School of Psychology and Speech Pathology

Self-Compassion and Psychological Health among Psychologists

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This thesis is presented for the Degree of
Doctor of Philosophy
of
Curtin University

November 2014

Declaration

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made. This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

Signature:

Date: November 14th, 2014

A moment of self-compassion can change your entire day. A string of such moments can change the course of your life.

- Christopher K. Germer

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Acknowledgements

I dedicate this thesis to my grandmother, Peggy.

Abstract

Psychologists tend to report higher levels of occupational stress-related conditions than many other professional groups, with serious implications for themselves, their clients, and the discipline as a whole. The investigation of new approaches toward stress-prevention amongst this occupational group has therefore been identified as an ethical imperative. *Self-compassion* is an emerging construct in psychological research and has been highlighted as a key target in interventions designed to increase psychological health. There is a growing body of research attesting to the relevance of this construct for health professionals; however, the benefits of self-compassion for reducing the negative consequences of occupational stress among psychologists are yet to be thoroughly explored. The aim of the current research was to explore the relationship between self-compassion and psychological distress among Australian psychologists (including trainees), and to investigate the feasibility and effectiveness of self-compassion training as a way of increasing wellbeing and reducing psychological distress in psychology trainees.

The first study was a cross-sectional, correlational study that aimed to clarify the relationship between self-compassion, emotion regulation difficulties, and psychological distress among Australian psychologists ($n = 198$), by testing a preliminary emotion regulation model of self-compassion. In this model difficulties with emotion regulation were hypothesised to mediate the relationship between self-compassion and psychological distress. After controlling for age and neuroticism, self-compassion was found to be a significant negative predictor of emotion regulation difficulties, depression, and stress. The data supported an emotion regulation model of self-compassion: emotion regulation difficulties were found to mediate the relationship between self-compassion and depression, as well as the

relationship between self-compassion and stress. The final models accounted for 28.10% of variance in depression and 25.5% of variance in stress. When taken in the context of previous literature, these findings indicate that self-compassion is a relevant construct for psychologists in terms of its potential to buffer against depression and stress. In addition, this study provides novel insights into what appears to be a important mechanism underlying the relationship between self-compassion and psychological health.

The overall aim of the second study was to develop and evaluate the effectiveness of a theoretically- and empirically-grounded self-compassion training program for improving psychological health among trainee psychologists. In Stage 1 of Study 2, a 6-week self-compassion training program (Self-Compassion Online; SCO) was developed, within the context of relevant theoretical models and findings from the scientific literature. In light of recommendations that new developments in stress prevention and wellbeing promotion focus on the development of initiatives that are accessible, flexible, sustainable, and cost-effective, the program was then adapted to be delivered as a web-based intervention. The program was reviewed and revised in line with the feedback provided.

In Stage 2 of Study 2, an open trial was conducted to examine the effects of the SCO program on levels of self-compassion, happiness, emotion regulation difficulties, and psychological distress in trainee psychologists. Participants were thirty-seven Australian post-graduate psychology trainees, who were currently engaged in clinical work. Of these, 20 (54%) completed post-test measures and 13 (35%) completed three-month follow-up measures. A main effect for time was found for each of the outcome measures, with significant increases in self-compassion and happiness, and significant decreases in depression, anxiety, stress, and perceived

stress, and emotion regulation difficulties reported between pre-test and post-test. All changes were maintained at follow-up. In addition, program feedback data collected from participants suggested that despite limitations such as time constraints, the program was an acceptable and relevant way of supporting meaningful change in participants' lives.

The aim of Stage 3 of Study 2 was to gather information regarding trainee psychologists' experience of stress, as well as to gain further insights into their experiences participating in the SCO program. Using the data collected from participants in Stage Two, participants' responses to a selection of the exercises in the SCO program were analyzed for common categories and themes. The data collected provided further evidence that clinical training for psychologists is often a stressful endeavor that entails a number of unique challenges. In addition, the data supported the idea that self-compassion training is a relevant and meaningful intervention for trainee psychologists that has the potential to create lasting positive changes in their personal and professional lives.

Taken together, these results provide preliminary evidence that self-compassion is a promising construct for psychologists in terms of (a) its ability to predict depression, stress, and emotion regulation difficulties, and (b) its capacity to be increased through training, thereby supporting psychological health. Additional testing of the emotion regulation model of self-compassion with alternative psychological outcomes is recommended. In addition, refinements to the SCO program are suggested; further research is needed to determine whether this intervention can be made more acceptable and to evaluate the full extent of its potential to promote well-functioning and resilience to occupational stress among psychologists.

CHAPTER 1

Introduction and Literature Review

Introduction and Overview

Psychologists across the career span are vulnerable to experiencing stress and stress-related conditions (Orlinsky & Rønnestad, 2005), with potentially severe and far-reaching implications for themselves, their clients, and the profession as a whole (American Psychological Association Advisory Committee on Colleague Assistance; APA ACCA, n.d.). Work-related stress among mental health professionals is linked to a range of deleterious physical and psychological outcomes, including discouragement, compassion fatigue, emotional depletion, relationship problems, anxiety, depression, and burnout (Norcross, 2000; Pope & Vasquez, 2005). In addition, work-related stress may lead to impaired performance at work, potentially compromising the provision of care (Barnett, Baker, Elman, & Schoener, 2007; Figley, 2002a). These issues may be especially problematic among psychologists who are younger or newer to the profession (Farber & Heifetz, 1981; Hellman, Morrison, & Abramowitz, 1987), who may experience overwhelming feelings of anxiety, negative self-evaluation, and inadequacy, particularly when subject to the confluence of academic and work-related stress involved in postgraduate training (Cushway, 2005; Rønnestad & Skovholt, 2003; Skovholt & Trotter-Mathison, 2011). As a result, it has been argued that the pursuit of psychologist well-functioning; "the enduring quality in one's professional functioning over time and in the face of professional and personal stressors" (Norcross, 2002, p. 5); is an ethical imperative, particularly among trainees (Barnett et al., 2007).

Health care paradigms are "expanding to include the wellbeing of the clinician as an essential part of the system" (Shapiro & Carlson, 2009, p. 107), and

identifying factors that contribute to psychologists' wellbeing is a concern that lies at the heart of a diverse, but interconnected range of research agendas. In line with theories of stress that highlight the central role of appraisal and coping in determining responses to occupational stressors (Ashkanasy, Ashton-James, & Jordan, 2004; Cox & Mackay, 1981; Goh, Sawang, & Oei, 2010), attention has been given to individual differences in the way people appraise and deal with stressful stimuli. Among human services workers there has been particular interest in examining how processes of self-relation - including self-awareness, self-regulation, and self-care – function to promote personal and professional well-functioning and buffer against occupational stress (e.g., Baker, 2003; Gilbert, 2007; Grepmair et al., 2007; Shapiro & Carlson, 2009). Such processes are thought to represent key individual differences in the way people respond to stress, and have been found to impact the types and frequencies of stressors people encounter, the way stressors are appraised, and the resources available for coping.

Within this line of thinking, researchers have recently directed attention to the question of how self-compassion may benefit clinicians as well as those with whom they work. Self-compassion has been described as "being open to and moved by one's own suffering, experiencing feelings of caring and kindness towards oneself, taking an understanding, non-judgmental attitude towards one's inadequacies and failures, and recognizing that one's experience is part of the common human experience" (Neff, 2003a, p. 224). Self-compassion is an adaptive form of self-relation, which promotes positive psychological outcomes such as greater life satisfaction, emotional intelligence, social connectedness, optimism, and happiness (Neff, Kirkpatrick, & Rude, 2007). Additionally, self-compassion is negatively linked with a range of psychological difficulties, such as depression, anxiety, self-

criticism, rumination, thought suppression, maladaptive perfectionism and disordered eating (see Neff, 2009, for a review). Importantly, self-compassion appears to be a skill that is capable of cultivation through a number of different methods, thus making it a viable target for interventions aimed at preventing or treating occupational stress.

Despite increasing recognition of the potential benefits of self-compassion for health-care professionals in general, and psychologists in particular, little research has sought to quantify or elucidate the relationship between self-compassion and psychological distress among this occupational group. In addition, the potential for self-compassion-based interventions to promote psychologists' wellbeing and protect them against the consequences of professional stress is yet to be explored. Finally, while a body of research is accruing that supports self-compassion as a robust predictor of wellbeing, and as a protective factor against psychological distress, insight into the mechanisms that underlie the relationship between self-compassion and psychological outcomes is limited.

The overarching aim of this thesis is therefore to conduct a multi-layered investigation into the relevance, acceptability and effectiveness of the self-compassion construct in terms of its ability to promote wellbeing and prevent stress and distress among psychologists. The specific aims are as follows:

(1) To test a predictive model of self-compassion and psychological distress among psychologists and psychology trainees that elucidates the major working mechanisms underlying this relationship.

(2) To develop a theoretically-grounded and empirically-supported self-compassion training program for postgraduate psychology trainees;

(3) To conduct a preliminary open trial of the program in order to investigate its feasibility and acceptability, and to evaluate its potential utility in terms of increasing self-compassion and psychological wellbeing (defined in terms of increased happiness and decreased emotion regulation difficulties and psychological distress) amongst the target group.

(4) To analyse participants' responses to the exercises contained in the program to gain further insight into the major themes that characterise participants' experience of stress associated with clinical training, as well as their experiences undertaking the self-compassion training program.

The current literature review outlines transactional stress theory as the grounding framework for this research. Subsequently, an overview of the prevalence, aetiology, and outcomes of occupational stress among psychologists across the career span is provided, with particular consideration given to the experiences of the trainee therapist. Following this is an examination of the nature of the self-compassion construct, including its links to adaptive functioning and its relevance for psychologists. Finally, consideration is given to the ways in which self-compassion may be developed through training, and the potential for a web-based program to deliver a self-compassion-based intervention among trainee psychologists is explored.

Literature Review

What is stress? The term stress is used inconsistently and ambiguously in the scientific literature and has been used variously to denote a stimulus that induces a stress response, the response itself, or the behavioural, cognitive, and emotional consequences of that response (Kemeny, 2003). In the current research, stress-inducing stimuli are referred to as *stressors*: exposure to stressors results in a *stress*

response that includes stress appraisals and coping efforts. The stress response may involve short-term physiological changes that are generally seen as adaptive: such changes have evolved as a way of helping individuals cope with stressors effectively. However, prolonged or repeated stress responses can have detrimental long-term impacts on physical and psychological health (McEwen, 1998; Sapolsky, 1992). It is these more enduring clinical symptoms that are referred to in the current literature as *stress.* Finally, in line with Kemeny (2003), the term *psychological distress* is used to refer to negative psychological responses to stressors that may include clinical symptoms of stress, anxiety and depression.

What is occupational stress? Research on occupational stress has been similarly plagued by issues with inconsistency and ambiguity in defining what is essentially a complex and multidimensional process (Hart & Cooper, 2001). Over the years, researchers have deliberated over whether occupational stress should be seen as a situational factor (i.e., environmental characteristics that elicit stress) or as an individual reaction (i.e., physiological or psychological disturbance within the individual), or both (e.g, Cooper, 1998; Cotton, 1995; Spector & Jex, 1998) and this lack of clarity has led to a degree of fragmentation in the relevant literature. While contention remains over how best to conceptualise the relationship between antecedents and consequences of occupational stress, there are several key concepts that can be gleaned from a review of the research. The purpose of the following section is to outline the dominant perspectives and current directions in occupational stress research, and to consider the implications of the evidence for the current study. This discussion is informed by the wider stress and coping literature, occupational stress research in general, and occupational stress research specific to the health professions.

The stressors and strain approach. Early approaches to occupational stress were based in the *stressors and strain approach* which holds that stress is what happens when *stressors* – particular events or characteristics related to the work environment - bring about *strain*, namely, negative physical or psychological outcomes amongst its employees (Beehr, 1995; Hurrell, Nelson, & Simmons, 1998). This "relatively simplistic" (Hart & Cooper, 2001, p. 94) approach underlies a vast majority of recent research into occupational stress within the health professions (e.g., Zapf, Seifert, Schmutte, Mertini, & Holz, 2001), as well as within the wider occupational context (Hart & Cooper, 2001), and has led to a number of theoretical offshoots in which particular variables are highlighted as integral elements in the stressor-strain relationship. Related research has largely focused on attempting to identify environmental factors, such as work load and role ambiguity, that predict strain-related outcomes such as distress, burnout, and job dissatisfaction (e.g., Heim, 1991; Lasalvia, 2011; Moore & Cooper, 1996). To a lesser extent this literature has considered the way individual differences, such as locus of control and affectivity, might make employees more or less vulnerable to experiencing occupational stress (e.g., Jain, Lall, McLaughlin, & Johnson, 1996; Jex & Spector, 1996).

Despite the influence of the stressors and strain model within the occupational stress literature, it has generated a number of criticisms, the foremost of which are elucidated by Hart and Cooper (2001). They highlight that this model is limited in that it is not driven by a coherent theory, and it rests on a number of erroneous assumptions. First, under the stressors and strain model, occupational stress is considered to be a linear process. This disallows the possibility of a reciprocal relationship between stressors and strain, and cannot account for situations in which employee's experience of strain may make them more vulnerable to

experiencing stressors. A second criticism is that according to this model, stressors are only capable of producing negative outcomes, and positive and negative outcomes are considered to be inversely related. This cannot account for findings that for some individuals, stressors are motivating and prompt engagement and growth (e.g., Lazarus, Deese, & Osler, 1952); and that positive and negative outcomes of stress (e.g. personal accomplishment and emotional exhaustion) may occur simultaneously (e.g., Farber, 1990). Finally, it is argued that the stressors and strain approach is limited in its conceptualisation of strain as a one-dimensional construct that occurs consistently within and between certain individuals in response to certain stressors. Contradicting this assumption, it has been found that although certain environmental factors tend to bring about stress responses in significant numbers of people, individuals and groups differ in terms of the type and severity of the response that is elicited (Lazarus et al., 1952). Additionally, recent developments suggest that "stress" cannot be encapsulated by a single variable (Lazarus, 1990) – rather, it is the consequence of the interaction between many different variables (Cooper, 1998).

　　　　The transactional stress approach. The notion of stress as an interactive process (Cooper, 1998) emerged in response to the consistent findings across stress research paradigms that inter-individual differences in stress vulnerability and resilience tend to outweigh similarities (see, e.g. Crandall & Perrewé, 1995). The process perspective is based largely on the interactional or transactional approach to stress, which emphasises the role of reciprocal interactions between the person and their environment in determining stress outcomes (Hart & Cooper, 2001). Of the many perspectives that have since been put forth under the interactional/transactional umbrella (e.g., Bowers, 1973; Cox, 1978; Cox & Mackay, 1981), Lazarus and Folkman's (1984) cognitive-relational approach is widely considered to be the most

dominant. While this approach is not specific to occupational stress, a number of theorists have successfully applied it to explain the role of the interactive relationship between employees and their working environment in determining occupational stress outcomes (e.g., Ashkanasy et al., 2004; Cox, Kuk, & Leiter, 1993). In this context, stress is specific to the cognitive, emotional and behavioural processes that characterise peoples' interactions with their work environment (Cox et al., 1993).

Drawing on Lazarus' (1966) assertion that stress should be considered an organizing concept for understanding the multitude of processes involved in adaptation, the cognitive-relational approach proposed that stress was a multidimensional construct, consisting of a range of variables and processes (Lazarus & Folkman, 1984). In their seminal work, Lazarus and Folkman (1984) proposed that the impact of a certain event can be predicted according to whether an individual appraises the demands of the environment as exceeding their capacity to cope with them. According to this model, external sources of stress may have differential effects between individuals, depending on the meaning of the event for the individual, and the physical and psychological resources the individual has access to. A key point here is that environmental "stressors" do not cause a stress response *per se*; rather, they elicit stress in an individual only to the extent that (a) they are appraised as threatening, and (b) the individual is under-resourced to deal with the threat. The key aspects of this process – primary appraisal, secondary appraisal, and coping resources – are discussed further below.

The role of appraisal. According to Lazarus and Folkman (1984), appraisal is the process of evaluating an internal or external stimulus, in order to assess its relevance in terms of one's wellbeing or the attainment of one's goals. This process *actively negotiates* between the demands, limitations, and resources of the

environment, and the belief system and personal goals of the individual (Lazarus, 1993). Lazarus and Folkman (Folkman & Lazarus, 1986; Lazarus, 1966) distinguish between primary appraisal – which determines whether the stimulus has the potential to affect one's wellbeing, and secondary appraisal, which evaluates whether one has sufficient coping resources to deal with it. In the occupational context, these processes are thought to work together to give meaning to the situations and events that happen in the workplace (Ashkanasy et al., 2004). Within the primary appraisal process, it is argued that stimuli may be evaluated as either irrelevant, benign-positive, or stressful. Moreover, stress appraisals can be further subdivided into appraisals of harm/loss, appraisals of threat, and appraisals of challenge, each with its own implications for the ensuing response. For example, harm/loss appraisals involve evaluating damage that has already occurred, while threat appraisals are involved with potential negative outcomes of a workplace stimulus. Both harm/loss and threat appraisals are thought to elicit emotions such as fear, anxiety, anger, and sadness, and to lead to "fight or flight" responses or resistance coping (Selye, 1976). When this appraisal-response process is recurring or prolonged, it inevitably leads to exhaustion or burnout (Schaufeli, Maslach, & Marek, 1993). While challenge appraisals also serve to mobilize an individual for adaptive change, they differ from threat appraisals in that they focus on the potential for *growth* that may accompany said change. Accordingly, challenge appraisals are more likely to be associated with positive emotions linked to motivation, and to lead to increased effort and positive performance outcomes.

The role of coping. While primary appraisals work to determine if a stimulus poses a potential threat to one's wellbeing, secondary appraisals evaluate whether the individual is able to access and utilize the necessary resources to modulate the stress

experience (Lazarus & Folkman, 1984). The magnitude of the discrepancy between resources and demands is thought to be one of the primary influences on the nature and intensity of the emotional response to the stimulus. In this context, the psychological "resources" that one might draw on in the face of a stress-inducing stimulus have largely been researched under the rubric of coping (Lazarus, 1991). According to Lazarus (1966), coping has three defining characteristics. First, coping is a cognitive and behavioural process in response to a stressful situation. Second, it is context-dependent, and is to some extent determined by the nature of the appraisal that precedes it and the resources available to deal with the stressful encounter. Finally, coping operates independent of the outcome – that is, a particular strategy or style of coping might be enacted regardless of whether or not it is successful. As such not all coping strategies are adaptive: individuals may 'cope' with situations by employing problematic strategies such as rumination, catastrophisation, or avoidance. Given the proliferation of coping strategies that have been identified, a number of different taxonomies have been suggested for the classification of coping into categories such as emotion-focused or problem focused, and approach or avoidance coping (see Skinner, Edge, Altman, & Sherwood, 2003, for a review). Based on a review of the various classifications of coping, Skinner et al. (2003) suggest that it is perhaps most useful to differentiate forms of coping based on whether they are adaptive or maladaptive.

With regard to individual differences in coping, it is important to note that despite Lazarus' assertion that coping is transitory and context-dependent, a substantial body of research suggests that individuals tend to have relatively stable styles of coping (Moos & Holahan, 2003). For example, Summerfeldt and Endler (1996) note that: (1) dispositional traits play a role in the ways situations are

appraised, and therefore the goals of coping; (2) dispositional traits influence the self-generation of stressful experiences; (3) individual capacities for the identification, discrimination, and articulation of emotional states have a clear role in the coping process; and (4) past coping attempts influence the way people cope in the present. While these arguments do not necessarily preclude the possibility of intra-individual variation in coping between specific situations, they do suggest that individual coping styles are relatively enduring.

   The role of self-concepts in the stress process. An interesting perspective on how the *meaning* of a stressor is constructed is offered by theorists who posit that stress appraisals hinge on whether events represent potential loss, threat or challenge to the *self* (e.g., Brown, Bifulco, & Harris, 1987; Hammen, Marks, deMayo, & Mayol, 1985; Hammen, Marks, Mayol, & deMayo, 1985; Oatley & Bolton, 1985; Thoits, 1991, 1995; Thoits, 2013). According to this perspective, events are appraised as more threatening (and therefore stressful) the more they pose a sense of loss or threat to an individual's identity or self-concept. This is in line with the majority of approaches to mental health within clinical psychology, which (apart from behaviourism) identify the self-concept and related processes as central to wellbeing (Thoits, 2013). From this point of view, ideas about self and identity are integral to the stress process and its outcomes, playing a part in stress appraisals, mediating and moderating processes, coping, and support-giving (Thoits, 2013).

   There is evidence to suggest that beliefs about self are a key predictor in the stress appraisal process, with individuals with a positive core self-worth consistently appraising themselves as more capable, worthy, and efficacious (e.g., Cozzarelli, 1993; Judge, Van Vianen, & De Pater, 2004). Conversely, a substantial body of evidence attests to the fact that deficits in self-worth are associated with a range of

negative psychological outcomes (Mann, Hosman, Schaalma, & de Vries, 2004), with symptoms such as feelings of worthlessness and unstable self-image implicated in disorders such as depression, dysthymia, bipolar disorder, and some Axis II disorders (American Psychiatric Association, 2000). Additionally, negative self-schemas form one part of the "negative triad" of beliefs that is theorized to be a key risk and maintaining factor in depression (Beck, Rush, Shaw, & Emery, 1979; Evans, Heron, Lewis, Araya, & Wolke, 2005).

In addition, the integral role of the self-concept in the stress process is reflected in research that examines individual differences in coping and adaptation. After reviewing the literature related to the variables thought to influence stress appraisals, Semmer (2003) outlined a number of characteristics of individuals who tend to be more resilient to stress than others. First, resilient individuals tend to interpret their environment optimistically and with a level of trust and agreeableness – expecting that things will go well, and that others do not pose a threat (as long as there are not reasons to believe otherwise). Second, resilient individuals are accepting of setbacks and failures, are able to put these experiences into perspective, and do not necessarily see them as indicators of their own incompetence or of a hostile world. Third, resilient people have a sense of self-efficacy and tendency to see stressful events as a challenge that can be overcome, rather than an insurmountable threat. Finally, it is implied that resilience engenders a level of emotional equanimity and that resilient people are likely to be lower in negative affect (Semmer, 2003).

Implications for the current research. The transactional model of stress has implications for the way occupational stress interventions are developed and implemented, and the current research is grounded in a number of premises derived

from the literature reviewed above. First, it is assumed that while certain characteristics of a given occupation tend to elicit stress more than others, individuals respond to such stressors idiosyncratically. That is, what is stressful for one person may not be stressful for someone else. Second, while intra-individual variation in responding to stressors across situations is acknowledged, the role of dispositional differences in appraising and coping with stress cannot be ignored. In fact, given that the purpose of the current research is to investigate and promote resilience to stress amongst psychologists across a range of different occupational contexts, it is considered paramount to identify dispositional vulnerabilities to stress and design interventions that enhance personal resources in vulnerable domains. Third, the self-construct is seen as a key variable that influences stress responses at a number of different stages of the stress process.

The following sections will examine both contextual and dispositional variables thought to be relevant to the occupational stress process amongst experienced and trainee psychologists, and consider self-compassion as a factor that has the potential to promote professional well-functioning amongst this group across different working contexts. For the purposes of the current discussion, "stress-related outcomes" and "stress symptoms" are considered to be the end-point of the stress process; that is, the negative physical and psychological consequences that one suffers as a result of experiencing occupational stress. Stressors are discussed in terms of the environmental, interpersonal, and intrapersonal factors that tend to elicit these outcomes amongst psychologists across the career span.

Stress among professional and trainee psychologists. In general, the professional role of the psychologist is one that draws on a range of cognitive,

emotional, and interpersonal competencies (Bennett-Levy, 2006), and may involve a number of unique challenges. It is a role that has been described as highly rewarding; the opportunity to form close connections with people, and to assist, guide, and participate in their healing processes is one that may facilitate one's own emotional growth and provide a sense of meaning, stimulation, and fulfilment (Norcross & Guy, 2007; Skovholt & Trotter-Mathison, 2011). However, the interpersonal dimension of mental health work is often characterized by emotional intensity, potentially arousing feelings of tension, anxiety, fear, hopelessness, guilt, and sometimes hostility (Rabin, Feldman, & Kaplan, 1999). As far back as 1937, Freud wrote of the dangers of psychoanalysis for the practicing therapist (Thompson & Calkins, 1996), however it was not until forty years later that researchers started exploring the potential negative impact of psychotherapy on those who practise it in greater depth (e.g., Deutsch, 1984; Deutsch, 1985; Farber, 1983; Farber & Heifetz, 1981; Maslach, 1982; Maslach & Jackson, 1981, 1984). Despite these efforts, stress prevention and management within this profession remains under-researched, and the rate of stress-related outcomes is high relative to many other occupational groups (Guy, 1987; Kilburg, Nathan, & Thoreson, 1986; Sussman, 1995), particularly for trainees (Cushway, 2005).

Types of stress-related outcomes. It has been suggested that the negative outcomes of professional stress for psychologists form a continuum of increasing severity, from transient episodes of emotional depletion to more enduring states of distress, burnout, and impairment (APA, n.d.; Baker, 2003). In this conceptualisation, "emotional depletion" may refer to both mild stress symptoms and perceived stress (e.g., Prosser et al., 1997), while distress has been defined as "an experience of intense stress that is not readily resolved, affecting wellbeing and

functioning, or disruption of thinking, mood and other health problems that intrude on professional functioning" (Munsey, 2006, p. 35). When distress is extreme or prolonged, impairment – "a decline in functioning that results in consistently substandard performance" (Norcross, 2002, p. 5) – may result. It is important to note that while more minor symptoms of stress do not always progress to advanced distress and impairment, they may be considered a "warning signal" (Baker, 2003, p. 21). Additionally, it has recently been emphasised that potential consequences of occupational stress should also encompass positive outcomes such as personal wellbeing and professional well-functioning (e.g., Coster & Schwebel, 1997; Wise, Hersh, & Gibson, 2012). These outcomes are not seen as merely the absence of distress, but also encompass constructs such as growth, engagement, and personal accomplishment (Schaufeli, Martinez, Marques Pinto, Salanova, & Bakker, 2002).

Among health professionals, occupational stress can lead to depression and anxiety (Radeke & Mahoney, 2000; Tyssen, Vaglum, Grønvold, & Ekeberg, 2001), feelings of isolation and loneliness (Lushington & Luscri, 2001; Penzer, 1984), reductions in job satisfaction (Prosser et al., 1997), decreased self-esteem (Butler & Constantine, 2005), and difficulties in interpersonal relationships (Myers, 1994). Stress is also detrimental to professional effectiveness. Acute or chronic stress can impede attention and concentration (Skosnik, Chatterton, Swisher, & Park, 2000), interfere with decision-making skills (Klein, 1996), and negatively impact clinicians' working relationships with their clients (Enochs & Etzbach, 2004; Renjilian, Baum, & Landry, 1998). Further, stress can increase the likelihood of occupational burnout (Rosenberg & Pace, 2006), a syndrome that involves depersonalization, emotional exhaustion, and a sense of low personal accomplishment.

Specific negative stress outcomes amongst psychologists include depression and anxiety (Radeke & Mahoney, 2000), burnout (see Morse, Salyers, Rollins, Monroe-DeVita, & Pfahler, 2012, for a review), and a number of conditions thought to be unique to the helping professions, such as secondary traumatic stress (Pearlman & Saakvitne, 1995), compassion fatigue (Bride, Radey, & Figley, 2007; Craig & Sprang, 2010; Figley, 2002a; Sprang, Clark, & Whitt-Woosley, 2007), and vicarious traumatization (Harrison & Westwood, 2009; Pearlman & Saakvitne, 1995; Sabin-Farrell & Turpin, 2003). Rothschild and Rand (2006) note that there is some confusion in the field about the use of, and distinction between, these terms. While there are some differences between these conditions, in terms of the circumstances under which they arise, and the nature, severity, and duration of the symptoms experienced, in general they may involve fatigue, frustration, disengagement, depletion, helplessness, hopelessness, emotional exhaustion, cynicism, altered notions of self, and lack of a sense of accomplishment (Smith & Moss, 2009).

Burnout is defined as a "psychological syndrome of emotion exhaustion, depersonalization, and reduce personal accomplishment that can occur among individuals who work with other people in some capacity" (Maslach, 1993, p. 20), while compassion fatigue is conceptualised as a specific "form of caregiver burnout" (Figley, 2002a, p. 1433). The latter is thought to be brought about by continually extending compassion and empathy to those who are suffering, with the result that care of the self is neglected (Figley, 2002a, 2002b). Similarly, vicarious traumatization and secondary traumatic stress are considered to be conditions that are brought on by working directly with traumatized clients, or by consistent exposure to clients' emotionally provocative experiences (Canfield, 2005). Although these terms have been used interchangeably in the research, some researchers have noted

differences between them. Vicarious traumatization is the process by which a therapist experiences a client's trauma as though it had happened to him or herself, and it is thought to involve changes in the way the therapist perceives self, others, and the world (Baird & Kracen, 2006; Canfield, 2005; Sabin-Farrell & Turpin, 2003). Secondary traumatic stress, on the other hand, is used to describe a condition in which a therapist experiences symptoms similar to posttraumatic stress disorder (such as avoidance and numbing) as a result of working with individuals who suffer from this disorder (Baird & Kracen, 2006).

Limited research has examined the nature and prevalence of specific stress-related outcomes amongst trainee psychologists, but that which has suggests that trainees are also at risk of suffering from psychological distress (Cushway, 2005), vicarious trauma (Adams & Riggs, 2008), and secondary traumatic stress (O'Halloran & O'Halloran, 2001). Other studies have identified relatively high rates of impairment amongst trainees, linked to factors such as depression, emotional problems, and interpersonal difficulties (Huprich & Rudd, 2003; Vacha-Haase, 1995). More specific to the trainee experience of stress is acute performance anxiety, which is thought to stem from the interaction between high performance expectations, a lack of professional confidence, and the experience of difficulties in a therapeutic session (Morrissette, 1996; Skovholt & Rønnestad, 2003; Skovholt & Trotter-Mathison, 2011). Similarly, trainees may be at risk of experiencing "the imposter phenomenon"(Henning, Ey, & Shaw, 1998) – the term coined by Clance and Imes (1978) to describe excessive self-doubt amongst high achieving individuals, to the point that they persistently question their own abilities and fear that others will realise that they are intellectual frauds. This syndrome is associated with increased psychological distress amongst general student populations

(Chrisman, Pieper, Clance, Holland, & Glickauf-Hughes, 1995; McGregor, Gee, & Posey, 2008) and health sciences students in particular (Henning et al., 1998).

This spectrum of conditions may have serious implications for trainee and experienced psychologists' professional functioning. It has been argued that stress, emotional depletion and compassion fatigue may negatively impact therapists' capacity to empathise with and relate to their clients (Enochs & Etzbach, 2004; Lambert & Barley, 2001; Renjilian et al., 1998). Further, Canfield (2005) argues that when therapists suffer negative emotional consequences as the result of secondary exposure to trauma, they may respond to clients in ways that are constrictive (doubting, avoiding, minimizing, or dissociating from client experiences) or intrusive (breaching boundaries and attempting to "rescue" the client).

In general, stress has also been found to impair attention and concentration (Skosnik et al., 2000), and affect decision-making skills (Dias-Ferreira et al., 2009). Clinical studies have suggested that individuals who suffer from severe burnout tend to display symptoms of cognitive impairment, such as memory loss, concentration difficulties, and problems carrying out complex tasks (Schaufeli, 2003). Additionally, the experience of performance anxiety arguably detracts from professional functioning, because attention is focused on the self, rather than on the interaction between therapist and client (Skovholt & Rønnestad, 2003).

The majority of the research on the professional consequences of occupational stress has focused on burnout, which has been found to correlate with negative occupational outcomes such as poorer job performance, and increases in absenteeism and turnover (Kahill, 1988). In psychologists, burnout may also impair interpersonal efficacy and the quality of care provided (McCarthy & Frieze, 1999). Exhaustion and mental distancing – two of the key aspects of burnout (Schaufeli,

2003) – both impact on professional engagement, albeit by different mechanisms. When suffering from exhaustion (both emotional and cognitive), individuals no longer have the energy to maintain work performance; when they distance themselves mentally, it may be that they are no longer *willing* to perform. Moreover, it has been noted that "therapists' dysfunctional emotional reactions and non-constructive coping responses may not only negatively influence their interactions with a particular client but also may transfer to their work with other clients" (Orlinsky & Rønnestad, 2005, p. 184). In some cases, mental distancing may be considered a functional coping strategy in the face of excessive job demands, however when this strategy becomes habitual, impaired performance may result (Schaufeli, 2003).

Despite limitations in the literature, it seems clear that when not well-managed, occupational stress can have dire consequences for therapists and clients alike. Harrison and Westwood (2009) summarize this dilemma thus:

> When individuals trained in the helping professions abandon the field, because of a perceived burden of caring and an insufficient ability to balance work with other aspects of life, this constitutes an enormous loss of resources and potential. When clinicians continue working despite suffering…this constitutes a tremendous disservice to both clients and therapist, and the health of our community is undermined (p. 204).

Prevalence of stress-related outcomes. It has been noted that prevalence research for stress-related outcomes amongst psychologists is marred by the range of different terms used to describe the various conditions described above (Smith & Moss, 2009). Adding to this ambiguity, there is often a lack of consensus regarding cut-off scores for the severity of stress-related outcomes, and the reliance on self-

report measures has led some researchers to suggest that rates of these conditions may be under-reported. It has been suggested that burnout research in particular suffers from the *healthy worker effect* – a systematic bias in the literature derived from the fact that the majority of burnout studies include only those participants who are still working, and thus comparably healthy (Schaufeli, 2003). Moreover, there is a notable lack of longitudinal research examining the way that stress-related conditions progress over time. What is presented here is thus intended to give only a rough approximation of the prevalence of stress-related outcomes amongst trainee and professional psychologists.

In a 2002 study, Gilroy, Carroll and Murra reported that 62% of counselling psychologists they surveyed identified having been depressed while working as a clinician, with 42% also reporting suicidal ideation or behaviour. This echoes findings reported by Deutsch (1985), that 57% of master's and doctoral level psychologists reported being depressed, with 2% also reporting suicide attempts. Similarly, Pope and Tabachnick (1994) found that depression was a primary concern reported by psychologists. While Mahoney (1997) found that substance use was amongst the lowest-rated concerns in a sample of psychologists, other researchers have identified rates of problematic drug and alcohol use amongst therapists at 6-11% (Deutsch, 1985; Thoreson, Miller, & Krauskopf, 1989). This can directly interfere with client care, with 6% of psychologists involved in Pope, Tabachnick, and Keith-Spiegel's (1987) study reporting that they had conducted therapy while under the influence of alcohol.

Other studies have looked at the rates at which psychologists report experiencing various symptoms of burnout. It has been suggested that of the three burnout components, psychologists are most likely to experience emotional

exhaustion (Rupert & Morgan, 2005), with rates as high as 30-40% reported in the literature (Ackerley, Burnell, Holder, & Kurdek, 1988; Mahoney, 1997). Ackerley et al. (1988) also identified rates of depersonalisation at approximately 30%, while Mahoney (1997) found that 42% of psychologists reported doubts about therapeutic success, and 27% described feeling disillusioned about their work. Importantly, however, other researchers have found burnout rates to be low to moderate (Rupert & Kent, 2007; Rupert & Morgan, 2005; Vredenburgh, Carlozzi, & Stein, 1999), and experiencing emotional exhaustion and depersonalisation does not necessarily preclude feelings of personal accomplishment or career satisfaction (Ackerley et al., 1988).

Research relating to the incidence of stress and psychological distress amongst trainee therapists is sparse (Kuyken, Peters, Power, & Lavender, 1998). A 1992 study by Cushway found that psychological distress - operationalized as "caseness" on the General Health Questionnaire (GHQ; Goldberg, 1978) - among 287 clinical psychology trainees surveyed was significantly higher (59%) than that found for trainees in other professions. Using the same criteria, Stafford-Brown and Pakenham (2012) found that 73% of the 56 participants in their study of the effectiveness of a stress management intervention for clinical psychology trainees were distressed at pre-treatment. In addition, two studies have considered the psychological adjustment of trainee clinical psychologists in the United Kingdom using the Employee Assistance Program Inventory (EAPI; Anton & Reed, 1994). In the first, in a sample of 183 trainees, 25% of participants reported significant problems with self-esteem, work adjustment, depression, or anxiety (Kuyken et al., 1998), while in a later study of 364 trainees, 41% of participants reported significant problems in at least one of these domains (Brooks, Holttum, & Lavender, 2002).

These rates may be loosely compared with estimates from studies of trainees across the health professions, such as that conducted by Henning et al. (1998), who found that of 477 medical, dental, nursing and pharmacy students surveyed, 27.5% were suffering clinical levels of psychological distress as measured by the Brief Symptom Inventory.

Aetiology of stress-related outcomes. The starting point for most research into the antecedents of stress-related disorders amongst psychologists is the acknowledgement that there are occupational hazards specific to the profession that may increase the likelihood of stress-related outcomes amongst those who practise it (Norcross, Guy, & Laidig, 2007). A transactional approach to the aetiology of occupational stress amongst this group must recognize the interaction between extrinsic (i.e. related to the nature of the profession) and intrinsic (i.e. related to certain characteristics of the practitioner) in determining occupational stress outcomes. However, while the relevant literature uses various taxonomies for categorizing sources of stress amongst psychologists (e.g., therapeutic stressors and patient stressors; Farber & Heifetz, 1981), very little research considers the interaction effects of these factors. Additionally, it should be noted that much of the extant literature documents equivocal relationships between antecedents and consequences in the occupational stress process, and the magnitude of these relationships is highly variable (Lee, Lim, Yang, & Lee, 2011). What is presented here is thus intended to give a general sense of the various factors that have been identified as giving rise to the stress-related outcomes described above.

Environmental factors. In the current discussion, environmental stressors include the nature of therapeutic work, working conditions, and issues related to the work culture. For example, psychotherapeutic work is often characterised as stressful

due to the fact that it requires constant empathic attention and "giving" to other people, regardless of one's emotional state; it demands vigilant ethical attention; it is potentially isolating, and sometimes devalued (Barnett & Cooper, 2009). In a study of sources of stress amongst American psychologists, Farber and Heifetz (1981) found that the stresses of therapeutic work clustered in three areas: managing "after hours" consequences of work, the difficulty of balancing intimacy and objectivity during the therapy hour, and problematic working conditions. For trainees in the health professions, environmental stressors may additionally involve factors such as time constraints, an imbalance between work and personal life, peer competitiveness, the pressure of frequent evaluation, and the added responsibilities related to patient care (Vitaliano, Russo, Carr, & Heerwagen, 1984). These factors operate within the context of tertiary student populations' increased susceptibility to burnout in general. According to Maroco et al. (2008), the socioeconomic pressures, academic demands and professional expectations, limited social and familial interactions, and identity-related stressors commonly experienced by tertiary students heighten their susceptibility to stress, distress, and burnout.

Interpersonal factors. Interpersonal stressors are conceptualised here as the particular characteristics of relationships with clients or colleagues that elicit stress responses in therapists. For example, researchers have highlighted the potential difficulties involved in treating: (a) emotionally demanding clients (e.g. clients with personality disorders and those who engage in high-risk behaviours); (b) clients who have chronic difficulties, are resistant to treatment, are slow to improve, or who relapse (c) clients who attempt or complete suicide, and those who are violent or aggressive toward themselves or others (Barnett et al., 2007; Farber & Heifetz, 1981). It has been suggested that in general, professions that involve a caring

relationship with clients may at times evoke feelings of powerlessness, frustration, grief, and fear, as well as feelings of failure and the need to "rescue" (Meier, Back, & Morrison, 2001). Interestingly, in a meta-analysis of predictors of burnout amongst psychologists, Lee et al. (2011) found that over-involvement (for example, feeling as though one was working harder for change than the client), predicted both symptoms of burnout *and* feelings of personal accomplishment. This finding attests to the nature of psychotherapeutic work as a double-edged sword: on the one hand, psychologists may be likely to become over-involved in client care because it is inherently rewarding; on the other, habitual over-involvement with clients, or over-involvement in unrewarding circumstances may lead to exhaustion and cynicism (Lee et al., 2011).

Intrapersonal factors. It is emphasized that the degree to which the aforementioned stressors impact upon psychologists' wellbeing is, to a large extent, contingent on the person of the psychologist (e.g., Guy, 1987). A number of studies have examined the "type" of person who is drawn to a career in the helping professions, and this research provides some interesting clues as to why some aspects of psychotherapeutic work may be particularly distressing for those who practise it. For example, there is some suggestion that psychologists tend to come from backgrounds characterized by emotional distress, and that one aspect of their motivation for entering the field is to fulfill unmet needs for closeness and intimacy (Dryden & Spurling, 1989; Elliott & Guy, 1993; Guy, Tamura, & Poelstra, 1989). Studies comparing mental health professionals with other health professionals have found that the former report significantly higher rates of physical and sexual abuse, family dysfunction, and parental psychiatric problems (Elliott & Guy, 1993; O'Connor, 2001). It has been argued that these childhood experiences may increase

the risk of therapists experiencing stress and distress (O'Connor, 2001), particularly when faced with similar experiences in clients.

Among trainee therapists, Skovholt and Trotter-Mathison (2011) propose a number of interacting factors that characterise increased vulnerability to stress, including perfectionistic expectations, lack of professional knowledge, an intense focus on achievement amongst the academic culture, and an underlying fear of being unsuitable or inadequate for the responsibilities of therapeutic work. Interestingly, while Henning et al. (1998) found that perfectionism levels in their sample of students in the health professions were no higher than those reported for other student samples, the risk of psychological distress amongst those with high levels of perfectionism was significantly increased. This finding may be understood in the context of Skovholt and Trotter-Mathison's (2011) suggestion that the ambiguity and uncertainty inherent in the novice practitioner's professional role can exacerbate feelings of self-doubt and inadequacy. It is likely that for trainees who are high in perfectionism, starting work in a field with a high level of responsibility and unpredictable outcomes is experienced as anxiety-provoking and stressful. On this it has been argued that "[s]tudents and interns who experience failure (e.g., clients failing to show up for appointments or dropping out of therapy; clients not improving or deteriorating) may easily experience accelerating doubts about themselves as therapists" (Orlinsky & Rønnestad, 2005, p. 184).   This is consistent with the findings of D'Souza, Egan, and Rees (2011), that increased perfectionism is linked to both stress and burnout amongst clinical psychologists.

Challenges encountered in therapist development: A theoretical model.
Bennett-Levy (2006) proposes a Declarative Procedural Reflective (DPR) model of therapist skill acquisition and refinement that illustrates the complexity of the

learning experiences encountered by trainee therapists. This model, grounded in information processing theory, details three interrelated systems that together account for the development of a number of different types of therapist skills over time. The first of these is the declarative system, which encompasses foundational elements of training such as conceptual knowledge, interpersonal knowledge, and technical knowledge. Second, the procedural system accounts for the interpersonal perceptual skills that are essential for therapists to put their procedural knowledge into effective practice. Also accounted for by this system are the various skills and attributes that comprise the therapist's identity or self-as-therapist schema. A central aspect of trainee therapists' development appears to be the construction of the self-as-therapist schema, followed by an ongoing process of balancing self-schemas and self-as-therapist schemas in a way that optimises interactions with clients (Bennett-Levy, 2006; Skovholt & Trotter-Mathison, 2011).

The final system described by the DPR model is the reflective system, a short-term representational structure that allows the therapist to continually draw on and integrate past experiences with present understanding, to facilitate new understanding, growth and development (Bennett-Levy, 2006). According to the DPR model, it is the reflective system that is responsible for therapists' capacity to "make finer and finer differentiations between different situations and circumstances in therapy, and to develop a progressively more sophisticated set of when-then rules, plans, procedures and skills" (Bennett-Levy, 2006, p. 68). The evolving nature of this process echoes the views of authors who have described the development of professional competence as a dynamic, contextually-influenced process (e.g., Donovan & Ponce, 2009; Epstein & Hundert, 2002). Accordingly, while novice therapists may face the greater burden of adjustment to new experiences and

challenges, the process of assessment and augmentation of professional knowledge, skills, and attitudes is ongoing (Donovan & Ponce, 2009; Johnson et al., 2014). In the context of the stressors described above, the DPR model provides some insight into the multiple demands placed on the therapist who wishes to maintain and further their professional competence over time.

Prevention and treatment of psychologist stress. Recent perspectives among researchers interested in promoting wellbeing and reducing occupational stress among psychologists have recommended the development of interventions that target self-care in a positive (i.e., promoting flourishing and wellbeing; Lawson & Myers, 2011; Wise et al., 2012), intentional, integrated, and sustainable way (Wise et al., 2012). Consistent with this suggestion, constructs such as mindfulness, self-awareness, and self-regulation have been found to support psychologist functioning (Grepmair et al., 2007; May & O'Donovan, 2007; Patsiopoulos & Buchanan, 2011; Shapiro, Brown, & Biegel, 2007; Skovholt & Trotter-Mathison, 2011), and there is some evidence that interventions designed to promote these variables, such as mindfulness-based stress reduction, and acceptance and commitment therapy, are effective for decreasing stress, negative affect, self-doubt and anxiety amongst trainee counselling and clinical psychologists, as well as allied health professionals (Shapiro, Astin, Bishop, & Cordova, 2005; Shapiro et al., 2007; Stafford-Brown & Pakenham, 2012). In addition, qualitative studies examining the effect of mindfulness-based interventions on trainee therapists have reported that trainees report increasing in self-awareness, self-compassion, and compassion for others following such interventions (Chrisman, Christopher, & Lichtenstein, 2009; Christopher, Christopher, Dunnagan, & Schure, 2006; Schure, Christopher, & Christopher, 2008). These studies are discussed in greater detail in Chapter 3.

Despite the contributions made by these studies, research on the effectiveness of interventions designed to improve psychological health among trainee psychologists remains in its infancy. In 2007, Shapiro, and colleagues noted that "no research known to us has examined the efficacy of interventions designed to enhance self-awareness, self-regulation, or balance in therapists or therapists in training" (p. 107), and since this time there have been only a limited number of published studies that have examined stress prevention or treatment programs for psychologists.

Implications for the current research. The above discussion emphasises that occupational stress among psychologists has a relatively unique profile in terms of the contextual, interpersonal, and intrapersonal variables thought to play a role in determining stress outcomes. Taken together, findings from the research suggest that therapeutic work can be inherently challenging from both a professional and personal perspective and that the nature and conditions of the work environment can present additional sources of stress. Occupational stress for psychologists has both psychological and physiological corollaries, and may be particularly prevalent amongst trainee therapists, who are faced with the dual demands of the academic and professional culture. Given the potentially dire consequences of stress amongst experienced and trainee therapists, it is an ethical imperative to identify individuals who are at greatest risk of psychological maladjustment. Moreover, it is important to target stress prevention and management programs at these individuals while they are undergoing training, in order to promote personal and professional wellbeing across the career span (Henning et al., 1998; Shapiro et al., 2007). Given the nature of their work, constructs pertaining to self-awareness, self-relation, and self-regulation appear to play a particularly important role in psychologists' experience of stress. Along these lines, it has been argued that self-compassion is a relevant construct for

experienced and trainee psychologists, in terms of its potential to promote wellbeing and resilience to stress (Mullenbach & Skovholt, 2011; Shapiro et al., 2007).

In this section a conceptual account of self-compassion will be presented, and the similarities and differences between self-compassion and related constructs will be discussed. Research on the links between self-compassion and psychological health will be reviewed, and consideration will be given to the mechanisms by which self-compassion is thought to operate. Finally, methods for the brief induction or longer-term cultivation of self-compassion will be described, and the potential benefits of self-compassion for psychologists will be discussed.

Self-compassion: an overview. While Western psychology has examined empathy and compassion for others in depth, the investigation of self-compassion as a psychological construct is relatively new (Neff, 2003b). In the last 10 years, scientists have developed research paradigms for self-compassion that draw on a range of philosophical and theoretical backgrounds, including Buddhism and evolutionary and attachment theory. The purpose of the current section is to (a) provide an overview of current conceptualisations of self-compassion; (b) review the literature on self-compassion and psychological wellbeing; (c) present some of the means by which self-compassion may be cultivated; and (d) discuss potential mechanisms thought to underlie the relationship between self-compassion and psychological health.

Conceptualisations of self-compassion. Broadly, self-compassion involves treating oneself with warmth, compassion, and understanding during times of suffering (Bennett-Goleman, 2001; Germer, 2009; Gilbert, 2010b; Kornfield, 1993; Neff, 2003b; Salzberg, 1997). In Buddhist philosophy, compassion for self and others are two inextricably linked processes; it is contended that any differentiation

between the two involves a separation between self and other that is inherently false (Hofmann, Grossman, & Hinton, 2011; Neff, 2003b). Self-compassion or *maitri* and related states such as *metta* (loving kindness) and *karuna* (compassion for others) are thought to revolve around the desire for self and others to be free from suffering, and the cultivation of these states is a central element of Buddhist practice.

Quite separate from any Buddhist underpinnings, Gilbert and Irons (2005) have incorporated principles of attachment theory, evolutionary biology and neuropsychology to explain the effects of self-compassion in terms of *social mentality theory*. This approach emphasises the role of attachment processes in the development of self-compassion, and argues that evolved systems for caring and social relating constitute the primary mechanism by which self-compassion exerts its beneficial effects (e.g., Gilbert, 2000b; Gilbert, Allan, & Goss, 1996). Social mentality theory proposes that self-referent information processing occurs along the same pathways as social and interpersonal information processing (Gilbert, 1989). It is argued that human systems for social relating involve responding to signal-sensitive systems in others, for example: "a sexual display can activate processing systems for sexual interest in another, an aggressive display can activate processing systems for fear and submission in another, a distress call can activate processing systems for seeking and help-giving in a parent, and parental affectionate care with warmth can sooth and activate processing systems for attachment and safeness in an infant" (Gilbert & Irons, 2005, p. 264).

Social mentality theory posits that in addition to playing a role in interpersonal processing, these systems can generate *intrapersonal* signals and responses, such as those manifest in metacognitions, self-representations, and

fantasies (Gilbert, 2000b, 2005). Along this line of reasoning, Gilbert and Irons (2005) argue that treating the self with hostility may generate a similar response to that felt in reaction to hostility from external sources – i.e. it stimulates threat systems. Alternatively, the practice of self-compassion may activate soothing and contentment systems. A key element of social mentality theory is the notion that self-regulation is inextricably linked to multiple processing systems, which are socially role-focused. In essence, "social rank mentality (rooted in concerns with the power of others, striving, social comparison, fear of rejection and attacks, and shame) becomes the dominant organizing mentality for self-to-self and self-to-other(s) processing" (Gilbert & Irons, 2005, p. 266).

Neff's model of self-compassion. Kristen Neff is the first researcher to have operationalized self-compassion as a psychological construct, with the development of the Self-Compassion Scale (Neff, 2003a, 2003b). Drawing largely from Buddhist conceptualisations of the term, Neff defines self-compassion with reference to awareness of suffering, self-kindness, and feelings of interconnectedness. According to Neff (2003b), self-compassion can exist as a trait or state process, and involves:

> being open to and moved by one's own suffering, experiencing
> feelings of caring and kindness toward oneself, taking an understanding,
> nonjudgmental attitude toward one's inadequacies and failures,
> and recognizing that one's own experience is part of the common
> human experience (p. 224)

In Neff's conceptualisation, self-compassion is primarily considered in terms of its relevance to human suffering, including experiences of loss, failure, and perceived flaws or inadequacies (e.g., Hannigan, Edwards, & Burnard, 2004). While the theoretical basis of Neff's approach to self-compassion is markedly different

from Gilbert's, both authors emphasize processes of warmth, self-soothing, kindness, reassurance, connectedness and equanimity (as opposed to self-criticism, judgement, self-threat or self-attacking, isolation and reactivity) as being at the heart of the self-compassion construct. Neff's (2003a) self-compassion scale measures self-compassion along three interacting dimensions: self-kindness, mindfulness, and common humanity, and includes scales designed to measure their maladaptive counterparts, namely self-judgment, overidentification, and isolation. The nature of these constructs, the interaction between them, and the relevant psychological literature is discussed below.

Self-kindness versus self-judgment. Self-kindness refers to the practice of actively comforting and soothing oneself in times of difficulty, and being gentle and understanding towards oneself, particularly when considering perceived flaws or failures (Neff, 2003a). The ability to be kind towards oneself is thought to be heavily influenced by early attachment experiences (Mikulincer & Shaver, 2007); such experiences may result in people internalizing the capacity to be self-reassuring and self-soothing during times of failure, or learning to direct their frustration and rage at the self (Kohut, 1971, 1977). Deficits in self-soothing capacity are implicated in psychopathology such as depression (Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006; Kelly, Zuroff, & Shapira, 2009), borderline personality disorder (Linehan, 1993), bulimia nervosa (Esplen, Garfinkel, & Gallop, 2000) and the experience of persecutory delusions (Hutton, Kelly, Lowens, Taylor, & Tai, 2013). Conversely, the "feelings of warmth, inter-relatedness, and equilibrium" (Neff, Rude, & Kirkpatrick, 2007, p. 912) associated with being kind and reassuring towards oneself are thought to promote happiness, optimism, contentedness, and adaptive coping (Neff, Hsieh, & Dejitterat, 2005; Neff, Rude, et al., 2007).

Self-kindness is contrasted with self-judgment, which is conceptualized as being actively self-critical and hostile towards oneself (Neff, 2003b). Self-judgment and related processes (e.g., self-criticism, self-attack, self-contempt and self-disparagement) have been extensively researched and consistently linked to psychological difficulties, including social phobia (Cox et al., 2000), mood disorder (Blatt & Zuroff, 1992; Gilbert & Irons, 2005; Teasdale & Cox, 2001), and post-traumatic stress disorder (Brewin, 2003). Self-criticism is also linked to interpersonal difficulties (Zuroff, Moskowitz, & Cote, 1999), and the degree of self-criticism experienced in childhood has been found to predict later adjustment (Zuroff, Koestner, & Powers, 1994). Together, self-criticism and self-reassurance have been found to mediate the link between students' recall of parenting (e.g., rejecting or warm) and self-reported depressive symptoms (Irons, Gilbert, Baldwin, Baccus, & Palmer, 2006).

Common humanity versus isolation. Common humanity refers to relating one's experiences to the wider scope of human experience, particularly when one is experiencing failure, weakness, and vulnerability (Neff, 2003b). This broadened perspective engenders the understanding that the experience of pain and suffering is common to humanity, and serves as a point of connection to others, rather than a catalyst for feelings of shame and isolation. This component of self-compassion reflects the Buddhist assertion that all beings are interconnected, and that the notion of a separate self is an illusion (Kumar, 2002). Self-compassionate people are more likely to feel a sense of social connectedness and belonging (Neff, 2003a; Neff & McGehee, 2010), 'fundamental human needs' that promote wellbeing (Steverink & Lindenberg, 2006) and inversely predict psychological difficulties (Berscheid & Reis, 1998; Lee & Robbins, 1998).

Common humanity is contrasted with feelings of isolation and aloneness in one's suffering. Allen and Leary (2010, p. 108) suggest that "[w]hen people fail, experience loss or rejection, are humiliated, or confront other negative events, they often feel that their experience is personal and unique". When people believe that they alone are responsible for their mistakes, and that their negative experiences are unique, they are more likely to experience feelings of shame and inadequacy (Germer, 2009). Commonly related to self-criticism, the experience of inner shame has been identified as a trans-diagnostic factor implicated in disorders such as social anxiety (Gilbert, 2000a), depression (Cheung, Gilbert, & Irons, 2004), and substance abuse (Dearing, Stuewig, & Tangney, 2005).

Mindfulness versus over-identification. The mindfulness component of self-compassion involves considering one's suffering with present-moment awareness and equanimity rather than overly focusing on, or attempting to avoid aspects of one's life or self that are disagreeable (Neff, 2003a). Traditionally, mindfulness has been conceptualised as a dual process of bringing attention and awareness to the present moment, and of cultivating a sense of acceptance and openness towards this experience (Bishop et al., 2004). This conceptualisation of mindfulness is distinguished from mindfulness as part of self-compassion in two ways. Firstly, 'general' mindfulness is directed at one's internal experience, whilst the mindfulness component of self-compassion focuses on the 'self' as the experiencer (Bishop et al., 2004). Secondly, self-compassionate mindfulness is applied specifically to *negative* experiences, whilst mindfulness used more broadly is relevant across the scope of experience, both positive and negative (Germer, 2009).

Increasingly, researchers have considered the role that mindfulness plays in adaptive emotion regulation and coping (Aldao, Nolen-Hoeksema, & Schweizer,

2010; Gratz & Roemer, 2004), particularly through its association with increased

cognitive flexibility and decreased cognitive reactivity. Mindfulness has also been

found to be highly correlated with the use of adaptive emotion regulation strategies

(Feldman, Hayes, Kumar, Greeson, & Laurenceau, 2007). Furthermore,

psychological interventions that include mindfulness as a core component, such as

Mindfulness-Based Stress Reduction, Acceptance and Commitment Therapy,

Dialectical Behaviour Therapy, and Mindfulness-Based Cognitive Therapy have

been found to be effective in treating a host of physical and psychological conditions

(Chambers, Gullone, & Allen, 2009). In general, these approaches focus on

developing a non-judgmental and compassionate approach towards one's

experiences, in order to enable individuals to break free from automated, maladaptive

patterns of thinking. Within this body of research, it has been found that mindfulness

practice is effective in treating depression (Ma & Teasdale, 2004; Segal, Williams, &

Teasdale, 2002; Teasdale et al., 2000), reducing negative affect and psychological

distress (Brown & Ryan, 2003), and treating anxiety in clinical (Evans et al., 2008)

and nonclinical populations (Shapiro, Schwartz, & Bonner, 1998). Additionally, it

has been found that mindfulness is linked with reductions in distress even in

situations that provoke negative self-evaluative cognitions (Jain et al., 2007; Kemeny

et al., 2012). Meta analyses have reported moderate-large average effect sizes for the

impact of mindfulness training on reducing psychological distress and improving

psychological wellbeing among individuals drawn from a range of different clinical

populations (Baer, 2003; Grossman, Niemann, Schmidt, & Walach, 2004; Hofmann,

Sawyer, Witt, & Oh, 2010).

Mindfulness is contrasted with overidentification (also referred to in the

literature as *overengagement*): the process by which one's emotional reactions are so

overwhelming that one loses awareness of possible alternate interpretations or reactions (Bennett-Goleman, 2001). Overidentification is a mode of responding linked to rumination, worry, catastrophisation and compulsive behaviours (Hayes & Feldman, 2004). Overidentification can lead to exaggerating the significance of failures (Neff et al., 2005; Shapiro et al., 2007) and acts as an obstacle to staying grounded in present-moment experience . At the other extreme, avoidance of difficult experiences, thoughts, and emotions represents another maladaptive alternative to mindful awareness (Neff, 2003b).

Interactions between the components of self-compassion. The components of self-compassion discussed above can be considered to be conceptually distinct but interrelated processes, and while little has been written on the relationship between them, Neff (2003b) provides some clarity. First, self-kindness may reduce self-criticism, thus decreasing the feelings of shame associated with self-judgment and diminishing the tendency to withdraw from others (Brown, 1999). When interactions with others are fostered during times of suffering, it is more likely than an individual will share their difficulties, relate their suffering, and in turn gain a deeper understanding of common humanity. Self- kindness may also enhance mindfulness: it is hypothesized that individuals who are better able to soothe and reassure themselves are more able to maintain contact with difficult present-moment experiences, and view them with equanimity. In addition, there is some support for the proposition that self-kindness may engender non-judgmental observation of one's inner dialogue (Greenberg, Watson, & Goldman, 1998). In contrast, self-criticism is linked to feelings of disconnection, correlating with lower perceived social support and higher perceived criticism from others (Dunkley, Zuroff, & Blankstein, 2003; Zuroff et al., 1999).

Second, an awareness of common humanity allows one to relate one's flaws and suffering to the wider human experience, thus promoting an approach of understanding and self-care. People who have an understanding of the universality of suffering and the inherent "imperfection" of humanity may be less likely to judge themselves harshly for perceived weaknesses and failings. In this way, self-kindness and awareness of common humanity are thought to enhance self-acceptance, and make the experience of suffering less aversive and threatening. As a result, one is less likely to avoid or over-identify with difficult experiences, and is instead more likely to hold them in mindful awareness. Finally, mindfulness is thought to enhance self-acceptance (Carson & Langer, 2006), thus engendering feelings of self-kindness and self-warmth. Mindfulness facilitates a sense of mental space from negative emotions and cognitions, thus reducing feelings of shame and separateness that may arise when one over-identifies with difficult experiences. Consequently, it is more likely that one will feel connected to others, and able to put one's struggles into perspective. Taken together, these factors illustrate the processes involved in the self-compassionate mindset and further expand on the association between self-compassion and positive psychological outcomes. While these processes need to be subject to further empirical examination, an understanding of their interaction is important in helping to distinguish self-compassion from other self-relational constructs (Barnard & Curry, 2011b). Importantly, it is the interaction between these three factors that are thought to confer psychological benefits beyond those facilitated by each of the three components individually.

Self-compassion and psychological wellbeing. A number of studies have documented the link between self-compassion and self-reported life satisfaction and psychological wellbeing (Neely, Schallert, Mohammed, Roberts, & Chen, 2009;

Neff, 2003a, 2003b; Neff, Kirkpatrick, et al., 2007). In a pair of studies involving college students, Neely and her colleagues (2009) investigated the relationship between self-compassion and wellbeing, defined as having a sense of life purpose, self-mastery and life satisfaction, as well as low perceived stress and negative affect. They found that self-compassion accounted for unique variance in wellbeing (defined in terms of higher scores on purpose in life, self-mastery, and satisfaction with life scales, and lower scores on perceived stress and intrusive thoughts measures) even when the influence of established predictors of wellbeing, such as goal regulation, stress, and social support was controlled. They concluded that self-compassion may be particularly important for students' wellbeing in times of high stress, disappointment, or failure. These findings support the hypothesis that self-compassion is a potentially useful construct for trainee and practicing psychologists in terms of promoting wellbeing and buffering against occupational stress.

Self-compassion has also been found to correlate with optimism and happiness, two central variables involved in psychological wellbeing (Neff, Rude, et al., 2007). Additionally, self-compassion explains unique variance in happiness and optimism once the combined effect of self-esteem, age, and gender have been accounted for (Neff & Vonk, 2009). Neff, et al. (2007a) suggest that the relationship between self-compassion and happiness may be bi-directional: "[g]reater happiness may stem from (and facilitate) the feelings of warmth, inter-relatedness, and equilibrium that people experience when they are self-compassionate" (p. 912). It is also suggested that the link between self-compassion and happiness may be partly driven by a tendency for self-compassionate people to ruminate less on negative life events, a tendency shared by happier people (Lyubomirsky, King, & Diener, 2005; Neff, 2003a). Finally, self-compassion is related to positive affect (Neff, Kirkpatrick,

et al., 2007), even when self-esteem – a consistent predictor of positive affect – is controlled for (Neff & Vonk, 2009). It has been argued that these results suggests that self-compassion plays a unique and important role in individuals' feelings of worth, acceptability and connectedness, as these are constructs involved in positive affect (Barnard & Curry, 2011b).

Self-compassion and psychological distress. Self-compassion has also been found to negatively correlate with a number of key markers of psychological distress, including anxiety, depression, neurotic perfectionism, rumination, and thought suppression (see Neff, 2009, for a review). The findings regarding the relationships between self-compassion and depression and anxiety are particularly robust, with correlations of around -.60 consistently reported in the literature (Neff, 2003a; Neff et al., 2005; Neff, Kirkpatrick, et al., 2007; Raes, 2010). One explanation for this is the finding that self-compassionate people are less likely to be self-critical and judgmental of their perceived shortcomings and failure (Leary, Tate, Adams, Allen, & Hancock, 2007). Importantly, however, while self-criticism is a key factor in the development of anxiety and depression, it has been found that self-compassion is strongly negatively associated with anxiety and depression when self-criticism is controlled for (Neff, 2003a). Additionally, it has been found that self-compassion better predicts symptom severity and quality of life amongst individuals with mixed anxiety and depression than mindfulness (Van Dam, Sheppard, Forsyth, & Earleywine, 2011).

Raes (2010) found that decreases in rumination and worry partially explained the relationship between self-compassion and anxiety, while the relationship between self-compassion and depression could be partially accounted for by reductions in worry and brooding. This finding has been replicated in a study involving a sample

from Thailand and Taiwan (Neff, Pisitsungkagarn, & Hseih, 2008). Interestingly, Ying (2009) suggested that the relationship between self-compassion and depression might also be partially mediated by perceived competence (measured as sense of coherence) amongst social work students. In this study, it was concluded that self-compassion is an important variable for promoting mental health and sense of coherence (a construct documented to promote resilience to stress; Amirkhan & Greaves, 2003) amongst trainee social workers, who face similar professional demands to trainee psychotherapists. Finally, of particular relevance to the current study is the finding that self-compassion is negatively correlated with burnout in a study of 69 Christian clergy (Barnard & Curry, 2011a). In their study, Barnard and Curry (2011a) found significant negative correlations between self-compassion and emotional exhaustion (r=- 0.60) and shame (r = -0.55), and significant positive correlations between self-compassion and work satisfaction (r = 0.42).

Self-compassion and resilience. Findings from quasi-experimental and experimental studies support the relationship between self-compassion and positive and negative psychological outcomes discussed above, and extend the research providing evidence that self-compassion may buffer against stress during times of difficulty. Neff and colleagues (2005) examined self-compassion amongst college students following a perceived failure (receiving a low examination grade) and found that increases in perceived competence and decreases in perceived fear of failure partially explained the relationship between self-compassion and academic anxiety. Additionally, it was found that students who were higher in self-compassion were significantly more likely to use coping strategies such as acceptance and reinterpretation, and less likely to use strategies such as emotional suppression following the failure. This is consistent with Neff's (2003a) finding that self-

compassion is positively correlated with aspects of emotional intelligence, such as emotional clarity and repair.

In a series of studies also conducted with undergraduate students, Leary et al. (2007) examined the link between self-compassion and emotional responses in the context of both real and imagined negative events and found that self- compassion was associated with reduced negative affect in both conditions. The authors also examined the correlation between self-compassion and affect when students received neutral or positive feedback, and found that self-compassion inversely predicted negative emotions in the face of neutral feedback. Next, they looked at the relationship between self-compassion and affect after students watched an embarrassing videotape of themselves: they found that students with higher self-compassion were more likely to report experiencing positive emotions, and less likely to report experiencing negative emotions after watching the tape. Finally, the authors asked participants to recall a previous failure, and assigned them to one of four conditions: (a) a self-compassion induction; (b) a self-esteem induction; (c) a writing control condition; (d) a true control condition. They then asked students to report their levels of negative affect, and found that students in the self-compassion induction condition reported significantly lower levels of sadness, anger, and anxiety than students in any of the other conditions.

It is theorised that self-compassion promotes emotional resilience by deactivating the threat-related system that is responsible for sympathetic nervous system activity (Gilbert & Proctor, 2006). This proposition is supported by the finding that trait self-compassion moderates inflammatory responses to social stress (Breines, Thoma, Gianferante, Hanlin, & Chen, 2014). Inducing self-compassion

also appears to enhance immune function and promote adaptive stress responses. Rein, Atkinson and McCraty (1995) found that self- and externally-induced feelings of care and compassion significantly increased a salivary indicator of immune functioning (salivary immunoglobulin A – S-IgA), while inducing feelings of anger and frustration had negative effects. The authors also found that self-induced feelings of care and compassion were more effective at stimulating S-IgA than previously used methods of external induction. It has been suggested that brief compassion meditation training has the capacity to produce changes in stress-processing areas of the brain, increase immune system function and feelings of wellbeing (Lutz, Brefczynski-Lewis, Johnstone, & Davidson, 2008), and enhance feelings of social connectedness (Hutcherson, Seppala, & Gross, 2008). Consistent with this, a study by Arch et al. (2014) found that a group of female participants undergoing brief self-compassion training displayed biopsychosocial and affective responses to social threat that were consistent with lower stress, relative to attention-training and no-training controls.

Self-compassion and self-esteem. Self-esteem has been a central preoccupation of Western culture within the last 30 years, and it has generated a large body of psychological research during this time (Crocker & Park, 2004). A discussion of the distinction between self-compassion and self-esteem is particularly relevant to the current research given that within the wider occupational health literature, researchers have identified self-esteem as a central construct in promoting job satisfaction and performance (Judge, Locke, Durham, & Kluger, 1998) and resilience to occupational stress (Mäkikangas & Kinnunen, 2003; Mäkikangas, Kinnunen, & Feldt, 2004). It should be noted that self-efficacy is thought to play a similar role to self-esteem in wellbeing both generally (Bandura, 1992) and

professionally (Bono & Judge, 2003), although as a global construct it is virtually indistinguishable from global self-esteem (Semmer & Meier, 2009). There is some suggestion that these constructs may buffer against distress and promote persistence in the face of negative feedback or failure (Bandura, 1989; Brockner, 1988). Additionally, self-esteem (along with locus of control and emotional stability), is part of a "core self-evaluation" (CSE) factor found by Kammeyer-Mueller, Judge, and Scott (2009) to inversely predict perceived stress, strain, and avoidance coping. Given the documented benefits of self-esteem for occupational stress resilience, it is important to consider why self-compassion may be a preferable construct in terms of promoting stress resilience and professional wellbeing amongst psychologists.

Traditionally, "global self-esteem" – referring to an overall feeling of self-worth - has been the focus of self-esteem research (Tafarodi & Milne, 2006). Current conceptualisations of global self-esteem are consistent with the early work of James (1983) who suggested that self-concept was highly dependent on goal attainment, and therefore threatened by real or perceived failure (Kernis, 2003). Additionally, the self-evaluative process that underpins global self-esteem may also be influenced by the perceived evaluations of others (Neff & Vonk, 2009). For many years, this construct was seen as almost synonymous with mental health (Pyszczynski, Greenberg, Solomon, Ardnt, & Schimel, 2004), and the idea that global self-esteem is highly linked to psychological wellbeing remains influential (Tafarodi & Swann, 1995). More recently it has been suggested that self-esteem may take different forms, and researchers have identified *contingent* or *unstable* self-esteem (Baumeister, Smart, & Boden, 1996; Crocker, Luhtanen, Cooper, & Bouvrette, 2003; Kernis, 2003) and *true* or *optimal* self-esteem (Deci & Ryan, 1995; Kernis, 2003), amongst other self-esteem constructs. Contingent self-esteem is thought to be determined by

the degree to which one is perceived to meet expectations and goals in valued areas of life (Baumeister et al., 1996; Deci & Ryan, 1995); that is, one's self-worth rests on the degree to which one is perceived as competent (Crocker & Park, 2004). True self-esteem, on the other hand, is considered to be an unconditional and stable sense of self-worth, that is not dependent on self-evaluation (Deci & Ryan, 1995). It is this latter construct that is most similar to self-compassion, while contingent self-esteem is a fundamentally different construct, given that self-compassion does not involve self-evaluation. On this point, Neff and Vonk (2009) found that self-compassion was inversely related to contingent self-esteem ($r = -0.47$) amongst a community adult sample.

In any discussion of the differences between self-compassion and self-esteem then, it is necessary to be specific about which form of self-esteem is being referred to (Barnard & Curry, 2011b). It is only recently that researchers have started to indicate which form of self-esteem they are investigating (Barnard & Curry, 2011b), and have often simply referred to the global self-esteem construct described above (e.g., Baumeister et al., 1996). As the relationship between self-compassion and other self-acceptance constructs has already been discussed, this section will focus on differentiating self-compassion and global self-esteem. Barnard and Curry (2011b) outline a number of different findings from the research that indicate that self-compassion and global self-esteem are distinct constructs, and which suggest that self-compassion is likely to be a more relevant construct than self-esteem for promoting stress-resilience amongst psychologists. First, while self-compassion and global self-esteem are significantly correlated, with associations ranging from $r = 0.56$ (Leary et al., 2007) to $r = 0.68$ (Neff & Vonk, 2009), these correlations are not sufficiently high to suggest that they are the same construct (Barnard & Curry,

2011b). Second, the two constructs have different patterns of association with other psychosocial variables, suggesting that there is a distinction between them. For example, global self-esteem is positively associated with narcissism, while self-compassion is not (Neff, 2003a; Neff & Vonk, 2009); self-compassion negatively predicts anger (Neff & Vonk, 2009) and catastrophizing (Leary et al., 2007), while global self-esteem is not significantly related to either construct. Importantly, while both high and low self-esteem have been linked to distorted perceptions of self, only low self-compassion predicts distorted self-perception (Leary et al., 2007).

A third point of difference identified by Barnard and Curry (2011b) is that self-compassion predicts variances in psychological outcomes when self-esteem is controlled for, however the reverse is not true. For example, self-compassion negatively predicts rumination, anger and negative affect, and positively correlates with happiness, optimism and positive affect, even after self-esteem is controlled for (Leary et al., 2007; Neff & Vonk, 2009). However, once self-compassion is controlled for self-esteem is no longer significantly related to constructs such as negative affect, rumination, and anger (Leary et al., 2007; Neff & Vonk, 2009). Taken together, these findings suggest that self-compassion and global self-esteem are quite distinct constructs (Barnard & Curry, 2011b). Despite this, Barnard and Curry (2011b) argue, it is important to acknowledge that at times the self-esteem literature may refer to constructs that are more similar to self-compassion than global or contingent self-esteem, such as "true" self-esteem (described above), or the accepting, forgiving self-esteem described by McKay and Fanning (McKay & Fanning, 2000).

While this research provides some compelling support for the potential

benefits of self-compassion over self-esteem as a stress-resilience variable in occupational health research, there are a few final points to be considered. For example, Crocker and Park (2004) argue that one of the dangers of self-esteem lies in what people will do to achieve or maintain it:

> Because increases in self-esteem feel good, and decreases in self-esteem feel bad, state self-esteem has important motivational consequences. Thus, in the domains in which self-worth is invested, people adopt the goal of validating their abilities of qualities, and hence their self-worth. When people have the goal of validating their worth, they may feel particularly challenged to succeed, yet react to threats or potential threats in ways that are destructive or self-destructive. They interpret events and feedback in terms of what they mean about the self; they view learning as a means to performance outcomes, instead of viewing success and failure as a means to learning; they challenge negative information about the self; they are preoccupied with themselves at the expense of others; and when success is uncertain, they feel anxious and do things that decrease the probability of success but create excuses for failure, such as self-handicapping or procrastination (p. 393).

This reiterates the view that maintaining self-esteem is an important goal and threats to self-esteem are perceived as stressful (Lazarus & Folkman, 1984; Semmer, Jacobshagen, Meier, & Elfering, 2007). Unstable high self-esteem is indicative of fragile sense of self-worth, which is associated with increased reactivity to self-threatening events, such as negative feedback and unfair treatment (Meier, Semmer, & Hupfeld, 2009). Moreover, as self-esteem is linked to a self-enhancement bias - in which individuals will go to great lengths to ensure that self-esteem is maintained

(Crocker & Park, 2004), the pursuit of self-esteem has the potential to compromise one's capacity to learn from experience (Deci & Ryan, 2000; Dweck, 2000). As Crocker and Park argue: "when people have self-validation goals, mistakes, failures, criticism, and negative feedback are self-threats rather than opportunities to learn and improve" (2004, p. 399).

Given that psychotherapy is an inherently uncertain profession, when personal or professional self-worth and identity are contingent on positive outcomes, the potential for that self-worth to be threatened is high. This is reflected by the findings discussed above - that psychologists often cite clients who are challenging, aggressive, or ungrateful, or those whose health fails to improve or actively deteriorates - as common stressors within the profession. As the risks associated with self-esteem are not shared by self-compassion, it has been suggested that self-compassion is a more stable and alternative self-relation construct, particularly during times of challenge or failure (Leary et al., 2007; Neff & Vonk, 2009).

Interventions for cultivating self-compassion. The findings discussed above are corroborated by an emerging body of intervention research that focuses on the possibility of training people in self-compassion to promote lasting beneficial outcomes. The type of intervention used has ranged widely, and has included simple written exercises, compassionate mind training, a Gestalt two-chair intervention, meditation practice, and an integrated 8-week training program (Adams & Leary, 2007; Gilbert & Proctor, 2006; Kirkpatrick, 2005; Neff & Germer, 2013). Broadly, these studies indicate that self-compassion is a skill that is capable of being cultivated in lasting ways, using a variety of techniques, amongst a range of different target audiences. While the research has not yet produced conclusive evidence for the

specific effects of increases in self-compassion in bringing about positive psychological outcomes, these studies provide preliminary support for approaches to stress prevention based on self-compassion.

Induction studies have provided initial evidence that (a) self-compassion can be increased, and (b) increases in self-compassion correspond with enhanced wellbeing and reduced distress. For example, a study by Adams and Leary (2007) found that inducing self-compassion using a brief self-statement amongst restrictive and guilty eaters promoted adaptive affective and behavioural responses following a break in their diet. The induction group were compared to a control group of restrictive eaters who did not receive the induction, as well as a control group of nondieters. Restrictive eaters who did not receive the induction ate more following the break in their diet, and reported more negative affect and less positive affect. In addition, a study by Leary et al. (2007) – discussed above – found that participants who received a self-compassion induction while recalling a negative self-relevant event reported significantly less negative affect and more connectedness with others than participants in any of the three control groups (a self-esteem induction, a writing control condition, and a no-intervention control).

Along similar lines, Neff, Kirkpatrick, et al. (2007) used a Gestalt two-chair intervention to raise levels of self-compassion, and found that positive changes in self-compassion significantly correlated with increases in social connectedness, and decreases in self-criticism, depression, rumination, thought suppression, and anxiety. Moreover, all of these correlations, apart from the correlation with depression, remained significant when reductions in anxiety were controlled for (Neff, Kirkpatrick, et al., 2007). While further research is needed to determine the specific

impact of this intervention and its utility in clinical settings, this study suggests that raising self-compassion through a two-chair intervention may have a number of important implications for psychological wellbeing.

From Paul Gilbert's line of research, a number of studies have examined the effect of compassionate mind training and related interventions in treating a range of symptoms of psychopathology. For example, compassionate mind training has been used to reduce psychological distress amongst people high in shame and self-criticism (Gilbert & Proctor, 2006) and decrease the hostility of auditory hallucinations amongst people with psychosis (Mayhew & Gilbert, 2008). Compassion-focused therapy has also been used as a framework for the development of treatments for eating disorders (Goss & Allan, 2010) and anxiety disorders (Welford, 2010). A major component of these approaches is the development of a compassionate image – that is, a visualisation of an image that connotes warmth, acceptance, understanding, and compassion (Gilbert, 2010b). This approach is similar to that used in Buddhist approaches, where meditation on images of compassion is used to help develop feelings of compassion for self and others (Lee, 2005). This notion is supported by research that has found that engagement in meditative practices is effective in enhancing empathy for others as well as compassion for the self (Kristeller & Johnson, 2005). Meditative practices that focus specifically on developing these qualities, such as loving-kindness or metta meditation, have been found to increase self-compassion (Shapiro et al., 2005; Shapiro et al., 2007), as well as a number of other positive psychological outcomes (see Hofmann et al., 2011 for a review).

Mindfulness-based interventions such as MBSR and MBCT have also been

found to increase self-compassion in a variety of populations (Barnard & Curry, 2011b). Mindfulness-based interventions are designed to enhance present moment acceptance and awareness, and foster a curious, open, and non-judgmental approach towards one's experiences (Kabat-Zinn, 1990). Some theorists have suggested that a basic level of mindfulness is an essential foundation for the cultivation of self-compassion (Germer, 2009; Neff & Germer, 2013). Two studies (discussed above) have looked at the effect of MBCT- and MBSR- based protocols amongst trainee and experienced health professionals (Shapiro et al., 2005; Shapiro et al., 2007) and have found that increases in mindfulness through meditation practice co-occur with increases in self-compassion. Additionally, a study by Moore (2008), found that while overall self-compassion did not increase following a 4-week mindfulness program for trainee clinical psychologists, scores on the self-kindness subscale did. Most recently, the results of a randomized controlled trial of the Mindful Self-Compassion (MSC) program – an 8-week integrated mindfulness and self-compassion training program developed by Neff and Germer (2013) – indicated that participants from a community sample reported significant increases in self-compassion, mindfulness, compassion for others, and life satisfaction, and significant decreases in depression, anxiety, stress, and the impact of trauma after completing the program. While the majority of the gains in wellbeing were explained by increases in self-compassion, increases in mindfulness accounted for additional variance in terms of happiness, stress, and the impact of trauma. In this study, the authors found large effect sizes for increases in self-compassion and decreases in depression, while increases in mindfulness, other-focused compassion, and life satisfaction, and decreases in anxiety, stress, and avoidance showed a moderate effect size. They reported a small effect size for increases in social connectedness

and happiness.

Finally, of relevance to the current research is the finding that internet-based self-compassion interventions may be capable of increasing positive psychological outcomes amongst participants. In a 2010 study, Shapira and Mongrain found that amongst an internet community sample, an online intervention in which participants were instructed to write a compassionate letter to themselves every day for one week resulted in significant increases in happiness for up to 6 months, and significant decreases in depression for up to 3 months, when compared to a control group instructed to write about early memories. Surprisingly, the researchers did not examine whether the intervention had any impact on participant's self-compassion levels, so it is not possible to say whether self-compassion accounted for the positive changes reported.

Self-compassion and emotion regulation. As noted above, there is currently limited understanding of the mechanisms by which self-compassion impacts associated markers of psychological health, however preliminary research indicates that emotion regulation strategies may play a key role in mediating the self-compassion – psychological distress relationship. Emotion regulation "refers to the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions" (Gross, 1998, p. 275). The use of different emotion regulation strategies has been found to impact a range of cognitive, affective and social consequences (Gross, 2002). Problematic emotion regulation strategies are implicated in a variety of psychological disorders, potentially increasing the severity and duration of negative emotional experiences (Aldao et al., 2010). As a result, emotion regulation has been highlighted as a key

variable in transdiagnostic approaches that seek to identify psychological processes that underlie a range of mental health difficulties.

Much of the self-compassion literature reviewed above supports the hypothesis that self compassion may promote adaptive emotional responding and reduce the use of problematic emotion regulation strategies. Neff (2003b) suggests that self-compassion promotes equanimity in the face of difficult emotional experiences, allowing individuals to cope more effectively with these experiences. Strong correlations have been found between self-compassion and emotional intelligence (Neff et al., 2005), which encompasses the ability to regulate and repair negative moods, as well as the capacity to identify, discriminate between, and communicate emotional states (Goleman, 1995). In addition, Raes (2010) found evidence that the relationship between self-compassion and depression is mediated by problematic emotion regulation *strategies*, such as rumination and worry. Evidence supporting emotion regulation difficulties as a mediator of the relationship between self-compassion and psychological distress is discussed further in Chapter Two.

Self-compassion for professional and trainee psychologists. From the above discussion, it may be surmised that self-compassion is potentially highly relevant for psychologists across the career span, in terms of its ability to promote wellbeing and resilience to occupational stress. First, the mindfulness aspect of self-compassion potentially protects against the use of maladaptive defense mechanisms that therapists lacking self-awareness may resort to in the face of occupational stress (Etherington, 2000). Secondly, the self-kindness aspect of self-compassion may promote the self-care attitudes and behaviours that are a vital factor in maintaining

well-functioning and have been described as an "ethical imperative" (Barnett, et al., 2007). Finally, self-compassion may act to reduce levels of perfectionism, self-criticism and self-doubt that have been linked to increased stress and burnout amongst health professionals (Hannigan et al., 2004; Henning et al., 1998).

Future directions for research. While there is a mounting body of evidence to suggest that self-compassion may play an important role in promoting psychological wellbeing and enhancing resilience to occupational stress amongst psychologists, the relationship between self-compassion and psychological distress in this professional group has not yet been directly tested. Given that self-compassion has been shown to be a variable that is responsive to practice and training, the investigation of these variables and the clarification of the ways in which they interact is of significant relevance for researchers interested in promoting well-functioning and preventing work-related distress amongst this occupational group. Further, based on suggestions that emotion regulation theory may account for self-compassion's beneficial effects on psychological health, preliminary investigation of the mediating role of emotion regulation difficulties in the self-compassion-distress relationship is warranted.

In addition, a number of authors have highlighted the importance of enhancing therapists' understanding of and capacity for self-awareness, self-care, emotion regulation, and stress management throughout their careers, and particularly during training (Baker, 2003; Kuyken, Peters, Power, & Lavender, 2003; Shapiro, et al., 2005; Weiss, 2004). In particular, it has been suggested that the development and evaluation of interventions designed to increase these capacities amongst trainee psychologists is an important area of future research (Shapiro, et al., 2005; Shapiro,

et al., 2007). Based on findings that web-based interventions are an effective, sustainable, and accessible way of delivering stress management training and positive psychology interventions, it is suggested that the development of a web-based self-compassion training program for stress management amongst trainee therapists is a worthwhile direction for research. The importance of this initiative is underscored by Mitchell and colleagues (2009): "[i]t is a professional imperative that psychologists continue to play an instrumental role in developing new ways of providing services that are accessible, safe and capable of enhancing self-care management practices" (p. 749).

CHAPTER 2: STUDY 1

Testing an Emotion Regulation Model of Self-Compassion and Psychological

Distress among Professional and Trainee Psychologists[1]

Introduction

Chapter 1 presented a review of the literature in support of the proposition that self-compassion is an important construct for psychologists – particularly those undergoing clinical training - in terms of its ability to promote personal and professional wellbeing and buffer against the negative consequences of occupational stress. Despite the increasing evidence attesting to the relevance of self-compassion among this occupational group, no research has sought to quantitatively examine the relationship between self-compassion and psychological distress among trainee or professional psychologists, and there is little insight into the mechanisms that potentially mediate the self-compassion- psychological distress relationship. This latter issue is linked to the fact that across the broader field of self-compassion research, there is no dominant explanatory model for the relationship between self-compassion and psychological outcomes to which it has been consistently linked. In order to address this gap, the current study sought to quantify the link between self-compassion and psychological distress among Australian psychologists (including trainees), and to test a theoretical model of self-compassion that aims to account for its impact on psychological health.

The current study aimed to test the proposition that the primary way in which self-compassion reduces the risk of psychological distress is by limiting the extent to which an individual experiences emotion regulation difficulties in the face of

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[1] An earlier version of this chapter is currently under revision for publication as Finlay-Jones, A., Rees, C., & Kane, R. (under revision). Self-compassion, emotion regulation and distress among Australian psychologists: Testing an Emotion Regulation Model of Self-Compassion using Structural Equation Modeling. *PLoS One*.

stressful events. Emotion regulation refers to the ways in which individuals attend to and appraise their emotions as well as the ways they modulate the intensity and duration of emotional states (Gross & Muñoz, 1995; Thompson, 1994). Based on a review of the extant emotion regulation literature, Gratz and Roemer (2004) proposed a multidimensional conceptualization of emotion regulation that involves: (a) emotional understanding, awareness, and acceptance; (b) the ability to reduce impulsive reactions and maintain goal-directed behaviour in the face of negative emotions; (c) the ability to modulate the intensity or duration of emotions using flexible and appropriate emotion regulation strategies; and (d) preparedness to encounter negative emotions in the course of pursuing meaningful experience.

The authors suggested that difficulties in any of these areas may represent problems with emotion regulation, and developed the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004) to quantify these deficits. According to this operationalization, difficulties with emotion regulation may involve any of the following: struggling to recognize, understand or accept certain emotional states, problems accessing adaptive coping strategies, and difficulties controlling impulses and maintaining goal-orientated behaviour in the face of difficult emotional encounters (Gratz & Roemer, 2004). In the absence of access to adaptive coping strategies, individuals may engage in problematic emotion regulation strategies such as rumination (Miranda, Tsypes, Gallagher, & Rajappa, 2013) and avoidance (Gratz & Roemer, 2004) more frequently. These strategies are consistently linked to a range of negative psychological outcomes (Aldao et al., 2010) as they generally serve to maintain or increase negative affective experiences over time (Campbell-Sills & Barlow, 2007; Werner & Gross, 2010).

There are a number of reasons to believe that self-compassion may exert its beneficial effects on psychological health via reducing problems in emotion regulation (Gratz & Tull, 2010). As discussed in Chapter 1, mindful awareness of difficult experiences and emotions is one of the three key components of the self-compassion construct. It may be theorized that this aspect of the self-compassionate perspective enhances individuals' awareness of their emotional experiences and promotes insight and clarity regarding emotional antecedents and consequences. Neff's (2003a) operationalization of self-compassion also constructs the mindfulness component in terms of a lack of overidentification with emotional experiences: that is, individuals who are more self-compassionate are less likely to get caught up in or overwhelmed by difficult emotions. As such, it is likely that a self-compassionate perspective promotes equanimity in the face of stressful encounters.

Hypothetically, this response is bolstered by the capacity for self-kindness (as opposed to self-criticism) and the understanding of the interconnectedness of human experience (as opposed to feelings of isolation) that is thought to be characteristic of self-compassionate individuals. Given that self-compassionate individuals are less likely to engage in self-blame and self-criticism in the face of stressful circumstances, it is plausible that negative emotions brought about by these encounters are likely to be less severe and more short-lived (Van Dam et al., 2011). In addition, the self-kindness facet may make it likely that self-compassionate individuals will act in self-serving ways (such as maintaining goal-direction and restraining self-destructive impulses) in difficult situations.

Finally, the ability to see difficult encounters and emotions as part of the common human experience is thought to reduce feelings of isolation and shame that

commonly arise in response to challenging situations (Germer & Neff, 2013; Woods & Proeve, 2014). This may be particularly relevant to the experience of negative self-relevant emotional experiences, such as failure or receiving negative feedback (e.g., Leary et al., 2007). Self-compassionate individuals are more likely to see setbacks and misfortunes as "part of life" and less likely to view them as indicative of something wrong with the self (Siegel & Germer, 2012). This may make it less likely that they will engage in problematic emotional regulation strategies such as rumination (fixating on what went wrong) or catastrophisation (worrying about what might happen in the future). Hypothetically, feeling connected to others while facing difficult emotions makes it less likely that self-compassionate individuals will experience such emotions as aversive and something to be avoided. This, in turn, may make it more likely that such individuals are able to respond to such emotions and the situations that elicit them in balanced and constructive ways.

The above discussion provides some insight into the ways that the three components of self-compassion are thought to enhance individuals' capacities to regulate negative emotions that may arise in response to stressful experiences, thereby reducing their experience of stress (Neff, Kirkpatrick, et al., 2007). It is hypothesized that self-compassion reduces problematic emotion regulation and promotes adaptive coping because self-compassionate people are less likely to be taxed by the negative self-evaluations and accompanying negative emotions that often arise in response to failures and other stressful events (Sirois, Kitner, & Hirsch, 2014; Terry & Leary, 2011). As a result, stressors are appraised as less threatening, and self-regulatory resources are more freely available to allow self-compassionate individuals to cope effectively with the situation at hand (Sirois, Molnar, & Hirsch, 2015).

This view is consistent with Lazarus and Folkman's (1984) transactional model of stress and coping, which highlight individuals' cognitive and behavioural responses to stress as a pivotal factor in determining the nature of the stress response. Adaptive responding to stress involves changing the way that the nature of the stressor is appraised, or making behavioural changes to reduce or remove the impact of the stressor. While a theoretical review conducted by Allen and Leary (2010) proposed that the link between self-compassion and reduced stress may be mediated by coping strategies, and some evidence suggests that self-compassion indeed helps to promote balanced, non-reactive responding to difficult emotional experiences (e.g., Allen & Leary, 2010; Leary et al., 2007; Neff et al., 2005) the role of emotion regulation strategies in the self-compassion – stress link is yet to be thoroughly explored.

The current study aimed to extend the understanding of the relationship between self-compassion, emotion regulation, and psychological distress by testing an emotion regulation model of self-compassion in which emotion regulation difficulties mediate the link between self-compassion and psychological distress outcomes (measured in terms of symptoms of depression, anxiety, and stress). According to Lazarus and Folkman's (1984) model, coping attempts mediate stressful encounters and stress responses. While emotion regulation and coping are not necessarily synonymous, they are often conceptualised as overlapping and interlinked constructs. The current research examined stable difficulties with emotion regulation thought to influence how an individual tends to cope with stressful situations. This model is depicted in Figure 1.
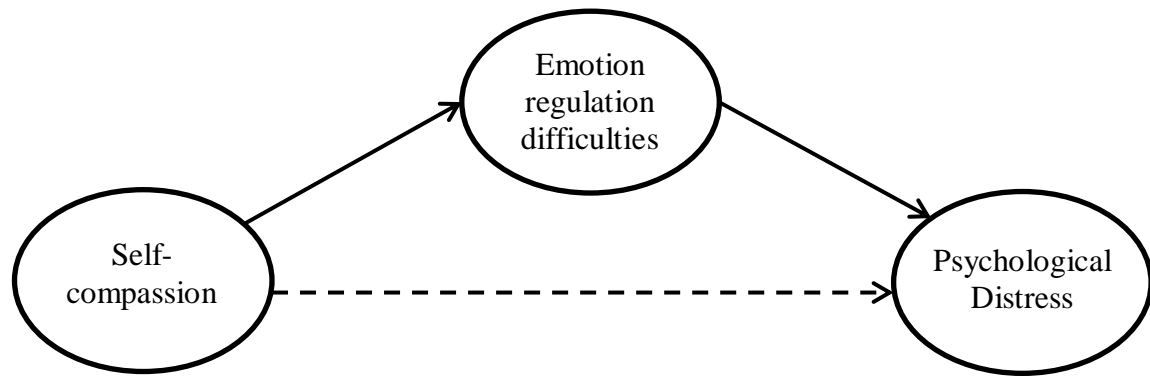
Figure 1. The emotion regulation model of self-compassion and psychological distress.

Hypotheses. As neuroticism has been found to predict both exposure and reactivity to daily stressors (Bolger & Schilling, 1991), it was anticipated that this variable may need to be controlled in the current study. As age and gender have previously been linked with both self-compassion (Neff, 2003b) and stress (Deutsch, 1984), it was also expected that the effects of these variables would need to be controlled. It was hypothesised that after controlling for neuroticism, age and gender:

H1: Self-compassion will significantly negatively predict psychological distress (measured in terms of depression, anxiety, and stress).

H2: Self-compassion will significantly negatively predict emotion regulation difficulties.

H3: Emotion regulation difficulties will significantly positively predict psychological distress.

H4: SEM Comparison of the saturated structural model (Figure 2) and the nested mediator model (Figure 3) will indicate that the relationship between self-compassion and psychological distress will be fully mediated by emotion regulation.
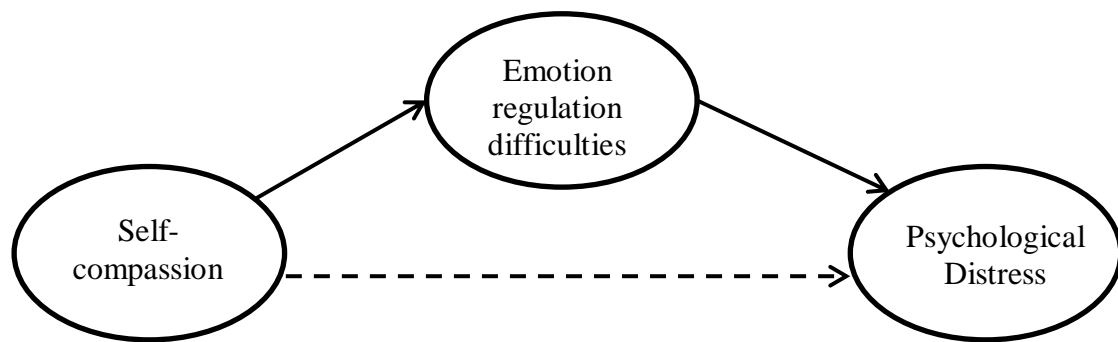
Figure 2. The saturated structural model.
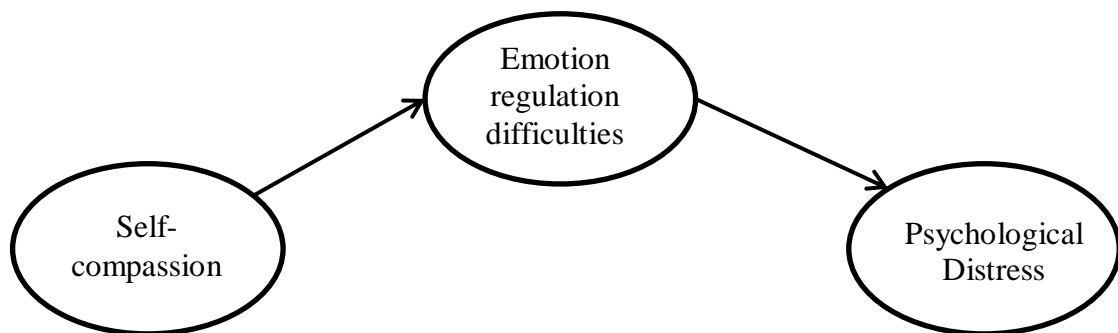
Figure 3. The nested mediator model.

Method

Ethics statement. Ethical approval for this study was granted by the Curtin University Human Research Ethics Committee (Approval number HR134/2011).

Participants. Participants were 198 currently practising Australian psychologists at various stages of the career span. Of these 105 (53%) were trainee psychologists, and 93 (47%) were professional psychologists. This sample size was sufficient to meet Kline's (2005) suggested minimum cases-to-parameter ratio of 5:1 for structural equation modelling analyses. To be included in the study, participants had to be over 18 years old and currently engaged in clinical work as a trainee or

professional psychologist[2]. Participants also had to self-identify as a provisional or full member of the Australian Health Practitioner Regulation Agency (AHPRA), the regulating body for health practitioners (including psychologists) in Australia.

Participants were recruited via snowball emailing directly to participants, through professional psychotherapy bodies and universities with postgraduate psychology programs around Australia. Additionally, the study was advertised through social media platforms such as Facebook and Twitter. Emails and advertisements outlined the purpose of the study and the eligibility criteria for participants. In addition, participants were informed that they would be able to enter a prize draw to win one of two AUD$150 vouchers upon completion of the study questionnaire (see Appendix B for a copy of the email invitation). It was hoped that this incentive would encourage interest from individuals others than those who had a vested interest in the research question, increase response rates and reduce participant attrition (Wyatt, 2000).

The sample consisted of 27 males (13.6%) and 171 females (86.4%), ranging in age from 22 to 68 years ($M = 36.25$, $SD = 11.79$). While the gender distribution in the current study was skewed, it should be noted that estimates of the ratio of females to males within the workforce of Australia psychologists are around 80:20 (Mental Health Workforce Advisory Committee, 2008). Participants' age, gender, occupational group and education level are outlined in Table 1. Participants' degree stream (trainee psychologists) and primary area of specialisation (professional psychologists) are presented in Table 2.

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[2] For the purposes of this study "professional psychologists" is the term used to denote psychologists who (a) identify psychology as their primary profession and (b) are not currently enrolled in postgraduate study. "Trainee" psychologists are those who are currently enrolled in a post-graduate psychology degree.

Table 1

Participants' Age, Gender, and Education.

	Mean	*SD*
Age	36.25	11.79
	Frequency	**Percentage**
Gender		
Male	27	13.60
Female	171	86.40
Current Occupation		
Trainee Psychologist	105	53.00
Professional Psychologist	93	47.00
Education Level		
Bachelor Degree	85	42.9
Graduate Diploma	8	4.0
Post-Graduate Diploma	17	8.6
Master's Degree	60	30.3
PhD/Doctorate	27	13.6

Table 2

Participants' Current Degree and Primary Profession

Trainee Psychologists		
	Frequency	**Percentage**
Current Degree		
PhD (Psychology)	37	18.7
Doctorate	24	12.1
Master of Applied Psychology	21	10.6
Master of Psychology	21	10.6
Post-Graduate Diploma	2	1.0
Current Stream		
Clinical Neuropsychology	2	1.0
Clinical Psychology	86	43.4
Counselling Psychology	9	4.5
Health Psychology	3	1.5
Developmental Psychology	3	1.5

Professional Psychologists		
	Frequency	**Percentage**
Primary Profession		
Counselling Psychologist	32	34.40
Clinical Psychologist	41	44.08
Educational Psychologist	4	4.30
General Psychologist	16	17.20

Research Design and Data Analysis. This study employed a cross-sectional, correlational design to investigate a predictive model. Preliminary data analysis was carried out using the Statistical Package for the Social Sciences (SPSS) version 17.0. Structural equation modelling (SEM) with maximum likelihood estimation was used to determine the extent to which emotion regulation difficulties mediated the relationship between self-compassion and psychological distress. SEM analyses were carried out using LISREL version 9.10 (Jöreskog & Sörbom, 2013).

Measures.

21-Item Depression, Anxiety, Stress Scales (DASS-21). Psychological distress (i.e. symptoms of depression, anxiety, and stress) was measured using the DASS-21 (Lovibond & Lovibond, 1995). The DASS-21 is a 21-item self-report instrument with three 7-item scales designed to measure symptoms of depression, anxiety and stress over the past week using a 4-point Likert-type response format (0 = *did not apply to me at all* to 3 = *applied to me very much, or most of the time*). The Depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest/involvement, anhedonia, and inertia. An example item from this scale is "*I couldn't seem to experience any positive feeling at all*". The Anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. An example item from this scale is "*I felt I was close to panic*". The Stress scale assesses levels of chronic non-specific arousal, such as difficulty relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive and impatient. An example item from this scale is "*I tended to over-react to situations*". The DASS-21 subscales have been shown to have high internal consistency and may be utilized to measure current states of depression, anxiety, and stress, as well as changes in these states over time. In the

current study, Cronbach's alphas for the depression, anxiety, and stress subscales were 0.89, 0.77, and 0.85, respectively.

Self-Compassion Scale – Short Form (SCS-SF). The SCS-SF (Raes, Pommier, Neff, & Van Gucht, 2011) is a 12-item self-report measure used to measure trait self-compassion. This measure employs a five-point Likert-type response format, ranging from 1 (*almost never*) to 5 (*almost always*). The SCS-SF is a short version of the 26-item Self-Compassion Scale (Neff, 2003a), and measures self-compassion across three dimensions: self-kindness, common humanity, and mindfulness. The inverse of these dimensions is also assessed using self-judgment, isolation, and over-identification subscales, with items from these scales reverse-scored. An example item from the Self-Kindness subscale is "*I try to be understanding and patient towards those aspects of my personality I don't like*"; an example item from the mindfulness subscale is "*[w]hen something painful happens I try to take a balanced view of the situation,*" while an example item from the common humanity subscale is "*I try to see my failings as part of the human condition*".

Factorial validation of the SCS-SF has indicated that it has a single higher-order self-compassion factor, as well as six second-order factors that correspond to the six dimensions of self-compassion (Raes et al., 2011). When examining total scores, the SCS-SF correlates highly with the long scale, which has strong internal consistency, test-retest reliability, and convergent and discriminant validity (Raes et al., 2011). The SCS-SF has demonstrated adequate internal consistency (Cronbach's alpha ≥ .86; Raes et al., 2011). In the current study, the reliability of this scale was α = 0.89.

Difficulties with Emotion Regulation Scale (DERS). The DERS (Gratz & Roemer, 2004) is a 36-item self-report questionnaire that is designed to measure clinically important problems with emotion regulation. The DERS uses a five-point Likert-type response format (1 = *almost never* to 5 = *almost always*) to measure six different types of emotion regulation difficulties, which are described in Table 3. While the DERS was also designed to yield a total emotion regulation difficulties score, it has been argued that these scores should be interpreted with caution given controversy over the factor structure of the scale, with some authors finding that the "Lack of Emotional Awareness" scale has only modest correlations with the other subscales, fails to significantly predict outcomes relevant to the emotion regulation difficulties domain, and does not consistently load onto an overarching higher-order emotion regulation difficulties construct (e.g., Bardeen, Fergus, & Orcutt, 2012; Neumann, van Lier, Gratz, & Koot, 2010; Tull, Barrett, McMillan, & Roemer, 2007). The DERS has exhibited good validity, test-retest reliability, overall internal consistency and subscale reliability, with Cronbach's alphas > .80 for each subscale (Gratz & Roemer, 2004; Ortega, 2009). In the current study, the reliability of the subscales was as follows: non-acceptance: $\alpha = 0.91$, goal-direction: $\alpha = 0.90$, impulse control: $\alpha = 0.78$, lack of awareness: $\alpha = 0.82$, limited access to strategies: $\alpha = 0.89$, lack of clarity: $\alpha = 0.75$.

Big Five Inventory (BFI). Neuroticism was measured using the Neuroticism subscale of the BFI (John, Donahue, & Kentle, 1991). The BFI is a 44-item questionnaire that assesses the Big Five Personality domains. Each item is a short descriptive statement, and respondents are asked to rate how much the characteristics described applies to them, using a 5-point Likert-type response scale (1 = *disagree strongly* to *5* = agree strongly). The BFI is freely available for research purposes and

has been found to have good reliability, a clear factor structure, convergent validity

with longer Big Five measures, and adequate self-peer agreement (Soto, John,

Gosling, & Potter, 2008).

Table 3

Subscales of the Difficulties in Emotion Regulation Scale

Subscale Name	No. Items	Score Range	Example Item
Non-Acceptance of Emotional Responses	6	6 – 30	"[w]hen I'm upset I become angry with myself for feeling that way"
Difficulties Engaging in Goal-Directed Behaviour	5	5 – 25	"[w]hen I'm upset I have difficulty focusing on other things"
Impulse Control Difficulties	6	6 – 30	"[w]hen I'm upset I have difficulty controlling my behaviours"
Lack of Emotional Awareness	6	6 – 30	"I pay attention to how I feel" (reverse scored)
Limited Access to Emotion Regulation Strategies	8	8 – 40	"When I'm upset, I believe that wallowing in it is all I can do"
Lack of Emotional Clarity	5	5 – 25	"I have difficulty making sense out of my feelings"

Demographic questionnaire. A demographic questionnaire (Appendix A)

was created to assess age, gender, current occupation (whether trainee or professional

psychologist), highest educational qualification attained, duration of clinical

experience, and average number of hours spent in clinical practice per week. In

addition, trainee psychologists were asked about type and stream of their current

degree, while professional psychologists were asked to specify their primary area of specialisation (if any).

Procedure.

Online questionnaire procedure. All measures were administered online using the web-based survey software Qualtrics. Recruitment emails and advertisements contained a hyperlink that directed participants to an online version of the *Participant Information and Consent Form* (Appendix C), which outlined the nature of the study and the inclusion criteria. Participants were asked to read this form and click through to the survey if they met the inclusion criteria and consented to participate in the research. The order of administration of the measures was automatically randomised to reduce order effects (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Upon completion of the questionnaire battery, participants were asked to enter their email address if they wanted to be included in the prize draw, and to select their choice of voucher (Amazon, iTunes, or ColesMyer) should they win. Participants were informed that their email addresses would not be linked to the other data provided. Participants were also given a brief description of the nature and aim of Study Two, and were asked to provide an email address if they wished to be contacted when Part Two of Study Two was open for registration. Qualtrics filters were used to download and store participants' email addresses separately to the rest of the data. Winners of the prize draw were determined using an online random-number generator, and the winner was notified via email.

Results

Data screening. Prior to conducting Structural Equation Modelling analyses, data for each variable were screened for missing and out-of-range values (Tabachnick & Fidell, 2013).

Missing data. Of the 286 eligible participants who commenced participation in the study, 88 submitted questionnaires that had more than 15% missing data on one or more scales. Given the relatively large sample size, it was decided not to include these questionnaires in this analysis. Following this, the data set contained 198 cases; for the two remaining cases with missing data, the results of Little's (1988) Missing Completely At Random (MCAR) test were obtained using the missing value analysis feature in SPSS. The results of this test were non-significant, $\chi^2 = 115.786$, $df = 134$, $p > .05$, supporting the use of maximum likelihood estimation to impute missing data. Compared with other techniques, maximum likelihood estimation provides unbiased parameter estimates (Enders, 2010) and improves the accuracy and power of the analyses (Schafer & Graham, 2002). Estimation Maximization methods were used to obtain maximum likelihood estimates for each scale across the remaining cases with missing data.

In order to determine whether there was a significant difference between participants who completed the questionnaire and those who did not, a series of chi-square tests were conducted on the demographic data provided. Across all participants, there were no significant differences between completers and non-completers in terms of gender, $\chi^2 (1, N = 261) = 2.36$, $p > .05$, education level, $\chi^2 (1, N = 262) = 2.47$, $p > .05$ or current occupation $\chi^2 (1, N = 269) = 2.65$, $p > .05$. Among the trainee therapists, there was no significant difference between completers and non-completers in terms of current degree $\chi^2 (1, N = 160) = 0.93$, $p > .05$. In this group there was a significant difference between completers and non-completers in terms of current stream, $\chi^2 (1, N = 158) = 10.23$, $p < .05$. Trainees studying clinical neuropsychology were more likely than not to be non-completers, while trainees in other streams were more likely than not to be completers. Among the professional

psychologists, there was no significant difference between completers and non-completers in terms of primary profession χ^2 (1, N = 92) = 12.11, p > .05.

Univariate normality. Inspection of SPSS frequencies tables indicated that the values for each item were within the expected range. Univariate normality was assessed by examining the histograms with normality curve overlay for each variable, as well as the skewness and kurtosis values and tests of normality. While the histograms and Kolmogorov-Smirnov statistics revealed deviations from normality for a number of the variables, the skewness and kurtosis values did not exceed the cut-offs suggested by West, Finch, and Curran (1995). As such, it was not considered necessary to transform the data.

Assumption testing for structural equation modelling. Structural equation modelling is based on the assumptions of multivariate normality, linearity, and an absence of multicollinearity (Kline, 2005). SPSS and LISREL procedures were used to test these assumptions. Multivariate normality - the assumption that all variables and all linear combinations of variables are normally distributed (Tabachnick & Fidell, 2013) - was tested using the PRELIS program. Significant chi-square statistics revealed that the data were not multivariate normal. As a result, all SEM analyses were performed using Browne's (1984) ADF chi-square, which does not assume multivariate normality (Satorra & Bentler, 2001). To assess linearity, a selection of the scatterplots for the bivariate correlations was examined. No obvious curvilinear trends were observed among the scatterplots inspected, indicating that this assumption was not violated (Tabachnick & Fidell, 2013). To check for multicollinearity, all of the variables were regressed onto the data identification number (i.e., the number assigned to each case according to their place in the data set) as the dependent variable, to produce a tolerance value. In line with Kleinbaum,

Kupper, Nizan, and Muller (2008), an absence of multicollinearity in the current data was indicated by the fact that none of the tolerance values were less than .1.

Control variables. Calculation of the bivariate correlations between the variables revealed that neuroticism was significantly correlated with each of the indicators; as such, it was retained as a control variable in subsequent analyses. In addition to neuroticism, the effects of age, gender, years of experience and occupational group on the outcome variables were tested in order to investigate whether these variables would need to be controlled. Age and years of experience were significantly correlated with each of the indicator variables; however, when age and years of experience were entered as predictors in a linear regression, the correlations between years of experience and the indicator variables were non-significant once age was controlled. As a result, age was retained as a control variable, whereas years of experience was not.

A multi-group analysis of the equality of the correlation matrices (based on the partial correlations between the variables after controlling for age) was conducted to determine whether the partial correlations among the nine indicators varied as a function of occupational group (i.e. professional versus trainee psychologists) or gender. As the relationship among the indicators did not vary as a function of occupational group, χ^2 (45, $N = 198$) = 29.33, $p = .970$ or gender χ^2 (55, $N = 198$) = 17.27, $p = .990$, it was considered appropriate to collapse the data across occupational group and gender.

Descriptive statistics. The means, standard deviations, and ranges for the 11 observed variables are reported in Table 4, which also shows the correlations among the variables. As the observed variables were not multivariate normal, Spearman's correlation coefficients were used as an index of correlation amongst these variables

(Pugesek & Grace, 1998). Reliability analyses were performed for the scales and subscales to be used in the analysis. All scales and subscales had an acceptable coefficient alpha (Tavakol & Dennick, 2011); these statistics are also reported in Table 4.

Table 5 shows the partial correlations among the observed variables after controlling for age and neuroticism. After controlling for age and neuroticism, self-compassion was significantly negatively related to depression ($r = -.22$, $p = .002$) and stress ($r = -.33$, $p < .001$), but not anxiety ($r = -.06$, $p = .370$). As such, anxiety was excluded from further analyses.

Inspection of the correlations between the subscales of the DERS and depression and stress revealed that the clarity and awareness subscales only shared modest correlations with the other subscales, and did not significantly correlate with either depression or stress. It was therefore decided to exclude these subscales from the analysis. Given that different emotion regulation problems are theorised to underlie different psychological outcomes (Aldao et al., 2010), it was decided to examine the partial correlations between each type of emotion regulation difficulty and the depression and stress outcomes. In our sample, non-acceptance, goal-direction, and strategies shared a significant positive correlation with depression, while impulse control, strategies, goal-direction, and non-acceptance shared a significant positive correlation with stress. Given the differences between the types of emotion regulation difficulties that were linked with each outcome, it was decided to perform separate structural equation modelling analyses for depression and stress. In each model only the emotion regulation difficulties that had significant partial correlations with each outcome were used as indicators of a latent emotion regulation difficulties variable.

Table 4

Means, Standard Deviations, Ranges, Internal Consistency Reliabilities, and Spearman's Correlations for Observed Variables

Var.	1	2a	2b	2c	2d	2e	2f	3a	3b	3c	*M*	*SD*	*Min*	*Max*	*α*
1.	-										3.27	0.74	1.28	4.04	.90
2a.	-.58***	-									11.20	4.91	6	30	.91
2b.	-.47***	.32***	-								13.21	4.58	5	25	.90
2c	-.55***	.50***	.46***	-							9.15	3.00	6	21	.78
2d.	-.28***	.18**	.09	.23**	-						12.84	4.22	6	29	.82
2e.	-.69***	.59***	.55***	.58***	.14*	-					13.28	5.01	8	37	.89
2f.	-.29***	.29***	.22**	.32***	.55***	.28***	-				8.80	2.51	5	19	.75
3a.	-.46***	.38***	.37***	.34***	.10	.56***	.17*	-			5.69	6.69	0	42	.89
3b.	-.39***	.40***	.32***	.43***	-.02	.49***	.14*	.44***	-		3.49	4.72	0	34	.77
3c.	-.54***	.51***	.38***	.50***	.14*	.60***	.20**	.55***	.52***	-	11.96	8.00	0	42	.85
4.	-.70***	.54***	.44***	.58***	.20**	.63***	.25***	.37***	.43***	.49***	2.70	.85	1	5	.86

1: Self-Compassion 2: Difficulties with Emotion Regulation: 2a: Non-Acceptance, 2b: Goal-Direction, 2c: Impulse Control, 2d: Awareness, 2e: Strategies, 2f: Clarity; 3.

Psychological distress: 3a: Depression, 3b: Anxiety, 3c: Stress; 4. Neuroticism *: $p < .05$, **: $p < .01$, ***: $p < .001$.

Table 5

Partial Correlations Among Observed Variables, Controlling for Neuroticism and Age

Variable	1	2a	2b	2c	2d	2e	2f	3a	3b	3c
1.	-									
2a.	-.35***	-								
2b.	-.23**	.18*	-							
2c	-.23**	.26***	.35***	-						
2d.	-.24**	.05	-.03	.15*	-					
2e.	-.41***	.46***	.44***	.37***	.02	-				
2f.	-.19**	.18**	.11	.24***	.55***	.10	-			
3a.	-.22***	.26***	.17*	.13	.08	.47***	.12	-		
3b.	-.06	.20**	.13	.20**	-.14	.21**	-.03	.29***	-	
3c.	-.33***	.30***	.19**	.34***	.07	.28***	.09	.39***	.42***	-

1: Self-Compassion 2: Difficulties with Emotion Regulation: 2a: Non-Acceptance, 2b: Goal-Direction, 2c: Impulse Control, 2d: Awareness, 2e: Strategies, 2f: Clarity; 3.

Psychological distress: 3a: Depression, 3b: Anxiety, 3c: Stress; 4. Neuroticism *: $p < .05$, **: $p < .01$, ***: $p < .001$.

Differences between occupational groups on outcome variables. In order to determine whether there were clinically relevant differences between occupational groups (i.e., professional versus trainee psychologists) on each of the outcomes measured, mean scores for each group were calculated and compared. In addition, mean scores on the DASS-21 were compared with severity cut-offs (Table 6). The results indicated that both groups were in the normal range for stress symptoms, and there was no statistically significant difference between the groups on this measure. Despite this, examination of the frequency and range of scores on the DASS-21 found that 9% of the sample of trainee psychologists was in the moderate-extremely severe range for depression, 8% of the sample was in this range for anxiety, and 20% of the sample was in this range for stress. For professional psychologists, 4% of the sample was in the moderate-extremely severe range for depression and 15% of the sample was in this range for stress, with 2% of the sample in the moderate range for anxiety. Means for professional psychologists were lower across psychological distress outcomes and higher for self-compassion when compared to trainees, however these differences weren't significant. Descriptive statistics for each group are reported in Table 7.

Table 6

Score Ranges and Severity Ratings for DASS-21 Subscales

Severity	DASS-21 scale		
	Depression	Anxiety	Stress
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
Extremely Severe	28+	20+	34+

Table 7

Descriptive Statistics for Outcome Measures per Occupational Group

	Professional Psychologists			Trainee Psychologists		
	___M___	___SD___	__Range__	___M___	___SD___	__Range__
Self-Compassion	3.35	0.72	1.75-4.92	3.24	0.70	1.42-4.75
ER Difficulties						
DERS 1	9.28	3.04	6-19	9.11	3.06	6-21
DERS 2	12.82	4.41	6-28	13.00	4.12	6-29
DERS 3	13.10	5.12	8-34	13.36	4.84	8-37
DERS 4	8.82	2.49	5-15	8.80	2.53	5-19
DERS 5	10.93	4.60	6-29	11.37	5.07	6-30
DERS 6	12.34	4.56	5-25	13.93	4.50	5-25
Depression	4.95	5.02	0-24	6.59	6.59	0-42
Anxiety	3.04	3.50	0-14	4.13	5.29	0-34
Stress	12.09	8.17	0-42	12.75	7.71	0-36

ER: Emotion Regulation; DERS 1:Non-Acceptance, DERS 2: Goal-Direction, DERS 3: Impulse

Control, DERS 4: Awareness, DERS 5: Strategies, DERS 6: Clarity.

Hypothesis testing. The hypotheses in the current study were based on the premises of mediation outlined by Baron and Kenny (1986), namely: (1) the predictor is related to the criterion; (2) the predictor is related to the mediator; (3) the mediator is related to the criterion; and (4) when the effects of the mediator are controlled, the relationship between the predictor and the criterion is weakened (indicating partial mediation) or made statistically non-significant (indicating full mediation). In the current study, Hypotheses 1-5 relate to the first three premises of mediation, which were tested by examining the relationships between the latent variables. Hypothesis 6 corresponds to the fourth premise of meditation, and was tested by comparing the fit of the saturated structural models and the nested mediator models.

Testing the hypotheses involved four stages. In Stage 1 a Confirmatory Factor Analysis was conducted for each latent variable. Based on the results from Stage 1, the measurement component of the structural equation model was generated, and this model was tested at Stage 2. If the measurement model provided an adequate fit for the data, the analysis progressed to Stage 3, where the fit of the structural model was tested. In Stage 4, the fit of the saturated structural model was compared with the fit of the nested mediation model to determine which model provided the better fit. Hypotheses 1-5 were tested by examining the relationships among the latent variables, while Hypothesis 6 was tested by comparing the fits of the partial and full mediation models.

To test the hypotheses, structural equation modelling (SEM) with maximum likelihood estimation using LISREL version 9.10 (Jöreskog & Sörbom, 2013) was carried out. A number of indices were used to evaluate model fit; with good fit indicated by the following cut-off values: less than 3 for χ^2/df (Kline, 2005), above .90 for the comparative fit index (CFI) and the non-normed fit index (NNFI; Hu &

Bentler, 1999), below .10 for the standardized root-mean-square residual (SRMR), and below .05, or a confidence interval that encompasses this value, for the root-mean-square error of approximation (RMSEA; Jaccard & Wan, 1996). All of the SEM tests met Kline's (2005) suggested minimum cases-to-parameter ratio of 5:1.

Confirmatory factor analysis. Confirmatory factor analysis (CFA) was used to determine the extent to which the observed variables measured the latent constructs. The indices described above were used to determine model fit. The results of the confirmatory factor analyses did not unequivocally support the factor structures described below, particularly in terms of the RMSEA statistics. However, it should be noted that there is some contention over using universal cut-offs to determine model fit on this index, as sample size, model specifications, and degrees of freedom all impact the appropriateness of a certain cut-off value (Chen, Curran, Bollen, Kirby, & Paxton, 2008). As such, it was considered important to evaluate the fit of factor structures across all of the goodness-of-fit indices described above, rather than considering single indices as an absolute assessment of model fit (Barrett, 2007; Chen et al., 2008; Goffin, 2007).

Latent variables and indicators. The results of the CFA conducted on the items of the DASS-21 supported the depression and stress scales as separate, single-factor, constructs. In addition, a 1-factor solution was confirmed for self-compassion. For each single-indicator latent variable, the error variance was computed by subtracting the reliability of the scale used to measure the indicator from 1.

Two hierarchical CFAs were conducted for the latent emotion regulation difficulties variables to investigate a higher order emotion regulation difficulties construct with 3 indicators (for the depression model) and 4 indicators (for the stress model). A higher order, single-factor emotion regulation difficulties construct based

on the non-acceptance, strategies, and goal direction subscales of the DERS was

supported by the data, as was a higher order, single-factor solution based on these

scales with the addition of impulse control items. The results of the CFA are reported

in Table 8.

Table 8

Confirmatory Factor Analysis Fit Statistics

Model	χ^2/df	CFI	NFI	SRMR	RMSEA
Emotion Regulation Difficulties					
Hierarchical 3F	339.61/149 = 2.28	0.97	0.95	0.06	0.08 (0.07, 0.10)
Hierarchical 4F	644.20/271 = 2.38	0.96	0.93	0.08	0.09 (0.08, 0.10)
Depression					
1F	33.73/14 = 2.41	0.99	0.97	0.03	0.08 (0.05, 0.12)
Stress					
1F	94.85/14 = 6.77	0.91	0.90	0.07	0.17 (0.14, 0.20)
Self-Compassion					
1F	181.24/54 = 3.36	0.94	0.92	0.07	0.12 (0.09, 0.12)

CFI: Comparative Fit Index; NFI: Normed Fit Index; SRMR: Standardized Root Mean Square Residual; RMSEA: Root Mean Square Error of Approximation

χ^2/df: A value less than 3 indicates a good fit (Kline, 2005); CFI: A value greater than or equal to .90 indicates a good fit (Hu & Bentler, 1999); NFI: A value greater than or equal to .90 indicates a good fit (Hu & Bentler, 1999); SRMR: A value less than or equal to .08 indicates a good fit (Hu & Bentler, 1999); RMSEA: A value less than or equal to .05, or a CI that encompass this value, indicates a good fit (Jaccard & Wan, 1996).

Model testing.

Depression. Hypothesis 1 predicted that after controlling for age and

neuroticism, self-compassion would significantly negatively predict depression. This

hypothesis was supported, with a significant, negative correlation observed between

self-compassion and depression, -.25, $p = .002$.

Hypothesis 2 predicted that after controlling for age and neuroticism, self-compassion would significantly negatively predict emotion regulation difficulties. This hypothesis was supported, with a significant negative correlation observed between self-compassion and emotion regulation difficulties, -.50, $p = .000$. The emotion regulation difficulties construct comprised non-acceptance of emotions, lack of access to emotion regulations strategies when distressed, and difficulties engaging in goal-directed behaviour when distressed. The other subscales of the DERS (lack of emotional awareness, lack of emotional clarity, and difficulties controlling impulsive behaviour when upset) did not significantly correlate with depression symptoms once age and neuroticism were controlled for, and so were excluded from the model.

Hypothesis 3 predicted that after controlling for age and neuroticism, emotion regulation difficulties would significantly positively predict depression. This hypothesis was supported, with significant positive correlations observed between emotion regulation difficulties and depression, .54, $p = .008$.

Based on the outcomes of testing Hypotheses 1-3, the first three requirements of Baron and Kenny's (1986) four step analytical procedure for testing mediation models were satisfied. The correlations among the latent variables in these analyses are reported in Table 9.

Table 9

Intercorrelations among Latent Variables for the Depression Model

Construct	1.	2.	3.
1. Self-Compassion	-		
2. Emotion Regulation Difficulties	-.49***	-	
3. Depression	-.25**	.54**	-

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

Testing the measurement model. Examination of the fit statistics for the measurement model suggested that this model fit the data well, and indicated that it was appropriate to test the structural model: χ^2 (4, $N = 198$) = 7.96, χ^2/df = 1.99, CFI = .98, NFI = .96, RMSEA = .07 (90% CI: .00, .14), SRMR = .05. These fit statistics are shown in Table 10.

Testing the partial mediation model. The partial mediation model for depression with its parameter estimates and standard errors is shown in Figure 4. In this model, the pathway from self-compassion to depression was non-significant, indicating that there is no direct pathway from self-compassion to depression once emotion regulation difficulties, age and neuroticism are controlled. All other pathways in this model were significant. The fit indices for this model suggested a good fit to the data, χ^2 (8, $N = 198$) = 18.05, χ^2/df = 2.26, CFI = .97, NFI = .96, RMSEA = .08 (90% CI: .03, .13), SRMR = .05. These statistics are shown in Table 10.

Figure 4. The partial mediation model for depression with its parameter estimates.

Testing the full mediation model. In order to test the full mediation model, the direct pathway from self-compassion to depression was removed: this model, with its parameter estimates and standard errors is shown in Figure 5. The fit statistics for the full mediation model suggested a good fit to the data, χ^2 (5, $N = 198$) = 8.00, $\chi^2/df =$ 1.60, CFI = .98, NFI = .96, RMSEA = .06 (90% CI: .00, .12), SRMR = .04. These statistics are shown in Table 10. As models with more factors will always provide a better fit to the data, a chi-square difference test was performed to determine whether the partial mediation model (with one extra pathway) fit the data significantly better than the full mediation model. The result of this test was non-significant $\chi^2_{difference}$ (1, $N = 198$) = 0.04, $p = .841$. Therefore, it was determined that the data supported a model in which the relationship between self-compassion and depression was fully mediated by emotion regulation difficulties, measured in terms of non-acceptance of emotions, lack of access to emotion regulation strategies, and difficulties with goal-directed behaviour when upset. This model accounted for 28.10% of variance in depression symptoms, and all pathways were significant.

Table 10

Fit statistics for Depression Models

Model	χ^2/df	CFI	NFI	SRMR	RMSEA
Measurement Model	7.96/4 = 1.99	0.98	0.96	0.04	0.07 (0.00, 0.13)
Saturated Structural Model	7.96/4 = 1.99	0.98	0.96	0.04	0.07 (0.00, 0.13)
Mediation Model	8.00/5 = 1.60	0.98	0.96	0.04	0.06 (0.00, 0.12)

CFI: Comparative Fit Index; NFI: Normed Fit Index; SRMR: Standardized Root Mean Square Residual; RMSEA: Root Mean Square Error of Approximation.
$\chi^2/df \leq 3$ indicates a good fit (Kline, 2005); CFI: $\geq$ .90 indicates a good fit (Hu & Bentler, 1999); NFI: $\leq$ .90 indicates a good fit (Hu & Bentler, 1999); SRMR: $\leq$ .08 indicates a good fit (Hu & Bentler, 1999); RMSEA: $\leq$ .05, or a CI that encompass this value, indicates a good fit (Jaccard & Wan, 1996).

Figure 5. The full mediation model for depression with its parameter estimates.

Test of the indirect effects. Standardised path estimates and standard errors for the indirect effect of self-compassion on depression via emotion regulation difficulties were estimated with a bootstrapping procedure based on 1000 draws using Mplus (Version 5.2). The statistical significance of the indirect effect was evaluated with a *z*-test. The indirect effect of self-compassion on depression via emotion regulation difficulties was significant. These results are reported in Table 11.

Table 11

Standardised Path Estimates and Standardised Errors for Indirect Effects for Depression Model

Indirect effect	Estimate	SE	Estimate/SE = Z	*p*-value
SC→ERD→DEP	-.866	.263	-3.297	.001

SC: Self-compassion; ERD: Emotion regulation difficulties; DEP: Depression.

Stress. Hypothesis 1 predicted that after controlling for age and neuroticism, self-compassion would significantly negatively predict stress symptoms. This hypothesis was supported, with a significant, negative correlation observed between self-compassion and stress symptoms, -.37, $p < .001$.

Hypothesis 2 predicted that after controlling for age and neuroticism, self-compassion would significantly negatively predict emotion regulation difficulties. This hypothesis was supported, with a significant negative correlation observed between self-compassion and emotion regulation difficulties, -.55, $p < .001$.

Hypothesis 3 predicted that after controlling for age and neuroticism, emotion regulation difficulties would significantly positively predict stress symptoms. This hypothesis was supported, with significant positive correlations observed between emotion regulation difficulties and stress symptoms, .47, $p < .001$.

Based on the outcomes of testing Hypotheses 1-3, the first three requirements of Baron and Kenny's (1986) four step analytical procedure for testing mediation models were satisfied. The correlations among the latent variables in these analyses are reported in Table 12.

Table 12

Intercorrelations among Latent Variables for the Stress Model

Construct	1.	2.	3.
1. Self-Compassion	-		
2. Emotion Regulation Difficulties	-.55***	-	-
3. Stress Symptoms	-.37***	.47***	-

*** $p < .001$

Testing the measurement model. Examination of the fit statistics for the measurement model suggested that the model fit the data well, and indicated that it was appropriate to test the structural model: χ^2 (8, $N = 198$) = 21.56, χ^2/df = 2.69, CFI = .96, NFI = .92, RMSEA = .09 (90% CI: .04, .14), SRMR = .05. These fit statistics are shown in Table 13.

Testing the partial mediation model. The partial mediation model for stress with its parameter estimates and standard errors is shown in Figure 6. In this model, the pathway from self-compassion to stress was non-significant, indicating that there is no direct pathway from self-compassion to stress once emotion regulation difficulties, age and neuroticism are controlled. All other pathways in this model were significant. The fit indices for this model suggested an adequate fit to the data, χ^2 (8, $N = 198$) = 21.56, χ^2/df = 2.69, CFI = .96, NFI = .93, RMSEA = .09 (90% CI: .05, .14), SRMR = .05. These statistics are shown in Table 13.
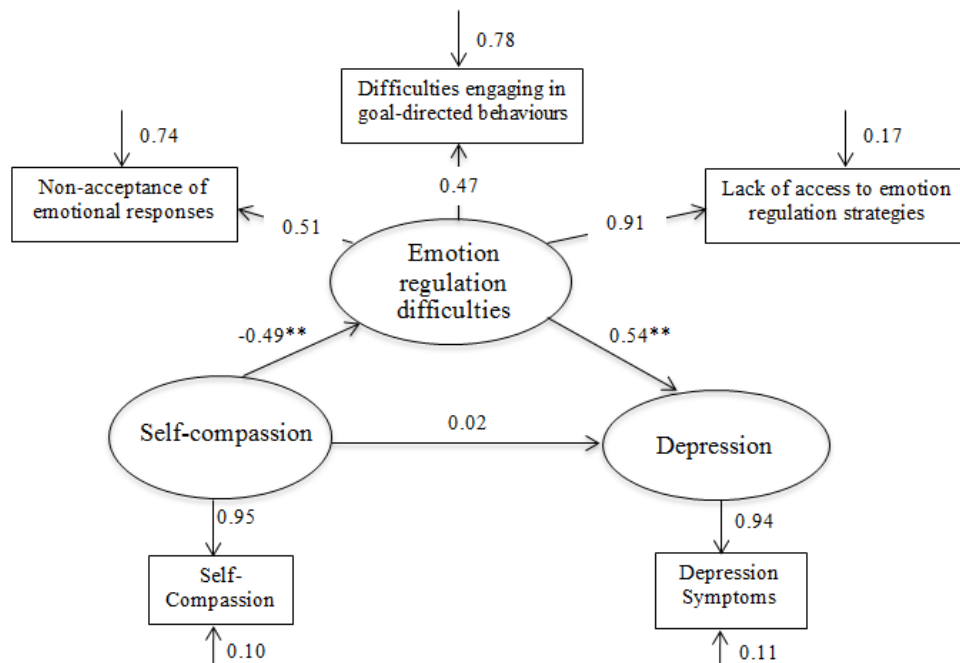
Testing the full mediation model. In order to test the full mediation model, the direct pathway from self-compassion to stress was removed: this model, with its parameter estimates and standard errors is shown in Figure 7. The fit statistics for the full mediation model suggested an adequate fit to the data, χ^2 (9, $N = 198$) = 24.02, χ^2/df = 2.67, CFI = .95, NFI = .92, RMSEA = .09 (90% CI: .05, .14), SRMR = .04. These statistics are reported in Table 13.

A chi-square difference test was performed to determine whether the partial mediation model (with one extra pathway) fit the data significantly better than the full mediation model. The result of this test was non-significant $\chi^2_{difference}$ (1, $N = 198$) = 2.46, $p = .12$. As a result, it was determined that the data supported a model in which the relationship between self-compassion and stress was fully mediated by emotion regulation difficulties, measured in terms of non-acceptance of emotions, lack of

access to emotion regulation strategies, and difficulties with goal-directed behaviour when upset. This model accounted for 25.5% of variance in stress symptoms, and all pathways were significant.
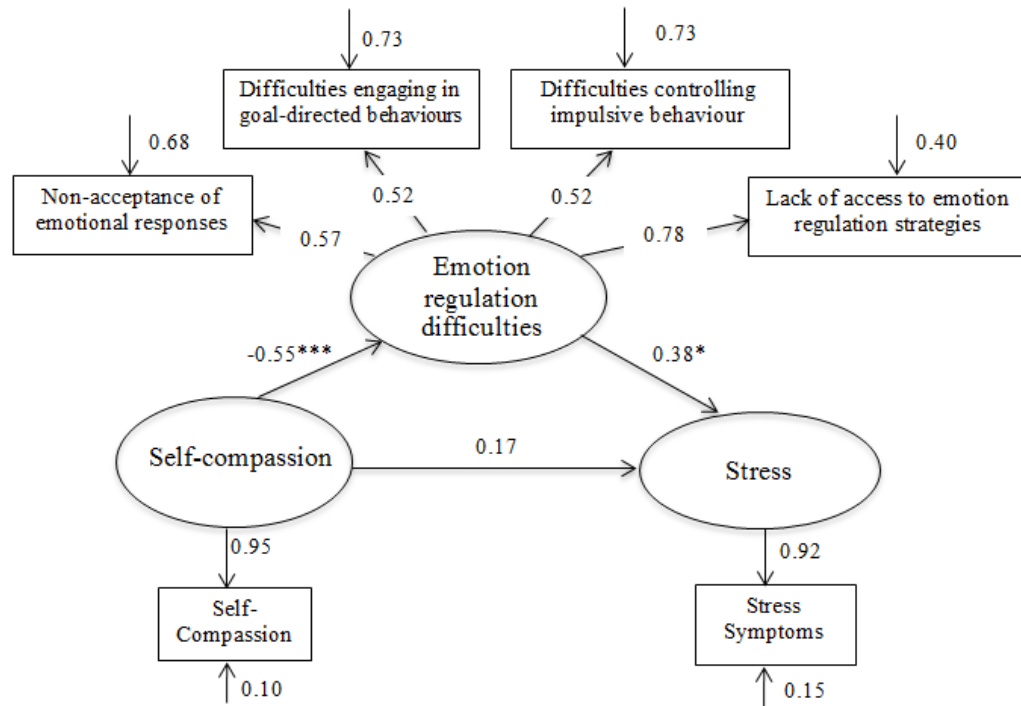
Figure 6. The partial mediation model for stress with its parameter estimates.
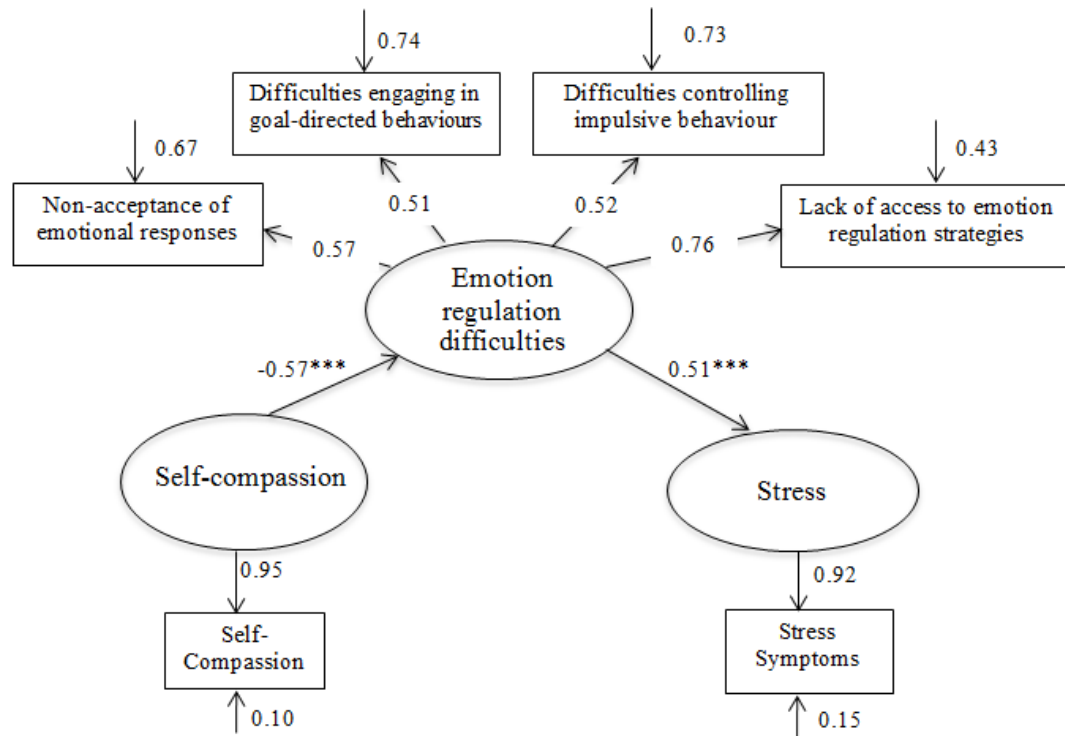
Figure 7. The full mediation model for stress with its parameter estimates.

Table 13

Fit Statistics for Stress Models

Model	χ^2/df	CFI	NFI	SRMR	RMSEA
Measurement Model	21.56/8 = 2.68	0.96	0.92	0.05	0.09 (0.05, 0.14)
Saturated Structural Model	21.56/8 = 2.69	0.96	0.93	0.04	0.09 (0.05, 0.14)
Mediation Model	24.02/9 = 2.67	0.95	0.92	0.04	0.09 (0.05, 0.14)

CFI: Comparative Fit Index; NFI: Normed Fit Index; SRMR: Standardized Root Mean Square Residual; RMSEA: Root Mean Square Error of Approximation.

$\chi^2/df \leq 3$ indicates a good fit (Kline, 2005); CFI: $\geq .90$ indicates a good fit (Hu & Bentler, 1999); NFI: $\leq .90$ indicates a good fit (Hu & Bentler, 1999); SRMR: $\leq .08$ indicates a good fit (Hu & Bentler, 1999); RMSEA: $\leq .05$, or a CI that encompass this value, indicates a good fit (Jaccard & Wan, 1996).

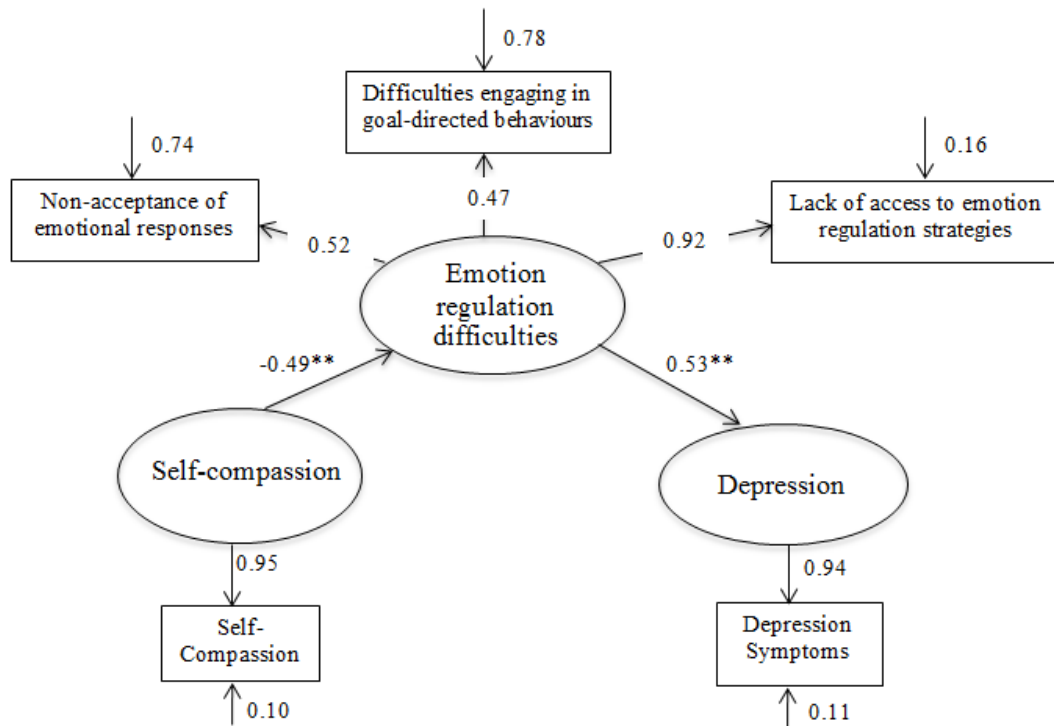*Test of the indirect effects.* Standardised path estimates and standard errors for both of the indirect effects were estimated with a bootstrapping procedure based on 1000 draws as implemented by Mplus (Version 5.2). The statistical significance of

each indirect effect was evaluated with a *z*-test. The indirect effect of self-compassion on stress symptoms via emotion regulation difficulties was significant. These results are reported in Table 14.

Table 14

Standardised Path Estimates and Standardised Errors for Indirect Effects for Stress Model

Indirect effect	Estimate	SE	Estimate/SE = Z	*p*-value
SC→ERD→STRESS	-.434	.203	-2.145	.032

SC: Self-compassion; ERD: Emotion regulation difficulties

Discussion

These results provide some evidence that self-compassion is a significant predictor of depression and stress outcomes in psychologists and psychology trainees, and that this relationship is fully mediated by difficulties in emotion regulation. After controlling for age and neuroticism, self-compassion significantly negatively predicted depression (*r* = -.22, *p* = .002) and stress (*r* = -.33, *p* < .001), although the relationship between self-compassion and anxiety was non-significant (*r* = -.06, *p* = .370). Structural equation modelling analyses indicated that a latent emotion regulation difficulties variable (measured in terms of non-acceptance of emotional responses, limited access to emotion regulation strategies, and difficulties engaging in goal-directed behaviour) mediated the relationship between self-compassion and depression, while a latent emotion regulation difficulties variable based on the these indicators with the addition of impulse control difficulties mediated the relationship between self-compassion and stress. In SEM terms, self-compassion did not directly

impact on depression or stress; rather, it impacted these outcomes via emotion regulation difficulties.

In the current study, while the zero-order correlations between self-compassion and anxiety were significant (-.34, $p < .001$), this relationship was no longer significant once age and neuroticism were controlled for. This suggests that the current data do not fully support the theoretical model as specified in the current study, and indicates that it may be advisable to consider psychological distress outcomes (such as depression, anxiety, and stress) individually when examining their relationship with self-compassion. While previous research has found that self-compassion is a strong predictor of anxiety (Neff, 2003a; Raes, 2010; Werner et al., 2012), these studies failed to control for neuroticism. The current results suggest that the relationship between self-compassion and anxiety may be a spurious one that is better explained by trait neuroticism (e.g., Bolger & Eckenrode, 1991; Cohen & Edwards, 1989). Further research is recommended to clarify the nature of the relationship between these variables.

Research has consistently found that neuroticism is positively related to depression and stress (e.g., Clark, Watson, & Mineka, 1994; Kendler, Gardner, & Prescott, 2003), as well as more specific occupational stress outcomes, such as burnout (Schaufeli & Enzmann, 1998). In the context of these findings, the finding in the current study - that self-compassion significantly predicts depression and stress once age and neuroticism are controlled - is particularly noteworthy. These results add to the evidence supporting self-compassion as a reliable predictor of depression and stress (for a review, see Barnard & Curry, 2011b), and extend the literature documenting the link between self-compassion and emotion regulation difficulties

(Keng, Smoski, Robins, Ekblad, & Brantley, 2012; Vettese, Dyer, Li, & Wekerle, 2011),

In addition, these results also support research documenting the link between emotion regulation difficulties and psychological distress outcomes such as depression and stress (for a review, see Aldao et al., 2010). An important addition to the literature derived from the current study is the finding that the relationship between self-compassion and both depression and stress is fully mediated by emotion regulation difficulties. Research on emotion regulation difficulties as a mediator between self-compassion and psychological distress is limited, although that which has been conducted has found that specific maladaptive emotion regulation strategies such as rumination and worry are key mechanisms in the relationship between self-compassion and symptoms of depression and anxiety (Raes, 2010). In the context of the previous research, the results of the current study may be extrapolated to suggest that emotion regulation is a key explanatory mechanism underlying the link between self-compassion and psychological health more broadly. This finding is in line with a transactional model of stress that conceptualises stress as a process in which the relationship between stressors and stress outcomes is moderated by various factors, including stress appraisals and coping efforts (Cox & Mackay, 1981; Folkman, 2008; Goh et al., 2010; Lazarus & Folkman, 1984).

It should be noted that the conceptualization of emotion regulation difficulties used in the current study is only one of a number of ways of defining and measuring this construct (Aldao et al., 2010). The emotion regulation difficulties measure used in the current study is based on Gratz and Roemer's (2004) model of adaptive emotion regulation that incorporates four key capacities: (1) emotional awareness and understanding; (2) emotional acceptance; (3) the capability to control impulsive

behaviours and behave in accordance with desired goals in the face of unpleasant emotions; and (4) the ability to use appropriate emotion regulation strategies. This widely-used measure was developed to provide a comprehensive assessment of the emotion regulation domain, however support for its factor structure is not unequivocal. In particular, there has been some doubt over whether the lack of awareness subscale is driven by the same higher-order emotion regulation construct as the other subscales (Bardeen et al., 2012). In the current study, the items from the lack of awareness and lack of clarity subscales had low correlations with items from the other scales, and failed to significantly predict psychological distress outcomes. This finding suggests that further investigation into the factor structure of the DERS is warranted. It is possible that the types of emotion regulation difficulties that cluster together vary across populations, and this hypothesis is also worth exploring.

In the current study, different types of emotion regulation difficulties were implicated in the relationships between self-compassion and depression, and self-compassion and stress. While emotion regulation is a broad construct that plays a central role in psychopathology, the current findings suggest that different aspects of emotion regulation are relevant to particular psychological distress outcomes, such as depression or stress. The current results suggest that limited access to emotion regulation strategies, non-acceptance of emotional responses, and difficulties maintaining goal directed behaviour are related to depression, while difficulties with impulse control are also implicated in the experience of stress. Broadly, these findings are in line with previous research that examined the role of particular subscales of the DERS in predicting variance in specific psychological disorders (e.g., Gratz, Bornovalova, Delany-Brumsey, Nick, & Lejuez, 2007). Further research into the role

of the individual DERS subscales in predicting different psychological distress outcomes is recommended.

The findings of the current study have important implications for the prevention and management of occupational stress-related outcomes among psychologists and psychology trainees. Previous research indicates that emotion regulation predicts individuals' capacity to cope with emotional responses to interpersonal stressors (Eisenberg et al., 1993). Given that psychologists' experience of occupational stress may centre on difficult interpersonal situations, such interactions with challenging clients, self-compassion may represent an important psychological resource among this occupational group. In the context of previous findings that self-compassion positively predicts aspects of emotional intelligence such as emotional clarity and mood regulation (Heffernan, Quinn Griffin, McNulty, & Fitzpatrick, 2010; Neff, 2003a), the current results support the prospect that therapists who are more self-compassionate are likely to be better equipped to deal with the types of stressors inherent to the psychology profession as they arise.

Overall, these results provide evidence that self-compassion is theoretically an important target variable for researchers interested in preventing and managing occupational stress-related conditions among psychologists across the career span. However, due to the cross-sectional research design, the results of the current research cannot reliably address questions of causality between self-compassion and distress outcomes. While increased self-compassion may buffer against distress (Brown & Ryan, 2003), it is also viable there is a reciprocal relationship between the constructs where lower levels of distress support a more self-compassionate perspective (Macbeth & Gumley, 2012). It is also possible that self-compassion mediates the relationship between emotion regulation and depression and stress.

This competing model was not investigated in the current study, as the broader research question was concerned with mechanisms of action underlying the self-compassion construct. In part, this is due to the fact that self-compassion was considered a more plausible treatment target, as it is a well-defined construct that has been found to be trainable in a range of populations (Neff, 2009). Emotion regulation, on the other hand, is a broad construct encompassing a range of different skills and deficits (Gross, 1999), potentially making it somewhat problematic as a treatment target. However, comparison with competing models is considered an important next step in future research investigating the theoretical model described in the current study. In addition, in order to address the question of causation, future research would benefit from the use of a longitudinal design to investigate the impact of changing self-compassion levels over time.

CHAPTER 3 - STUDY 2, STAGE 1

Development of an Online Self-Compassion Training Program for Trainee Psychologists

Introduction

In Chapter 1, the occupational hazards associated with work in the human services professions were discussed, and the deleterious consequences of work-related stress for psychologists were explored. Concerns about the levels of stress faced by this professional group have lead a number of authors to argue that stress management initiatives should be an essential part of clinical training and ongoing professional development (Newsome, Christopher, Dahlen, & Christopher, 2006; Shapiro et al., 2007; Shapiro & Carlson, 2009), with self-care programs for trainees seen as "an important form of 'preventive treatment' for professionals at risk of later psychological problems" (Shapiro & Carlson, 2009, p. 110). However, while clinical training programs often highlight the importance of self-care over the course of the career span, teaching self-care skills to trainees is often a neglected part of the curricula (Christopher et al., 2006). Shapiro and Carlson (2009) argue that this is a notable drawback of current health care training programs, that has important implications for health care professionals and their clients.

Study 1 found evidence that, after controlling for age and neuroticism, self-compassion is negatively related to depression and stress symptoms in trainee and professional psychologists, with emotion regulation difficulties mediating this relationship. This finding supports the proposition that self-compassion training programs may be of benefit in helping therapists to cope with the inevitable stressors that occur in the process of therapeutic work, by helping them to regulate their emotional responses to stressful encounters in a more adaptive manner. On this point, previous research indicates that self-compassion can be cultivated through training

(see, e.g., Germer & Neff, 2013; Hofmann et al., 2011); although research in this area is in its infancy. In order to explore the potential effectiveness and feasibility of self-compassion training for psychologists, the present study sought to develop a self-compassion training program for trainee psychologists in Australia. It was decided to focus on trainees as the majority of the literature indicates that this subgroup tends to report heightened levels of stress, with stress experiences characterized by self-evaluative anxiety and difficulties maintaining balance in the face of multiple demands. It should be noted that in Study 1, there was no significant difference between trainees and practicing psychologists on psychological distress outcomes, however a greater percentage of trainees scored in the moderate-extremely severe range for depression, anxiety, and stress. In addition, there is a recognized need for preventative efforts during clinical training that equip trainees with the skills necessary to manage stress early on in their careers, therefore optimizing their resilience over the career span. In this chapter, the rationale for the development of the program is discussed, theoretical and clinical considerations guiding protocol development are outlined, and the protocol for the program is detailed.

Stress prevention among trainee psychologists. Despite acknowledgement of the negative consequences of occupational stress, published research regarding the development and evaluation of stress management and prevention initiatives amongst trainee psychologists is minimal (Stafford-Brown & Pakenham, 2012). At the time of writing, only 3 published studies were found that investigated the impact of interventions designed to reduce or prevent stress among this group, and none of these studies reported effect size. Consistent with the suggestion that constructs such as mindfulness, self-awareness, self-regulation and self-care are central to enhancing psychologist functioning (Grepmair et al., 2007; Patsiopoulos & Buchanan, 2011;

Shapiro et al., 2007; Skovholt & Trotter-Mathison, 2011), the studies that were identified utilised mindfulness-based stress management programs to help trainee psychologists manage stress. The first of these was a prospective, nonrandomized, cohort-controlled study conducted by Shapiro et al. (2007), looking at the effectiveness of an 8-week Mindfulness Based Stress Reduction (MBSR) intervention for reducing stress and enhancing wellbeing amongst master's level trainee counselling psychologists ($n = 54$). Compared to 32 cohort controls, trainees who undertook the intervention reported significant decreases in perceived stress, negative affect, rumination, and anxiety, and significant increases in positive affect, empathy, and self-compassion. While the mediating effects of self-compassion in this study were not investigated, a previous study by Shapiro et al. (2005) found that changes in self-compassion significantly predicted changes in perceived stress following a MBSR intervention amongst health professionals from various disciplines.

In a more recent study, Rimes and Wingrove (2011), evaluated the impact of an 8-week Mindfulness Based Cognitive Therapy program (modified for stress rather than depression) for reducing psychological distress amongst 20 trainee clinical psychologists in various stages of training (first, second, and third year). The authors based their rationale for this choice of intervention around three primary considerations: (1) experiential learning was considered an important way for students to deepen their understanding of mindfulness as a therapeutic process, as first—hand experience of mindfulness is generally considered an essential foundation for instructing others in the practice (e.g., Segal et al., 2002); (2) the practice of mindfulness may enhance therapist skill development, as has been found to promote self-awareness and interpersonal perception (e.g., Bennett-Levy, 2006); and (3) MBCT was considered to be potentially useful as a stress-management intervention

for clinical psychologists, who often report elevated levels of stress (e.g., Hannigan et al., 2004). Following the intervention, participants reported significant increases in mindfulness and self-compassion, and significant decreases in rumination. However, only the first year students displayed a significant reduction in stress ($p = .028$).

Using a similar rationale, Stafford-Brown and Pakenham (2012) evaluated the effectiveness of an Acceptance and Commitment Therapy (ACT) -informed stress management intervention for trainee clinical psychologists. This intervention focused on developing psychological flexibility amongst participants, via the cultivation of experiential acceptance, mindfulness, cognitive defusion, and values-based action (see Hayes, Strosahl, & Wilson, 1999). Stafford-Brown and Pakenham (2012), found that following the four-week intervention, participants reported significantly greater reductions in psychological distress and professional self-doubt compared with a no-treatment control group. Testament to the importance of stress-management interventions amongst this group, they also found that levels of distress and self-doubt in the control group increased over time.

Self-compassion for trainee psychologists. There are myriad ways of approaching stress management and self-care interventions among health professionals more generally and trainee psychologists in particular (Shapiro & Carlson, 2009); however, there are a number of reasons to believe that self-compassion-focused interventions may be particularly relevant for this occupational group. First, self-compassion training is grounded in mindfulness practice, which has the potential to increase trainees' awareness of their current stress levels and to enhance understanding of the internal processes that are implicated in stress appraisals and responses (Shapiro et al., 2005; Shapiro et al., 2007; Shapiro et al., 1998). This provides a starting point for trainees to better address stress as it arises, as well as

giving them scope to change their patterns of emotional responding over time (Shapiro & Carlson, 2009). Therapists who are higher in mindfulness report feeling more life satisfaction, more frequent positive emotions, less frequent negative emotions, more job satisfaction, and less burnout (May & O'Donovan, 2007).

Importantly, the advantages of self-compassion training theoretically go beyond those conferred by mindfulness training alone. A second major benefit of self-compassion training is that it aims to help trainees treat themselves with kindness during times of distress. The self-kindness component of self-compassion is thought to provide "an alternative to self-criticism, self-condemnation, blaming, and rumination, which are common to classic notions of depression…and other forms of psychopathology" (Van Dam et al., 2011, p. 2). Thus, in addition to enhancing basic self-kindness behaviours such as self-care, it is anticipated that self-compassion training may help to directly ameliorate negative or critical self-talk during times of difficulty. This is significant given that negative self-talk can increase anxiety and distraction, thereby interfering with trainees' functioning and therapeutic performance (Friedlander, Keller, Peca-Baker, & Olk, 1986; Hiebert, Uhlemann, Marshall, & Lee, 1998; Kurpius, Benjamin, & Morran, 1985; Nutt-Williams, Hayes, & Fauth, 1992; Nutt-Williams & Hill, 1996). Encouraging self-kindness may also help to counter the perfectionistic expectations that are linked to a range of negative psychological outcomes in the general population and which have been found to be predictive of stress, burnout and reduced work satisfaction in psychologists (D'Souza et al., 2011; Wittenberg & Norcross, 2001).

A third possible benefit of self-compassion training for trainee psychologists is that it may help to enhance trainees' sense of interconnectedness, thereby reducing the

feeling that they are unique or alone in their stresses and difficulties. Trainee therapists often report high levels of self-evaluative anxiety when starting out in clinical work, as they receive in-the-moment feedback about their performance as therapists from clients, as well as retrospective feedback from supervisors and peers (Rønnestad & Skovholt, 1993; Skovholt & Rønnestad, 2003). High levels of anxiety can interfere with therapists' learning (Ho, Hosford, & Johnson, 1985) and performance (Friedlander et al., 1986; Kelly, Hall, & Miller, 1989), while feelings of incompetence and inadequacy can increase trainees' discomfort discussing their performance and limit their disclosure with supervisors (Yourman, 2003). It is hoped by helping trainees to see they are not alone in the challenges they face, their feelings of inadequacy and performance anxiety may be reduced. Feeling more connected to others is also important given that the professional role of the psychologist is one that is potentially quite isolating (O'Connor, 2001), and feelings of loneliness are linked to burnout (Lushington & Luscri, 2001).

Aims of Study 2, Stage 1. The primary aim of the current study was to develop a self-compassion training program for trainee psychologists who were currently undertaking clinical work in Australia. At the time of writing, there were only a few, brief self-compassion induction exercises described in the scientific literature (e.g., Kirkpatrick, 2005; Shapira & Mongrain, 2010), and no extant protocol available for any longer-term intervention with the primary aim of increasing self-compassion among participants. Thus, the aim was to develop a novel intervention that was grounded in relevant theory and findings from the empirical literature. An additional aim for the current study was to develop an intervention that would be accessible to individuals across different universities and organizations, and that could be delivered in a flexible, sustainable, and cost-effective manner. To address this aim,

it was decided to develop a self-guided, web-based intervention that participants could access at their own discretion. The rationale for using a web-based intervention is described in further detail below. Following this, the content of the Self-Compassion Online (SCO) program is summarized, and the development process for the SCO protocol is explained.

Rationale for the use of a web-based intervention. Recent perspectives in mental health promotion and intervention research emphasise the importance of providing services that are accessible, flexible, sustainable and cost-effective (Christensen & Hickie, 2010; Kazdin & Blase, 2011). Additionally, the Australian Fourth National Mental Health Plan Working Group (2009) has recently called for the use of new technologies in innovative service development. Consideration of these factors prompted the decision to use a web-based intervention to deliver self-compassion training in the current study. The term *web-based intervention* refers to "a primarily self-guided intervention program that is executed by means of a prescriptive online program operated through a website and used by consumers seeking health- and mental-health related assistance" (Barak, Klein, & Proudfoot, 2009, p. 5). Web-based interventions are part of a wider range of e-mental health services which offer mental health promotion and prevention, early intervention, support provision, and clinical treatment services via telephone or the Internet (Christensen & Hickie, 2010).

Proudfoot et al. (2011) argue that web-based interventions are well-suited to service delivery within the helping professions, as they are constantly and remotely accessible, support standardized but personalized service provision, and allow for anonymity, consistency of care, and ease of administration of symptom and outcome measures. In addition, web-based interventions can offer users empowerment and

flexibility, by allowing them to manage their health care, determine the pace of treatment, and engage with content as often as they like (Proudfoot et al., 2011). Web-based interventions may be particularly relevant for researchers interested in promoting mental health among young people and student populations, who are more likely to have experience with using the Internet for information seeking, support, and education (Burns, Davenport, Durkin, Luscombe, & Hickie, 2010; Monshat, Vella-Broderick, Burns, & Herrman, 2012). Additionally, offering psychological interventions via the Internet reduces some Beyond the potential advantages to participants, the use of web-based interventions in research confers significant benefits over face-to-face intervention delivery, such as the standardisation of treatment, automation of assessment, and the capacity to directly download data, which decreases staff time, costs, and the risk of experimenter bias and error (Luthans, Avey, & Patera, 2008).

Given that the target population in the current study were (a) tertiary students likely to have familiarity with using the Internet for educational purposes; (b) located around Australia; and (c) likely facing elevated time constraints (Shapiro & Carlson, 2009), a web-based intervention was considered an appropriate form of intervention delivery. The evidence supporting the efficacy of e-health services is outlined briefly below, and recommendations for the development of web-based interventions are reviewed.

Evidence supporting the utility of e-health services. There is increasing evidence that e-health services are effective in the prevention and treatment of a range of mental and physical health conditions amongst general, at risk, and clinical populations (Barak, Hen, Boniel-Nissim, & Shapira, 2008; Cuijpers, van Straten, Smit, Mihalopoulos, & Beekman, 2008; Griffiths, Farrer, & Christensen, 2010).

Christensen and Hickie (2010) argue that web-based technologies are "uniquely placed" to deliver prevention and early intervention services as they allow cost-effective dissemination of interventions to a wide audience. Of particular relevance to the current research are findings that web-based programs can be used to deliver stress management training (Zetterqvist, Maanmies, Strom, & Andersson, 2003), and that online positive psychology interventions are an effective, sustainable and accessible way to enduringly enhance wellbeing (Mitchell et al., 2009). Previous research has documented the efficacy of web-based interventions to increase happiness (Seligman, Steen, Park, & Peterson, 2005), cognitive wellbeing (Mitchell et al., 2009), and hope, efficacy, optimism, and resilience (Luthans et al., 2008).

Self-guided programs. While the preferred mode of delivery for web-based interventions involves integration with extant face-to-face services or "virtual" supervision by health professionals, Christensen and Hickie (2010) warn than restriction to this model endorses a "narrow" view of e-mental health service provision. There is convincing evidence supporting the effectiveness of "traditional" self-help therapies (e.g. bibliotherapy, or therapy administered via CD-ROM, video, or audio tape) in the treatment of a range of mental health problems (e.g., Anderson et al., 2005; Apodaca & Miller, 2003; Cuijpers, 1997; Cuijpers, Donker, van Straten, Li, & Andersson, 2010; den Boer, Wiersma, & Van de Bosch, 2004), and recent research suggests that fully-automated web-based interventions can be similarly effective (Griffiths et al., 2010; Spek et al., 2007). For example, van Straten, Cuijpers, and Smits (2008) developed a web-based self-help problem-solving intervention and trialed its effectiveness for reducing symptoms of depression, anxiety, and burnout. Using a randomized controlled trial with ($n = 213$) a wait-list control group, they found that participants in the intervention group reported statistically and clinically

significant reductions in depressive and anxious symptoms. Powell et al. (2013) developed a 5-module Internet-based self-help program that provided cognitive-behavioural skills training to participants in an attempt to improve wellbeing. In a randomized controlled trial ($n = 3070$) with a wait-list control, they obtained post-test and 12-week follow-up data for 1529 (49.80%) participants, with significant increases in wellbeing reported by the intervention group, compared to no increase for the control group.

Method

The development of the SCO program involved a three-phase process: (1) drafting content and structure for the program based on a review of the literature related to the cultivation of self-compassion, the prevention and treatment of stress, and the promotion of wellbeing; (2) adapting the content and structure of the program and designing the website in line with recommendations from the literature on the development of web-based interventions; (3) conducting a third-party review of the program, and revising the content and structure in line with the feedback provided. This process is described in further detail below.

The SCO program: theoretical and empirical considerations. The development of the SCO program was informed at the broadest level by theory and intervention research relating to the promotion of resilience and the prevention and management of stress. Specifically, the intervention took Lazarus & Folkman's (1984) transactional model of stress (outlined in Chapter One) as its theoretical basis. This model suggests that the ways in which individuals appraise and cope with stress impact their psychological wellbeing more than the experience of particular types of stressors (see Aldwin & Reveson, 1987 for a review of research supporting this proposition).

Within this framework, the content and structure of the intervention was guided by findings and recommendations from positive psychology and mindfulness- and acceptance-based (MAB) intervention research (e.g.,Baer & Krietemeyer, 2006; Cohn & Fredrickson, 2011; Hayes, Follette, & Linehan, 2004; Roemer & Orsillo, 2009; Seligman et al., 2005; Wilson, 2009), given that self-compassion spans these distinct but interrelated fields. The content for the current intervention aimed to include common themes and exercises from extant books that provided "self-help" self-compassion training, such as Germer (2009), Neff (2011) and Gilbert (2010a, 2010c). The findings from Study 1 also guided the development of the content of the current intervention; specifically, it was inferred that attention to emotion regulation is potentially an important part of self-compassion training. Finally, the content and structure of the current intervention was informed by findings and recommendations from studies that effectively targeted self-compassion as a secondary outcome. The evidence base for the structure and content of the SCO program is described in further detail below.

Key components of the SCO program. Content for each module of the SCO program was structured around three key components: psychoeducation, meditation, and exercises with reflective and experiential components. The rationale for the inclusion of these elements is outlined below.

Psychoeducation. Psychoeducation is an integral part of MAB behavioural therapies (Roemer & Orsillo, 2009) and is thought to provide participants with the cognitive foundation and rationale for behavioural change, thereby enhancing motivation to make such change (Roemer & Orsillo, 2009). In addition, an intellectual understanding of the mechanisms underlying behavioural change may provide

participants with support and encouragement during times when change is difficult, distressing, or slow. Psychoeducation is also believed to be important to help participants self-direct and administer treatment, and to apply intervention-based learning to new contexts (Roemer & Orsillo, 2009). Throughout the program, the majority of the psychoeducational content was presented in the form of short (2 minute) videos; for more complex concepts, some supportive text and illustrations were also included.

Meditation Practice. Meditation practice is thought to foster self-compassion (Kristeller & Johnson, 2005), and was therefore a key component of the SCO protocol. While Goyal et al.'s (2014) recent review and meta-analysis did not find evidence that meditation training has an effect on positive affect or wellbeing, it was concluded that mindfulness meditation is an effective intervention for reducing psychological distress in some clinical populations. It was decided to include training in a variety of meditative practices throughout the program, including mindfulness meditation, loving-kindness meditation and self-compassion meditation. Mindfulness has been defined as "open-hearted, moment-to-moment, non-judgemental awareness" (Kabat-Zinn, 2005, p. 24), and mindfulness meditation is a form of meditation training that is designed to enhance mindful awareness and reduce cognitive reactivity. A number of authors have argued that mindfulness is the fundamental context out of which self-compassion arises; thus, mindfulness skills are seen as an important foundation on which to develop one's self-compassion skills (Beddoe & Murphy, 2004; Boellinghaus, Jones, & Hutton, 2014; Germer, 2009).

Self-compassion and loving-kindness meditation is a form of meditation training that specifically focuses on generating self-directed feelings of care, compassion, and warmth (Hofmann et al., 2011), and has been found to increase

feelings of compassion for self and others (for a review, see Boellinghaus et al., 2014). In a recent qualitative study of the impact of loving kindness meditation practice among trainee therapists Boellinghaus, Jones, and Hutton (2013) reported that participants described greater self-awareness, self-confidence, and self-compassion after engaging in this practice, and that it positively impacted their relationships with others, including their clients.

Dr Christopher Germer, a clinical psychologist who specializes in mindfulness- and acceptance-based treatment, and who has extensive training in meditative practice, provided permission for his audio (mp3) series of mindfulness and self-compassion meditations (Germer, n.d.) to be used in the research. In line with the recommendations outlined in Monshat et al. (2012), the length of meditation training was graduated; short (5 minute) meditations were offered in the first module, followed by meditations of increasing length and greater degrees of specificity over the duration of the program. This structure was designed to introduce participants to basic meditation skills and establish a foundation of mindfulness before moving on to self-compassion and loving-kindness practices. Where relevant, meditations that supported the psychoeducational content of a particular module were included in that module. To optimise accessibility, participants were able to listen to the meditations online, or to download them and listen to them on a computer or portable mp3 player.

Interactive Exercises. A number of reflective and experiential exercises (such as compassionate letter writing and self-care practice) have been used previously in self-compassion-based interventions, and are believed to be an important way of helping participants apply the skills and knowledge they have learned to their own lives and individual circumstances (e.g., Neff, 2011; Shapira & Mongrain, 2010). In addition, exercises that encourage participants to reflect on and self-monitor

cognitive, emotional, and behavioural processes relevant to the intervention were included in each module. According to Roemer and Orsillo (2009), self-monitoring is central to enhancing individuals' awareness of their internal experiences, particularly the variability in their experiences, and their relationships with certain contexts and behaviours. All exercises were adapted from existing MAB protocols or designed specifically for the program.

Structure of the Self-Compassion Online intervention. The intervention comprised six modules, administered over six weeks, with weekly exercises and contact from the program administrator via email. It was decided to have participants complete exercises on a weekly basis, rather than more frequently, to make the intervention more feasible for participants with time constraints. In addition, there is some evidence that positive psychology interventions are more effective when exercises are administered weekly rather than daily (Emmons & McCullogh, 2003; Lyubomirsky, Sheldon, & Schkade, 2005). At the end of each module, a summary of the module was provided in Portable Document Format (PDF) form, for participants to download. Participants were also given a "Self-Compassion Challenge" as homework each week. These exercises were designed to reinforce the concepts explored in each module and to encourage participants to experiment with real-life applications of concepts and practices.

Intervention Protocol.

Module one: introduction. The primary aim of the first module was to introduce participants to the concept of self-compassion, and to place the construct within a self-care and stress-management framework. An overview of the module in video format provided an introduction to the module, and Neff's (2003b) tripartite model of self-compassion was introduced. This was followed by an audio download

of the "Waiting on Yourself" meditation (Germer, n.d.), a short meditation practice that asks listeners to simply tune in to their current internal state with a sense of openness and curiosity. This practice was designed to facilitate participants' understanding of self-compassion by introducing it from an experiential point of view. Following this was a "reflection space" in which participants were invited to reflect on their experiences practicing this meditation.

In the next steps of this module, participants were invited to reflect on their current self-care practices, and watch a short video outlining the rationale for self-care followed this exercise. Using an exercise based on Germer (2009), participants are invited to contemplate they habitual ways in which they respond to difficulties in their lives. Participants were then asked to listen to an audio recording that discusses the three components of self-compassion (mindfulness, self-kindness, and common humanity) in greater depth. Following this was a video that explained these components in terms of the "micro-skills" (Gilbert, 2010b) that correspond to them, along with a quiz that allowed participants to reflect on which skills they may already have developed, and which ones they need to practice further.

In the final steps of Module One, participants were asked to reflect on how they think self-compassion might be useful for them, and to set some goals for their participation in the program. The module concludes with a list of frequently asked questions about self-compassion, and their corresponding answers. Given the self-guided nature of the program, this information was included as a way of addressing any potential conceptual or practical issues that participants may have with self-compassion training.

In the "Self-Compassion Challenge" homework assigned for this module, participants were asked to practice the "Waiting on Yourself" meditation daily for a

week. They were also asked to complete a reflective exercise (adapted from Germer, 2009), that asked them to reflect on the ways in which they take care of themselves in different domains (physically, mentally, emotionally, relationally, and spiritually), and to brainstorm new ideas for self-care in each domain. Based on these ideas, participants were invited to download a "Self-Care Schedule" to schedule and complete at least one self-care activity for the week.

Module two: mindfulness. The aim of the second module was to focus on the mindfulness component of self-compassion, an element which is contrasted with "overidentification" in Neff's (2003b) definition. This was approached by giving participants a general introduction to the concept of mindfulness, and then guiding their attention to mindfulness of difficult experiences, which is the core focus in self-compassion-based mindfulness. In line with the general aim of MAB interventions, this module aimed to introduce participants to the practice of cultivating awareness of moment-to-moment experience, and of relating to this experience in a non-judgmental manner (Bishop et al., 2004; Kabat-Zinn, 2003).

After watching an introductory video overview of the module, participants were invited to listen to a 6-minute "mindfulness of sound" audio recording created by the researcher. This meditation practice was designed to introduce participants to the two fundamental properties of mindfulness: focusing attention on a specific meditation "object", and maintaining a general level of awareness of internal/external phenomena (Bishop et al., 2004). These concepts were also explained using a psychoeducational video, and participants were given further opportunity to practice focusing and awareness skills with a "Mindfulness of Breath" audio meditation developed by the researcher, and a "Three Breaths" practice based on the "Three Sighs" practice developed by Harrison (2006).

In the second steps of this module, participants were invited to watch a video describing the ways in which people commonly act "on autopilot" (i.e., non-mindfully). Participants were then invited to reflect on the ways that they may act on autopilot, as a way of drawing their attention to the areas of their lives in which they may benefit from acting more mindfully. Following this, participants were invited to watch a video explaining two different ways of relating to difficult experiences (for example, painful physical or emotional sensations): resisting them versus holding them in mindful awareness. To facilitate participants' experiential understanding of the difference between these two modes of relating to experience, they were provided with instructions for a "Mindfully working with Pain" exercise based on an activity outlined in Neff (2011). As the final part of this step, participants were asked to practice a "Mindfulness of Emotion" audio meditation (Germer, n.d.), as a way of bringing their attention to the ways emotion can physically manifest in the body.

The final step of this module involved a psychoeducational video that explained the difference between formal and informal mindfulness practice, and an experiential exercise that provided participants with instructions for carrying out daily activities in a more mindful way. Psychoeducation regarding the ways that mindfulness can inform and benefit psychotherapeutic practice was provided, and participants were asked to reflect on some of the ways that mindfulness practice might be most relevant for them. Frequently asked questions and corresponding responses about mindfulness practice were also included as part of this module.

In the "Self-Compassion Challenge" homework assigned for this module, participants were asked to engage in their choice of one short (5-10 minute) formal and one informal meditation practice each day for a week. As preparation for the third module, participants were also asked to start self-monitoring the nature of their self-

talk, by completing the "Self-Talk Scale" (STS; Brinthaupt, Hein, & Kramer, 2009).

The STS is a 16-item questionnaire designed to evaluate the frequency with which

respondents engage in self-talk under certain situations. Sample items include "I talk

to myself when I want to reinforce myself for doing well" and "I talk to myself when

I feel ashamed of something I've done" (Brinthaupt et al., 2009). Responses are given

using a 5-point Likert-type scale ("Never" – "Very Often").

Module three: self-kindness. The focus of the third module was the

cultivation of self-kindness – as opposed to self-criticism – in times of stress and

difficulty. Self-kindness is often considered to be the central aspect of the self-

compassion construct, and "entails being warm and understanding toward ourselves

when we suffer, fail, or feel inadequate, rather than flagellating ourselves with self-

criticism" (Germer & Neff, 2013, p. 1). Key themes explored in this module were

self-talk, self-criticism and perfectionism, and self-acceptance/self-soothing. After

watching an introductory video, participants were asked to engage in a 10-minute

"Soften, Soothe, Allow" practice (Germer, n.d.) presented using an audio recording,

and designed to give participants an experiential understanding of relating to internal

experiences in a gentle, soothing, and accepting way.

Following this, participants were asked to reflect on their responses on the

"Self-Talk Scale" to describe the nature of their self-talk and the emotional and

physical impact that this had on them. Drawing attention to self-talk in this way was

considered crucial given that self-criticism is often a process so ingrained that

individuals may not immediately recognize it or be aware of potential alternative

ways of self-relating (Gilbert, 2010a). Participants were provided with a video

summarizing the emotional, behavioural, and neurophysiological impact of self-

criticism (e.g., Gilbert et al., 2006; Longe et al., 2010; Zuroff et al., 1999), and given

psychoeducation about the incidence and impact of perfectionism amongst postgraduate students. They were asked to reflect on the self-evaluative standards that may be linked to their perceptions of self-worth, and the distinction between conditional and unconditional appraisals of self-worth was highlighted.

To give participants an experiential understanding of self-acceptance and self-soothing, they were asked to practice and reflect on a "Loving-Kindness for Beginners" audio meditation (Germer, n.d.), which aims to help participants develop feelings of warmth for themselves and others. As an alternative "informal" practice, participants were also introduced to a practice that aims to help individuals self-soothe when stressed by engaging in a pleasant sensory experience. A final aspect of this module was to provide participants with a framework for restructuring negative or self-critical self-statements in a more self-compassionate manner. The aim of this exercise was to encourage participants to consider ways of relating to themselves during times of difficulty that may allow them to self-soothe and focus on having their needs met, rather than exacerbating the negative emotional experience (Leahy, Tirch, & Napolitano, 2011).

In the "Self-Compassion Challenge" homework assigned for this module, participants were encouraged to build on their meditation practice by continuing a daily practice of mindfulness meditations (from Module Two) alternated with the loving-kindness and self-soothing meditations introduced in Module Three. They were also encouraged to engage in an informal self-soothing practice if they noticed they were feeling stressed during the week, and to monitor how they were feeling before and after this practice. Finally, participants were encouraged to practice supportive self-talk by choosing relevant self-talk statements from a handout and putting them somewhere where they were likely to see them frequently.

Module four: interconnectedness. The fourth module of the SCO program was designed to focus on the theme of common humanity – which, contrasted with "isolation", forms the third element of self-compassion according to Neff's (2003b) conceptualisation. This aspect of self-compassion emphasizes the capacity to relate one's flaws and difficulties to the wider scope of human experience, and represents an alternative to feeling alienated by one's own suffering. A primary goal of this module was to facilitate participants' contemplation of the ways in which they feel connected or separate from others; moreover, given that trainee psychologists commonly report self-consciousness in the context of clinical work and supervision (Hiebert et al., 1998), this module also aimed to facilitate participants' understanding that performance concerns are a common experience amongst trainees and a normal part of therapist development. Key themes of this module were belongingness and social safety, social comparison and identity, and disconnection and isolation.

After viewing an introductory video, participants were invited to reflect on their current emotional experiences in social situations using the Social Safeness and Pleasure Scale (SSPS; Gilbert et al., 2008). The SSPS is an 11-item measure that asks participants to rate the extent to which they experience warmth, reassurance, and belonging in social relationships, using a 4-point Likert-type scale. Sample items include "I feel connected to others" and "I feel a sense of warmth in my relationships with people". Following this, participants were asked to watch a video that explored the themes of connection with others, and feeling a sense of "belonging" as opposed to "fitting in". Participants were asked to further explore ideas of belongingness and acceptance by reflecting on the ways in which they relate to others' perceptions of them and were provided with psychoeducation around the link between the

construction and maintenance of social identity and feedback about self-worth (see, e.g., Thoits, 2013).

Following this, participants were provided with an overview of how low self-compassion can lead to feeling isolated and disconnected from others during times of difficulty. They were invited to reflect on their social comparison processes – that is, the way they see themselves in relation to others, using the Social Comparison Scale (Allan & Gilbert, 1995). This measure uses a semantic differential scale to measure respondents' social comparison of themselves in relation to others on 11 bipolar dimensions (e.g., Inferior/Superior; Different/Same). Participants were also asked to reflect on *who* they were comparing themselves with when responding to this scale, and provided with psychoeducation around how reference groups for social comparison can change the emotional impact of such comparisons.

As a final exercise, participants were asked to reflect on their perceived barriers to connection with others, and how these might be overcome. They were also asked to contemplate how changing the way they perceive themselves in relation to others may impact their personal and professional lives.

In the "Self-Compassion Challenge" homework assigned for this module, participants were asked to incorporate the *Self-Compassion Meditation* (Germer, n.d.) into their daily practice. This meditation is 20 minutes long and builds on the loving-kindness meditation introduced in Module Three; participants were given the option of using a shorter recording if they were facing time restrictions. Participants were also asked to practice noticing similarities between themselves and others – particularly those who they felt distant or disconnected from. The aim of this exercise was to counter the tendency to distinguish oneself from others using social

comparison, and instead draw attention to features of self and others that underscore the concept of common humanity.

Module five: dealing with difficult emotions. The aim of the fifth module was to encourage participants to apply the various skills and capacities discussed in Modules 2-4 to help them cope with difficult emotional experiences. The decision to focus on the application of self-compassion to dealing with difficult emotions was informed by the findings from the first study, that self-compassion impacted depression and stress via reducing difficulties with emotion regulation. This is also in line with the general design of MAB protocols which seek to facilitate change by altering individuals' relationships to troublesome cognitive and emotional experiences (Roemer & Orsillo, 2009).

After watching a video that provided an overview of the module, participants were given a brief summary of the emotion regulation construct. They were also given a description of Roemer and Orsillo's (2009) six categories of emotion regulation difficulties, each of which was illustrated with an example. Participants were asked to reflect on whether any of these difficulties resonated with them and were encouraged to think of a specific situation in which one of their primary emotion regulation difficulties had influenced the way they responded. In the second step of this module, participants were asked to watch a video explaining how the various aspects of self-compassion can be applied to difficult emotional experiences to make them easier to deal with. This concept was reinforced with psychoeducational content that contrasted self-compassionate responding with responding to difficulties in an avoidant, ruminative, or self-critical way. Participants were also asked to watch a video that explored difficult emotions in the context of interpersonal relationships.

In the third step of this module, participants were asked to integrate their self-compassion skills and apply these to a difficult emotional experience by engaging in the Self-Compassion Letter-Writing exercise. This exercise, drawn from Neff (2011), asks participants to recall a difficult situation they have encountered, and then write a letter to themselves about this situation from a self-compassionate perspective. The aim of this letter is to assist participants to reframe difficult situations using a framework that (a) brings mindful awareness to the underlying needs and emotional processes implicated in the situation; (b) offers words of reassurance and support in recognition of the difficulty of the experience; and (c) seeks to emphasize connection with others during this difficult moment by considering how such situations are a "normal" part of human experience.

Module six: integrating self-compassion into clinical training. The focus of the sixth and final module was on the application of self-compassion to participants' experiences as trainee psychologists, and how self-compassion can be used to protect against occupational stress and burnout. This module also aimed to summarise key concepts introduced in the program and provide a rationale for ongoing self-compassion practice.

After watching an introductory video, participants were asked to practice the *Waiting on Yourself* audio meditation that was first introduced in the first module. Participants were asked to reflect on how their experience with this practice may have changed over the duration of the program. Following this, participants were asked to watch a video that outlined some of the challenges involved in training to be a psychologist, particular those related to starting clinical work. Participants were also asked to reflect on some of the concerns that were salient for them in relation to their work as psychologists.

In the next steps of this module, participants were invited to watch a video that outlined some of the ongoing stressors involved in psychotherapeutic work (i.e. those that continue across the career span and are not just limited to the trainee experience). They were then asked to contemplate which aspects of self-compassion practice may be most beneficial for them in terms of developing and maintaining resilience to occupational stress. Following this, participants were invited to read a list of ways in which self-compassion might influence and contribute to their professional practice. In the final steps of this module, participants were provided with psychoeducational content that explored the consequences of occupational stress for psychologists, and outlined a framework for applying the principles of self-compassion to help manage stress and prevent burnout. Participants were also given a list of symptoms of stress and burnout, and asked to reflect on which symptoms they were currently experiencing, and which symptoms they may have experienced in the past.

In the "Self-Compassion Challenge" homework assigned for this module, participants were asked to continue their meditation practice, with the option of incorporating a *Mindful Self-Compassion Meditation* (Germer, n.d.). In addition, they were asked to experiment with the "Waiting on Yourself" practice in an informal way (i.e. conducting a brief "check-in" to bring compassionate awareness to internal sensations) at some point during their working day. Finally, participants were asked to complete the *Professional Resilience and Self-Care Inventory* (Skovholt & Trotter-Mathison, 2011).

Guidelines and considerations in developing web-based interventions. A well-known problem in evaluating online interventions is the low treatment adherence and high attrition rates often associated with the delivery of such services (Kelders, Kok, Ossebaard, & Van Gemert-Pijnen, 2012; Powell et al., 2013). As such, creating a rich

and engaging online environment is considered crucial to maximise treatment compliance and minimise program drop-out. The SCO program was administered via a website, which was designed in line with the recommendations outlined in Ritterband, Thorndike, Cox, Kovatchev, and Gonder-Frederick's (2009) model of internet intervention-based behavioural change. Considerations included website appearance, the nature of behavioural instructions and prompts, ease of use, accuracy and clarity of content, mode and message of content delivery (including form, style, likeability, and credibility), participation (including interactivity and opportunities for rehearsal and rewards) and assessment, including the provision of personalised feedback. In addition, the online structure of the program utilised features of persuasive system design suggested by Kelders et al. (2012), such as reduction, tunnelling, personalization, self-monitoring, and reminders.

An additional consideration in adapting the SCO intervention for online administration was the fact that mindfulness- and acceptance- based programs are usually taught in group format, with intervention developers highlighting interaction with facilitators and fellow participants as an important part of learning (Segal et al., 2002). The presence of other participants is thought to enhance social support and motivation and facilitate learning through the sharing of experiences. In addition, participants are thought to learn by observing or participating in dialogue with facilitators. Such "non-specific" factors are thought to account for a significant amount of variance in outcome change in face-to-face interventions (Chambless & Hollon, 1998; Hollon & Ponniah, 2010). As such, an online environment in which there is no interaction among participants or between participants and facilitator presents unique challenges for teaching the core components of a mindfulness- and acceptance-based intervention. In an attempt to address some of these challenges, a

Frequently Asked Questions section was included in a number of the modules. In addition, weekly emails were sent to provide participants with an outline of the module they would be completing that week, and participants were given the option of providing weekly feedback to express any difficulties with the program.

Protocol review and website testing. Once the protocol for the program had been developed, its content was reviewed by one expert reviewer and two users who were drawn from the target population but unable to participate in Studies 3 and 4. All three reviewers were asked to provide feedback on the language used, the clarity and coherence of the information presented, the ease of use of the website and associated audiovisual elements (such as audio and video recordings), module length, and website appearance and functionality. Suggestions made by the reviewers included simplifying the language used, changing the layout so that text was easier to read, presenting some of the text content in video format, and including more explicit instructions regarding certain functional elements of the website. Changes were implemented as per these suggestions. A screenshot of a page from the final program is included in Appendix D.

Discussion

The development of interventions for cultivating self-compassion is a nascent area of research. Given the lack of established protocols for self-compassion-based interventions, the aim of the current study was to develop a protocol for a comprehensive and targeted self-compassion training program. In addition, given the potential relevance of self-compassion training for promoting wellbeing and resilience to occupational stress among psychologists, the aim of the current study tailored the intervention specifically for postgraduate psychology trainees. Based on relevant literature and extant empirical findings, *Self-Compassion Online* (SCO), a 6-week,

web-based self-compassion training program was developed. This program was subsequently refined based on recommendations from one expert and two user reviewers. Preliminary research into the effectiveness and feasibility of the SCO program is presented in Chapters 4 and 5 of this thesis.

CHAPTER 4: STUDY 2, STAGE 2

Online Self-Compassion Training for Reducing Psychological Distress and

Promoting Wellbeing among Trainee Psychologists: A Preliminary Open Trial

Introduction

Study 1 found evidence that, after controlling for age and neuroticism, self-compassion predicted symptoms of depression and stress in a sample of Australian psychologists and psychology trainees currently engaged in clinical work. Based on these findings and the rationale for the development of stress prevention programs for trainee psychologists that was outlined in Chapter 1, an online self-compassion training program for psychology trainees (Self-Compassion Online; SCO) was developed in Stage 1 of Study 2. The present study sought to examine the effects of the SCO program among trainee psychologists enrolled in an Australian postgraduate psychology program and undertaking clinical work.

The primary aim of the present study was to examine the impact of the SCO program on participants' levels of self-compassion, emotion regulation difficulties, and psychological distress (measured as symptoms of depression, anxiety, and stress). These outcomes were identified as relevant to the current study based on the results of Study 1, with the addition of depression and anxiety symptoms as supplementary markers of psychological distress.

A second aim of the current study was to examine the impact of the program on wellbeing – operationalised here as scores on a measure of authentic happiness. Authentic happiness has been defined as the degree to which one experiences a life which is pleasant, engaging, and meaningful (Seligman, 2002), and is a construct that aligns closely with the concept of eudemonic happiness. This outcome was chosen

rather than a measure of positive affect as the self-compassionate mindset was considered to be more aligned with eudemonic than hedonic happiness, a view that has since been supported by Neff and Costigan (2014). It was considered important to include a measure of wellbeing given the emphasis on developing stress-prevention initiatives for psychologists that aim to enhance positive psychological outcomes in addition to reducing negative ones (Wise et al., 2012). Furthermore, it is increasingly recognized that positive psychological states are valuable predictors of clinical symptoms, accounting for variance in psychopathology beyond that predicted by negative risk factors alone (Wood & Tarrier, 2010).

The final aim of the current study was to evaluate the acceptability and feasibility of the SCO program in terms of participant attrition, compliance, and satisfaction. In order to address these latter questions, feedback data was gathered from participants at the end of each module, as well as at post-test and 12-week follow-up.

Hypotheses.

Hypotheses in the current study were as follows:

H1. There would be a significant increase in self-compassion scores between pre- and post-test, and these changes would be maintained at follow-up.

H2. There would be a significant decrease in emotion regulation difficulties scores between pre- and post-test, and these changes would be maintained at follow-up.

H3. There would be a significant increase in happiness scores between pre- and post- test, and these changes would be maintained at follow-up.

H4. There would be a significant decrease in perceived stress scores between pre- and post-test, and these changes would be maintained at follow up.

H5. There would be a significant decrease in psychological distress (depression, anxiety, and stress) scores between pre- and post-test, and these changes would be maintained at follow-up.

Method

Ethics statement. Ethical approval for this study was granted by the Curtin University Human Research Ethics Committee (Approval number HR134/2011).

Participants. Thirty seven (89% female, mean age 32.61 years) postgraduate psychology trainees from around Australia participated in the study. This sample size was deemed adequate, given power calculations using the G*Power program (Faul, Erdfelder, Lang, & Buchner, 2007) indicated that a sample size of 28 would be sufficient to detect a moderate effect.

To be eligible for inclusion in the study, participants had to be currently enrolled in an APAC-accredited post-graduate psychology degree and currently engaged in clinical work. In the current sample 17 (45.84%) were enrolled in a Masters of Clinical Psychology, 5 (13.51%) were enrolled in a Masters of Counselling Psychology, 9 (24.32%) were enrolled in a Clinical Psychology PhD, 3 (8.12%) were enrolled in a Counselling Psychology PhD, and 3 (8.12%) were enrolled in a Clinical Psychology Doctorate program. The average number of hours of clinical work per week reported across participants was 19. The demographic characteristics of the sample are presented in Table 15.

Sampling and registration procedure. Participants were recruited through university email channels and advertising on social media. Participants were invited to read through an online Participant Information and Consent Form (Appendix E) and click through to a screening questionnaire if they consented to participate in the program. The screening questionnaire was designed to screen out participants who did

not meet the inclusion criteria. Following screening, eligible participants were emailed a link to the pre-test measures one week prior to the commencement of the program. Upon completing the pre-test measures, participants nominated a username and password, which they used to log in to the program once it was open.

Table 15

*Demographic Characteristics of Sample (*n *= 37)*

Variable	*M*	*SD*	*n*	*%*
Age	29	3.45		
Gender				
Female			34	91.89
Male			3	8.11
Degree Type & Stream				
Masters of Clinical Psychology			17	45.94
Masters of Counselling Psychology			5	13.51
PhD Clinical Psychology			9	24.32
PhD Counselling Psychology			3	8.12
Doctorate Clinical Psychology			3	8.12
Hours Clinical Work per Week	18	8.75		

Participants received access to one module a week for 6 weeks. At the beginning of each week, they received an email giving them an overview of the current module and encouraging them to log in to the program. At the end of each week, they were emailed with a link to the weekly feedback questionnaire. At the end of the week of the sixth module, participants were emailed a link to the post-test measures, which were available for one week. Twelve weeks after the end of the sixth

module, participants were emailed a link to the follow-up measures, which were also available for one week. Each time a participant completed a weekly measure or the post-test or follow-up questionnaire, they became eligible to enter a prize draw for an iTunes voucher. Of the 37 participants who completed pre-test measures, 20 (54%) completed post-test measures and 13 (35%) completed three-month follow-up measures. All data entered by participants was identifiable only by a participant number, which was not linked to any identifying information.

Measures. Participants completed online assessments via Qualtrics at pre-test, post-test and follow-up, which was designed to measure self-compassion, happiness, emotion regulation difficulties, perceived stress, and psychological distress. The scales in these measures are described below. In addition, participants completed a weekly program feedback survey, and further feedback questions were asked at post-test and follow-up.

Self-Compassion Scale (SCS; Neff, 2003a). The SCS is a 26-item self-report measure comprising six subscales (self-kindness, self-judgment, common humanity, isolation, mindfulness, and over-identification) designed to assess the different facets of self-compassion proposed by Neff (2003a, 2003b). It employs a five-point Likert-type response format, ranging from 1 (*almost never*) to 5 (*almost always*). Confirmatory factor analysis has indicated that there is a high degree of intercorrelation between these subscales, which can be accounted for by a single composite 'Self-Compassion' factor, and the majority of relevant research has focused on this total scale score. However, this version of the SCS also provides reliable information about subscale scores, and is recommended for use where subscale scores are of interest to researchers. Internal consistency, test-retest

reliability, convergent validity and discriminant validity for the scale are all strong (Neff, 2009).

Authentic Happiness Inventory (AHI; Peterson & Park, 2008). The AHI is a 24-item updated version of the Steen Happiness Index (SHI) developed by Seligman et al. (2005) to measure authentic happiness. Each item is a set of five statements that range from negative (e.g., *My life does not have any purpose or meaning*) to extremely positive (e.g., *I have a very clear idea about the purpose or meaning of my life)*. Preliminary data support the reliability of this scale (e.g., Schiffrin & Nelson, 2010).

Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004). In the current study, the DERS was used to measure difficulties with emotion regulation. Please refer to Study 1 for details of this measure.

Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983). In the current study, the PSS (Cohen et al., 1983) was used to measure perceived stress. This scale is a 10-item self-report measure which asks respondents to rate the frequency of cognitive appraisals of stress in the past month on a 5-point Likert-type response scale, ranging from 0 (*never*) to 4 (*very often*). The PSS has reported adequate construct and discriminant validity, and good reliability, with reported Cronbach's alpha of .85 (Cohen et al., 1983; Cohen & Williamson, 1988).

***21-item Depression Anxiety and Stress Scales (DASS-21; Lovibond & Lovibond, 1995)*.** In the current study, the DASS-21 was used to measure symptoms of depression, anxiety, and stress. Please refer to Study 1 for details of this measure.

Research design and data analysis. The aims of the current study were tested using a single-group, open trial design, with measures administered at pre-test, post-test, and 12-week follow-up. An open trial research design was considered an

appropriate preliminary step in examining the feasibility, acceptability and effectiveness of the Self-Compassion Online program, given that the current intervention was completely novel, and that research regarding self-compassion interventions in general is limited. When researching novel interventions or nascent areas of clinical investigation, comparative hypotheses (such as those formulated in the context of a controlled trial) may not be justifiable, and the use of a single-group design may thus be supported (Ip et al., 2013). In line with Chambless and Hollon (1998), the current research design included follow-up assessments to provide preliminary insight into the durability of treatment effects, clinical significance analyses to investigate whether the intervention elicited reliable and clinically significant change among participants, and feasibility evaluations using compliance and feedback questionnaires to further understand the clinical utility of the program.

SPSS's (Version 21.0) GENLINMIXED procedure was used to develop a Generalised Linear Mixed Model (GLMM) that tested for the effect of time within the context of a hierarchical design in which time (pre-test, post-test, and follow-up) was nested within participants, with time treated as a fixed effect, and participants treated as a random effect. The GLMM maximum likelihood procedure confers a number of benefits over statistical procedures traditionally used to analyse behavioural change (such as repeated measures ANOVA), as it uses all the data available at each assessment point, rather than relying on all participants to provide data at each point, thereby optimising statistical power and lessening the impact of sampling bias due to subject attrition (Elobeid et al., 2009; Kwok et al., 2008). This analytical technique may thus be particularly suited to research on web-based interventions, for which high dropout rates are often reported (Melville, Casey, & Kavanagh, 2010). In addition, while alternative methods of analysing behavioural change over time are based on

assumptions of normality, homogeneity of variance, and sphericity (Tabachnick & Fidell, 2013), GLMM's 'robust statistics' option can be invoked to accommodate violations of normality; violations of sphericity can be accommodated by changing the covariance matric from the default of compound symmetry to autoregressive (Kwok et al., 2008). GLMM is also more able to estimate group means when group size is small compared to other statistical techniques (Holden, Kelley, & Agarwal, 2008).

To maximise the likelihood of convergence, separate GLMM analyses were conducted for each of the nineteen outcome variables. As analysing each outcome independently inflates the familywise error rate, per-test alpha levels needed to be corrected to control the inflation. To optimise statistical power, alpha correction were applied within groups of conceptually related outcomes, across the entire set of outcomes (Klockars, Hancock, & McAweeney, 1995). For the psychological distress outcomes, the Bonferroni-corrected alpha level was .017. For the subscales of the self-compassion and emotion regulation difficulties measures the Bonferroni-corrected alpha level was .008. All other tests were performed at the conventional alpha level of .05.

Reliable and clinically significant change. Clinically significant change refers to whether the impact of treatment has practical significance for a client; i.e., whether change on outcome measures translates into meaningful changes in daily life (Kazdin, 2001). There are a number of ways of determining clinically significant change, and each method has its own strengths and weaknesses (Kazdin, 2003; Kazdin & Kendall, 1999). Comparison methods entail determining whether an individual has demonstrated reliable change (i.e. a change that is more than expected given the measurement error of the scale) and then determining whether their scores

reflect a shift away from the norms of the clinical population and towards the norms of the functional population (Kazdin, 2001). Based on this method, Jacobson and Truax (1991) have proposed four categories for classifying treatment outcomes, according to whether clients have achieved reliable and clinically significant change. *Recovered* individuals are those whose scores on the outcome measure reflect reliable change and a shift into the functional population; *improved* individuals are those whose scores on the outcome measure reflect reliable change but remain in the clinical range but have shifted in a positive direction; *unchanged* individuals are those whose scores do not indicate any reliable change, while individuals whose scores have reliably worsened are classified as *deteriorated*.

While Jacobson and Truax (1991) offer three different cut-off criteria to determine clinically significant change, each of these is based on two distributions only: the norms for the "functional" population and the norms for the "dysfunctional" population. Ronk, Korman, Hooke, and Page (2013) argue that this approach "ignores hetereogeneity within the "dysfunctional" population" (p. 1103) and may not provide an accurate reflection of meaningful change. Based on the "multiple-distribution" approach to determining clinically significant change used by Tingey, Lambert, Burlingame, and Hansen (1996), Ronk et al. (2013) proposed cut-offs for determining clinically significant change on the 21-item Depression, Anxiety, Stress Scales (DASS-21; Lovibond & Lovibond, 1995) based on the norms for "inpatient," "outpatient" and "nonclinical" samples. This approach provides cut-off points separating inpatient-outpatient and outpatient-nonclinical ranges, with reliable and clinically significant change determined with reference to minimum score changes within or between each of these three categories. While this approach is relatively new, it was considered an appropriate method for calculating reliable and clinically

significant change on the DASS-21 for each individual in the current study because the target group was not a clinical sample *per se* and there was marked heterogeneity in symptom severity.

According to Ronk et al. (2013), individuals can be categorised into one of five categories according to (a) whether the magnitude of their score change is above a certain threshold (i.e. whether it is reliable) and (b) which of the three distributions (inpatient, outpatient, or nonclinical) their post-treatment scores fall into. Individuals whose scores demonstrate positive reliable change and have shifted into the nonclinical range are classified as *recovered*; those who have made a positive reliable change from the inpatient to outpatient range are classified as *recovering*; individuals whose scores represent a positive reliable change *within* any range are considered *improved*; those who have not made a reliable change in either direction are classified as *unchanged*, while those whose scores reflect *negative* reliable change are said to have *deteriorated*.

Effect Sizes.Effect sizes for changes on outcome variables between pre- and post-test and pre-test and pre-test and follow-up were determined by calculating Cohen's *d* for each of the outcome variables.

Table 16 provides Cohen's (1992) conventions for determining the effect size indicated by Cohen's *d*.

Table 16

Effect Size Conventions for Cohen's d

Cohen's *d*	Effect Size
0.2	Small
0.5	Moderate
≥ 0.8	Large

Results

      Data screening. In line with Tabachnick and Fidell (2013), data for each variable were screened to check for missing and out-of-range values prior to analysis. The GLMM robust statistics function was used to accommodate violations of normality. Outcomes of the Mauchly's Test of Sphericity obtained by conducting a one-way, repeated-measures ANOVA for each of the outcomes using SPSS indicated that the assumption of sphericity was not violated.

      Missing data and differences between completers and non-completers. The GLMM maximum likelihood procedure is a full information estimation procedure that uses *all* the data present at *each* assessment point. This reduces sampling bias and the need to replace missing data. GLMM is able to use the data present at each assessment point because time (T1, T2, T3) is interpreted as a Level 1 variable that is nested within participant at Level 2.

      In order to assess whether there were differences between completers and non-completers (i.e. those who provided data at post-test and those who did not), Mann-Whitney U tests were used to compare these groups on pre-test scores for each of the outcome variables. The results of these tests were non-significant for all variables apart from perceived stress, with pre-test levels of perceived stress for non-completers significantly higher (*Mean Rank* = 22.00, n = 17) than for completers (*Mean Rank* = 17.50, n = 20), p = .03. In order to determine whether there was a significant difference in terms of age and gender between participants who completed the program and those who did not, chi-square tests were conducted on the demographic data provided. Across all participants, there was no significant difference between completers and non-completers in terms of gender, χ^2 (1, N = 37) = .04, p > .05 or age χ^2 (14, N = 37) = 19.28, p > .05.

Descriptive statistics. The mean scores for each outcome variable at pre-test, post-test and follow-up are reported in Table 17. While the DASS-21 is not intended as a categorical measure of clinical diagnoses, recommended cutoffs for conventional severity labels (normal, mild, moderate, severe, extremely severe) are provided (Lovibond & Lovibond, 1995, see Study 1). In the current study, mean depression and anxiety scores were in the normal range at pre-test, post-test and follow-up, while mean stress scores were in the mild range at pre-test, but in the normal range at post-test and follow-up.

Hypothesis testing.

Main effects of time and pairwise contrasts. A series of GLMMs was used to evaluate the relationship between the fixed effect of time and each of the outcome variables (SCS, DERS, AHI, PSS, and DASS-21). The main effects for time for each of the outcome variables are summarized in Table 18. In addition, post hoc Least Significant Difference (LSD) tests were conducted to test for significant differences between pre-test and post-test, post-test and follow-up, and pre-test and follow-up.

Hypothesis 1 predicted a significant main effect of time on mean self-compassion scores, using a Bonferroni-adjusted alpha level of .007. This hypothesis was supported, $F[2,65] = 28.51$, $p < .001$, with significant, positive changes in self-compassion scores observed between pre- and post-test ($p < .001$) . Additionally, positive but non-significant changes in mean self-compassion scores were observed between post-test and follow-up ($p < .001$). Effect size calculations indicated a large effect for the changes in self-compassion between pre- and post- test ($d = .86$) and between pre-test and follow-up ($d = 1.15$).

Table 17

Means and Standard Deviations for Outcomes at Pre-test Post-test and Follow-up.

		Pre-test (*n* = 37)		Post-test (*n* = 20)		Follow-up (*n* = 13)	
		M	*SD*	M	*SD*	M	SD
SCS							
	Total	2.76	.01	3.43	.14	3.49	.11
	Self-Kindness	2.79	.11	3.72	.14	3.45	.12
	Self-Judgment	3.37	.13	2.65	.14	2.57	.15
	Common Humanity	3.08	.13	3.86	.16	3.61	.15
	Isolation	3.30	.15	2.74	.19	2.88	.22
	Mindfulness	3.11	.12	3.82	.13	3.78	.16
	Overidentification	3.45	.14	2.91	.26	2.73	.93
DERS							
	Total	76.78	2.80	67.35	3.04	67.23	4.16
	Non-Acceptance	12.81	.93	10.06	.61	9.44	.72
	Goal-Direction	15.73	.74	13.02	.73	12.84	.63
	Impulse Control	10.24	.45	9.02	.51	9.14	.76
	Awareness	13.46	.68	12.53	.81	12.94	1.00
	Strategies	15.35	1.03	13.40	.95	12.61	1.03
	Clarity	9.19	.50	8.53	.50	8.74	.47
AHI		3.12	.07	3.35	.074	3.28	.10
PSS		19.57	6.25	14.65	5.18	13.92	6.07
DASS-21							
	Depression	7.40	.98	4.00	.88	4.00	1.18
	Anxiety	5.24	1.03	3.50	1.08	1.64	.85
	Stress	15.13	1.36	9.10	1.16	8.92	1.98

SCS: Self-compassion Scale; DERS: Difficulties with Emotion Regulation Scale; AHI: Authentic Happiness Inventory; PSS: Perceived Stress Scale; DASS-21: 21-Item Depression, Anxiety, Stress Scales.

Table 18

Results of the Fixed Effects of Time for Each Outcome.

Outcome	Numerator df	Denominator df	*F*-value	Sig.
SCS				
Total	2	65	28.51	<.001
Self-Kindness	2	65	18.58	<.001
Self-Judgment	2	67	11.64	<.001
Common Humanity	2	67	14.39	<.001
Isolation	2	67	3.50	.036
Mindfulness	2	67	13.25	<.001
Overidentification	2	60	10.63	<.001
DERS				
Total	2	67	17.01	<.001
Non-Acceptance	2	67	6.52	.003
Goal-Direction	2	67	19.27	<.001
Impulse Control	2	67	6.57	.002
Lack of Awareness	2	66	.67	.515
Strategies	2	67	4.97	.010
Clarity	2	65	1.56	.218
AHI	2	67	6.75	.002
PSS	2	67	6.73	.002
DASS				
Depression	2	67	5.37	.007
Anxiety	2	65	7.92	.001
Stress	2	67	14.60	<.001

SCS: Self-compassion Scale; DERS: Difficulties with Emotion Regulation Scale; AHI: Authentic Happiness Inventory; PSS: Perceived Stress Scale; DASS-21: 21-Item Depression, Anxiety, Stress Scales.

Significant main effects for time were also observed for the six self-compassion subscales: *self-kindness* (F[2, 65] = 18.58, $p < .01$), *self-judgment* (F[2,67] = 11.64, $p < .001$), common humanity (F[2,67] = 14.39, $p < .001$), isolation (F[2,67] = 3.50, $p=.036$), *mindfulness* (F[2,67] = 13.25, $p < .001$), and *overidentification* (F[2,67] = 13.25, $p < .001$). All changes were in the hypothesized directions (i.e. positive), and were maintained at follow-up. Data for the pairwise contrasts between pre-test and post-test, post-test and follow-up, and pre-test and follow-up for self-compassion outcomes are reported in Table 19.

Table 19

Least Significant Difference (LSD) Tests of the Simple Main Effects of Time with Pairwise Contrasts of Pre-Test and Post-Test (T1-T2), Post-Test and Follow-Up (T2-T3) and Pre-Test and Follow-Up (T1-T3) for Self-Compassion Outcomes.

Outcome	Time Interval	C. E.	Std. Err.	t-value	95% C.I.	Adj. Sig.	d
Self-Compassion	T1-T2	-.66	.13	-5.25	-.92, -.41	<.001	.86
	T2-T3	-.06	.13	-.49	-.32, .20	.623	.08
	T1-T3	-.73	.10	-7.00	-.94, -.52	<.001	1.15
Self-Kindness	T1-T2	-.92	.16	-5.89	-1.23, -.61	<.001	.97
	T2-T3	.27	.13	2.10	.01, .52	.039	.34
	T1-T3	-.65	.13	-4.89	-.92, -.39	<.001	.80
Self-Judgment	T1-T2	.72	.17	4.26	.38, 1.06	<.001	.70
	T2-T3	.09	.14	.65	-.18, .36	.565	.11
	T1-T3	.81	.18	4.58	.46, 1.16	.000	.75
Common Humanity	T1-T2	-.78	.15	-5.15	-1.08, -.48	<.001	0.85
	T2-T3	.25	.16	1.58	-.07, .56	.520	.26
	T1-T3	-.53	.15	-3.64	-.83, -.24	<.001	.60
Isolation	T1-T2	.56	.21	2.65	.14, .98	.010	.44
	T2-T3	-.13	.17	-.78	-.48, .21	.441	.13
	T1-T3	.43	.23	1.85	-.03, .89	.069	.30
Mindfulness	T1-T2	-.71	.15	-4.67	-1.01, -0.41	<.001	.77
	T2-T3	.004	.19	.23	-.33, .42	.823	.04
	T1-T3	-.67	.18	-3.71	-1.02, -.31	<.001	.61
Overidentification	T1-T2	.69	.23	2.98	.23, 1.16	.004	.49
	T2-T3	-.08	.22	-.37	-.53, .36	.710	.06
	T1-T3	.61	.14	4.37	.33, .89	<.001	.71

C.E.: Contrast Estimate; Std. Err.: Standard Error; C.I.: Confidence Interval: Adj. Sig: Adjusted Significance; *d*: Cohen's *d*.

Hypothesis 2 predicted a significant main effect of time on mean emotion regulation difficulties scores. This hypothesis was supported, $F[2,67] = 17.01$, p <.001, with significant negative changes in total emotion regulation difficulties scores observed between pre- and post-test ($p < .001$). These scores continued to decrease between post-test and follow-up; however these changes were non-significant. Effect size calculations indicated a moderate-large effect size for the changes in total emotion regulation difficulties between pre- and post-test, and a moderate effect size for pre-test to follow-up changes.

The significance of pre- to post-test changes for the DERS subscales was evaluated against a Bonferroni-corrected alpha level of 0.008. Significant main effects for time were observed for three of the six DERS subscales: non-acceptance ($F[2,67]$ = 6.52, p = .003), difficulties engaging in goal-directed behavior ($F[2,67] = 19.27$, $p <$ .001), and impulse control difficulties ($F[2,67] = 6.57$, p = .002), with limited access to emotion regulation strategies trending toward significance ($F[2,67] = 4.97$, p = .010). Changes for impulse control were maintained at follow-up, while mean scores on non-acceptance, difficulties engaging in goal-directed behavior, and limited access to emotion regulation strategies continued to decrease between post-test and follow-up; however these changes were non-significant. In addition, scores on the lack of emotional awareness and lack of emotional clarity subscales decreased between pre- and post-test; however these changes were not significant. Data for the pairwise contrasts between pre-test and post-test, post-test and follow-up, and pre-test and follow-up for the DERS total score, and for each of the DERS subscales are reported in Table 20.

Table 20

Least Significant Difference (LSD) Tests of the Simple Main Effects of Time with Pairwise

Contrasts for Emotion Regulation Difficulties Outcomes

Outcome	Time Int.	C. E.	Std. Error	t-value	95% C.I.	Adj. Sig.	*d*
Emotion Regulation Difficulties	T1-T2	9.434	2.52	3.75	4.41, 14.45	.001	.62
	T2-T3	1.43	2.63	.05	-5.12, 5.36	.964	.10
	T1-T3	9.553	3.01	3.17	3.54, 15.56	.002	.52
Non-Acceptance	T1-T2	2.78	.79	3.53	1.21, 4.35	.001	0.58
	T2-T3	.58	.70	.84	-.81, 1.98	.405	0.14
	T1-T3	3.36	1.06	3.16	1.24, 5.49	.002	0.52
Goal-Direction	T1-T2	2.75	.51	5.40	1.73, 3.77	<.001	0.89
	T2-T3	.25	.64	.39	-1.02, 1.52	.698	0.06
	T1-T3	3.00	.62	4.87	1.77, 4.23	<.001	0.80
Impulse Control	T1-T2	1.32	.38	3.44	.56, 2.09	.001	0.57
	T2-T3	-.13	.60	-.21	-1.32, 1.07	.832	0.03
	T1-T3	1.19	.58	2.06	.03, 2.36	.044	0.34
Awareness	T1-T2	.94	.81	1.15	-.69, 2.56	.255	0.19
	T2-T3	-.38	.64	-.60	-1.67, .90	.552	0.10
	T1-T3	.55	.81	.68	-1.07, 2.17	.499	0.11
Strategies	T1-T2	2.02	.80	2.53	.42, 3.62	.014	0.42
	T2-T3	.85	.73	1.15	-.62, 2.31	.253	0.19
	T1-T3	2.87	.93	3.08	1.01, 4.73	.003	0.51
Clarity	T1-T2	.66	.44	1.51	-.21, 1.53	.136	0.25
	T2-T3	-.20	.46	-.44	-1.11, .71	.662	0.07
	T1-T3	.46	.34	1.36	-.22, 1.13	.179	0.22

C.E.: Contrast Estimate; Std. Err.: Standard Error; C.I.: Confidence Interval: Adj. Sig: Adjusted

Significance; *d*: Cohen's *d.*

Hypothesis 3 predicted a significant main effect of time on happiness. This hypothesis

was supported ($F[2,67] = 6.75$, p=.002), with significant increases in happiness

observed between pre- and post-test ($p = .001$). These changes were maintained at

follow-up. A moderate effect size was observed for the pre-post test changes in

happiness, while the effect size for changes in happiness between pre-test and follow-

up was small. Data for the pairwise contrasts between pre-test and post-test, post-test

and follow-up, and pre-test and follow-up for happiness are reported in Table 21.

Table 21

Least Significant Difference (LSD) Tests of the Simple Main Effects of Time with Pairwise

Contrasts for Happiness

Outcome	Time Interval	C. E.	Std. Error	t-value	95% CI	Adj. Sig.	*d*
Happiness	T1-T2	-0.23	0.06	-3.58	-.37, -.10	.001	0.59
	T2-T3	0.07	.10	.74	-.12, .26	.465	0.12
	T1-T3	-0.16	.12	-1.41	-.40, .07	.164	0.23

C.E.: Contrast Estimate; Std. Err.: Standard Error; C.I.: Confidence Interval: Adj. Sig: Adjusted

Significance; *d*: Cohen's *d*.

Hypothesis 4 predicted a significant main effect for time on perceived stress.

This hypothesis was supported (F[2,66] = 4.97, p =.002), with significant decreases in

perceived stress observed between pre- and post-test (p = .002). These changes were

maintained at follow-up. A moderate effect size was observed for the pre-post

changes in perceived stress (d = .52), while a small-moderate effect size was observed

for the changes in perceived stress between pre-test and follow up (d = .48). Data for

the pairwise contrasts between pre-test and post-test, post-test and follow-up, and pre-

test and follow-up for stress appraisals are reported in Table 22.

Table 22

Least Significant Difference (LSD) Tests of the Simple Main Effects of Time with Pairwise

Contrasts for Perceived Stress.

Outcome	Time Interval	C. E.	Std. Error	t-value	95% CI	Adj. Sig.	*d*
Perceived Stress	T1-T2	3.92	1.24	3.16	1.44, 6.39	.002	0.52
	T2-T3	.10	1.47	.07	-2.83, 3.03	.945	0.01
	T1-T3	4.02	1.38	2.92	1.27, 6.77	.005	0.48

C.E.: Contrast Estimate; Std. Err.: Standard Error; C.I.: Confidence Interval: Adj. Sig: Adjusted

Significance; *d*: Cohen's *d*.

Finally, Hypothesis 5 predicted significant main effects for time on each of the

psychological distress variables. At the Bonferroni-corrected alpha level of .017, this

hypothesis was supported for each of the three psychological distress outcomes: depression ($F[2,67] = 5.37$, $p = .007$), anxiety ($F[2,65] = 7.92$, $p = .001$), and stress ($F[2,67] = 14.60$, $p < .001$). Mean depression scores significantly decreased between pre- and post-test ($p - .002$), with changes maintained at follow-up. For anxiety scores, non-significant reductions were observed between pre-test and post-test ($p = .165$); however there were significant reductions between pre-test and follow-up ($p = .003$). Mean stress scores significantly decreased between pre-and post-test ($p < .001$), and continued to decrease between post-test and follow-up; however these changes were non-significant. A moderate effect size was observed for changes in depression between pre- and post-test ($d = .54$), while a small-moderate effect size was observed for pre-test to follow-up changes ($d = .31$). For changes in anxiety, a small effect size was observed between pre- and post-test ($d = .23$), while the effect size for pre-test to follow-up changes was moderate ($d = .52$). For changes in stress, a large effect size was observed for pre-posttest changes, while pre-test to follow-up changes showed a small-moderate effect size ($d = .46$). Data for the pairwise contrasts between pre-test and post-test, post-test and follow-up, and pre-test and follow-up for depression, anxiety, and stress are reported in Table 23.

Table 23

Least Significant Difference (LSD) Tests of the Simple Main Effects of Time with
Pairwise Contrasts for Psychological Distress Outcomes.

Outcome	Time Interval	C.E.	Std. Error	t-value	95% CI	Adj. Sig.	*d*
Depression	T1-T2	3.44	1.05	3.27	1.34, 5.54	.002	0.54
	T2-T3	-.80	1.12	-0.72	-3.01, 1.41	.473	0.12
	T1-T3	2.64	1.42	1.86	-0.19, 5.47	.067	0.31
Anxiety	T1-T2	1.74	1.24	1.40	-.74, 4.23	.165	0.23
	T2-T3	1.86	.85	2.18	.16, 3.57	.033	0.36
	T1-T3	3.61	1.15	3.14	1.31, 5.90	.003	0.52
Stress	T1-T2	5.45	1.06	5.15	3.34, 7.56	<.001	0.85
	T2-T3	-.78	1.76	-.44	-4.29, 2.73	.659	0.07
	T1-T3	4.67	1.67	2.79	1.33, 8.01	.007	0.46

C.E.: Contrast Estimate; Std. Err.: Standard Error; C.I.: Confidence Interval: Adj. Sig: Adjusted

Significance; *d*: Cohen's *d*.

Reliable and clinically significant change. In line with Ronk et al. (2013)
reliable change calculations for each participant's pre-post-test and pre-test – follow-
up scores on the DASS-21 were carried out using the cut-offs and minimum change
thresholds provided in Table 24. For participants who had achieved reliable change,
clinically significant change was classified according to the 5-cateogory convention
stipulated by Ronk et al. (2013), described above.

Twenty participants provided data to calculate reliable and clinically
significant change at post-test. Of these, five participants (25%) achieved reliable
change on depression scores. Of these, two were classified as improved, and three
were classified as recovered. Seven participants (35%) achieved reliable change on
anxiety scores. Of these, two were classified as deteriorated, two were classified as
improved, and three were classified as recovered. Six participants (30%) achieved
reliable change on stress scores. Of these, three were classified as improved, and three
were classified as recovered.

Thirteen participants provided data to calculate reliable and clinically significant change at follow-up. Of these, three participants (23%) achieved reliable change on depression scores, with all three classified as recovered. Four participants (31%) achieved reliable change on anxiety scores; of these, three were classified as recovered, and one was classified as improved. Four participants achieved reliable change on stress scores, with two classified as recovered and two classified as improved.

Tables 25 and 26 show the direction of participant's pre-post and pre-test to follow-up change on the DASS-21, the severity of their pre-test, post-test, and follow-up scores according to the cut-offs provided by Lovibond and Lovibond (1995), and whether they achieved reliable change according to Ronk et al. (2013). For participants who achieved reliable change, clinically significant change classifications are also provided.

Table 24

Cutoff Scores and Reliable Change Thresholds for Determining Clinically Significant

Change on the DASS-21 based on Ronk, et al. 2013

	DASS-21 scale		
	Depression	**Anxiety**	**Stress**
Cutoff point between:			
(a) nonclinical and outpatient range	9.03	6.27	12.27
(b) outpatient and inpatient range	22.53	15.26	22.55
Minimum score change required for reliable change:			
(a) within normal range	3.86	3.85	4.90
(b) between normal and outpatient range	5.01	5.38	5.55
(c) within outpatient range	6.15	6.92	6.20
(d) between outpatient and inpatient range	6.28	8.08	6.36
(e) within inpatient range	6.41	9.23	6.52

Table 25

Direction of Change, Severity Indices, and Reliable and Clinically Significant Change Data for Participant's Pre- and Post-Intervention Scores on the DASS-21.

No	DC	Depression Pre Sev.	Post Sev.	RC	CSC	DC	Anxiety Pre Sev.	Post Sev.	RC	CSC	DC	Stress Pre Sev.	Post Sev.	RC	CSC
1	NC	Norm.	Norm.		-	Dec.	Norm.	Norm.	Yes	Imp.	Dec.	Norm.	Norm.	No	-
2	NC	Norm.	Norm.		-	NC	Norm.	Norm.		-	Dec.	Norm.	Norm.	Yes	Imp.
3	Dec.	Mild.	Norm.	Yes	Imp.	Dec.	Mild	Norm.	Yes	Rec.	Dec.	Sev.	Norm.	Yes	Rec.
4	NC	Norm.	Norm.		-	NC	Norm.	Norm.		-	Dec.	Norm.	Norm.	No	-
5	Dec.	Mod.	Norm.	Yes	Rec.	Dec.	Norm.	Norm.	Yes	Imp.	Dec.	Mod.	Norm.	Yes	Rec.
6	Dec.	Norm.	Norm.	No	-	Dec.	Norm.	Norm.	N/A		NC	Norm.	Norm.		-
7	Dec.	Norm.	Norm.	N/A		Dec.	Norm.	Norm.	N/A		Dec.	Norm.	Norm.	No	-
8	Dec.	Sev.	Norm.	Yes	Rec.	Dec.	Mild	Norm.	Yes	Rec.	Dec.	Mod.	Norm.	No	-
9	Inc.	Norm.	Norm.	No	-	Dec.	Mod	Norm.	Yes	Rec.	Dec.	Norm.	Norm.	No	-
10	Dec.	Norm.	Norm.	No	-	Inc.	Mod	Sev	No	-	Dec.	Mild.	Norm.	No	-

(*table continues*)

	Depression					Anxiety					Stress				
No	DC	Pre Sev.	Post Sev.	RC	CSC	DC	Pre Sev.	Post Sev.	RC	CSC	DC	Pre Sev.	Post Sev.	RC	CSC
11	Dec	Mod.	Norm.	Yes	Rec.	Inc.	Norm.	Norm.	No		Dec.	Mild.	Norm.	Yes	Rec.
12	Dec.	Norm.	Norm.	No	-	Dec.	Mod	Mild	No	-	NC	Norm.	Norm.		-
13	Dec.	Norm.	Norm.	No	-	Dec.	Norm.	Norm.	No	-	Dec.	Mild	Norm.	No	-
14	NC	Mild.	Norm.		-	Dec.	Mod	Mild	No	-	Dec.	Mod.	Norm.	Yes	Rec.
15	Dec.	Sev.	Mod.	No	-	NC	Mod	Mod.		-	Dec.	Mild	Norm.	No	-
16	NC	Norm.	Norm.		-	Inc.	Norm.	Mild	Yes	Det.	Dec.	Mod.	Norm.	No	-
17	Dec.	Norm.	Norm.	Yes	Imp.	NC	Norm.	Norm.		-	Dec.	Norm.	Norm.	Yes	Imp.
18	NC	Norm.	Norm.		-	NC	Norm.	Norm.		-	Dec.	Norm.	Norm.	Yes	Imp.
19	NC	Norm.	Norm.		-	Inc.	Norm.	Mod.	Yes	Det.	NC	Mod.	Mod.		-
20	Inc.	Norm.	Norm.	No	-	NC	Norm.	Norm.		-	Dec.	Norm.	Norm.		-

DC: Direction of Change; Dec: Decrease; Inc: Increase; NC: No Change; Pre Sev.: Pre-Test Severity; Post-Sev: Post-Test Severity; Norm: Normal; Mod.: Moderate; Sev.: Severe; RC: Reliable Change; CSC: Clinically Significant Change; Imp.: Improved; Rec.: Recovered; Det: Deteriorated

N.B. For participants whose pre-test score was below the minimum score change required for reliable change, reliable and clinically significant change columns are marked "N/A".

Table 26

Direction of Change, Severity Indices, and Reliable and Clinically Significant Change Data for Participant's Pre-Intervention and Follow-Up Scores on the DASS-21.

	Depression					Anxiety					Stress				
No	DC	Pre Sev.	Post Sev.	RC	CSC	DC	Pre Sev.	Post Sev.	RC	CSC	DC	Pre Sev.	Post Sev.	RC	CSC
1	Dec.	Norm.	Norm.	No	-	Dec.	Norm.	Norm.	Yes	Imp.	Dec.	Mild	Norm.	No	-
2	Dec.	Mild	Norm.	No	-	Dec.	Norm.	Norm.	N/A		Dec.	Norm.	Norm.	No	-
3	Dec.	Mod.	Norm.	Yes	Rec.	NC	Norm.	Norm.	-		Inc.	Mild	Mild	No	-
4	Dec.	Mild	Norm.	No	-	Dec.	Mod.	Norm.	Yes	Rec.	Dec.	Mod.	Mod.	No	-
5	NC	Norm.	Norm.	-		NC	Norm.	Norm.	-		Dec.	Norm.	Norm.	No	-
6	Dec.	Norm.	Norm.	No	-	Dec.	Mod.	Mod.	No	-	Inc.	Mild.	Norm.	No	-
7	NC	Norm.	Norm.	-		NC	Norm.	Norm.	N/A		NC	Norm.	Norm.	-	
8	Dec.	Sev.	Norm.	Yes	Rec.	Dec.	Mild	Norm.	Yes	Rec.	Dec.	Mod.	Norm.	Yes	Rec
9	Dec.	Norm.	Norm.	N/A		Dec.	Norm.	Norm.	N/A		Dec.	Norm.	Norm.	Yes	Imp.
10	Dec.	Norm.	Norm.	No	-	NC	Norm.	Norm.	-		Dec.	Norm.	Norm.	Yes	Imp.

(*table continues*)

	Depression					Anxiety					Stress				
No	DC	Pre Sev.	Post Sev.	RC	CSC	DC	Pre Sev.	Post Sev.	RC	CSC	DC	Pre Sev.	Post Sev.	RC	CSC
11	Inc.	Norm.	Mod.	Yes	Rec.	NC	Norm.	Norm.	-		Dec.	Norm.	Norm.	Yes	Rec.
12	Dec.	Norm.	Norm.	No	-	Dec.	Mod	Norm.	Yes	Rec.	NC	Norm.	Norm.		-
13	NC	Norm.	Norm.		-	Dec.	Norm.	Norm.	N/A		Dec.	Norm.	Norm.	No	-

DC: Direction of Change; Dec: Decrease; Inc: Increase; NC: No Change; Pre Sev.: Pre-Test Severity; Post-Sev: Post-Test Severity; Norm: Normal; Mod.: Moderate; Sev.: Severe; RC: Reliable Change; CSC: Clinically Significant Change; Imp.: Improved; Rec.: Recovered; Det: Deteriorated

N.B. For participants whose pre-test score was below the minimum score change required for reliable change, reliable and clinically significant change columns are marked "N/A".

Compliance and satisfaction with program. Of the 37 individuals who commenced participation in the program, 20 (54.05%) completed post-test measures, and 13 (35.14%) completed 12-week follow-up measures. Participants also completed a number of feedback measures during and after the intervention that provide some indication of the degree to which they complied and were satisfied with the various modules in the program, as well as the program overall.

Feedback response rates varied per module; however for each module, over 85% of participants who provided feedback reported completing it either mostly or entirely. Completion rates per module are shown in Table 27. In addition, all respondents for each module reported understanding the module, while 75% or more reported being able to do the module well. In a similar vein, responses collected for each module indicated that 75% or more of respondents found the module enjoyable, while 25% or less found it difficult. Over 75% of respondents for each module reported learning something from the module, while over 85% reported finding the module relevant to them. Data regarding module relevance, accessibility, enjoyability, and difficulty is presented in Table 28.

Perceived benefits and difficulties. Twenty participants provided responses to a question asking them what benefits (if any) they felt they had gained from participating in the Self-Compassion Online program. Overall, participants reported that they had a better understanding of self-compassion and how to apply within their personal lives, including being more mindful and kinder to themselves, not being so self-critical, having increased self-acceptance, and realising that they are not alone in their difficult experiences.

Participants also reported an enhanced appreciation of the value of self-care practices and an increased capacity to handle stress and to recover from difficult

experiences. They reported that the SCO program provided them with a structure for taking time for self, as well as a platform for self-reflection. Finally, participants reported benefits in terms of the impact on their therapeutic work, including using self-reflection as part of the therapeutic process and being able to "practise what you preach". Participants' perceived benefits are reported in Appendix F.

Sixteen participants responded to a question asking them what difficulties (if any) they experienced with the SCO program. The primary difficulty that participants reported experiencing was time constraints, although there were also difficulties with getting some of the audiovisual components of the program to work. Participants suggested that making the program less dense may increase the likelihood of them completing it. These responses are also reported in Appendix F.

Table 27

Participants' Program Completion Rates Per Module

Module No.	Response				
	Not at all	*A little*	*About half*	*Mostly*	*Completely*
1 ($n = 16$)	0 (0%)	0 (0%)	0 (0%)	4 (25%)	12 (75%)
2 ($n = 8$)	0 (0%)	0 (0%)	0 (0%)	4 (50%)	4 (50%)
3 ($n = 8$)	0 (0%)	1 (12.50%)	0 (0%)	5 (62.50%)	2 (25.00%)
4 ($n = 9$)	0 (0%)	0 (0%)	1 (11.11%)	2 (22.22%)	6 (66.67%)
5 ($n = 9$)	0 (0%)	0 (0%)	0 (0%)	4 (44.44%)	5 (55.56%)
6 ($n = 4$)	0 (0%)	0 (0%)	0 (0%)	2 (50.00%)	2 (50.00%)

Table 28

Participants' Satisfaction Ratings Per Module

	Level of Agreement				
Module 1 (*n* = 16)	**SD**	**D**	**NAND**	**A**	**SA**
"I found this module difficult"	4 (25%)	10 (62.50%)	1 (6.25%)	1 (6.25%)	0 (0%)
"I found this module enjoyable"	0 (0%)	0 (0%)	2 (12.50%)	14 (87.50%)	0 (0%)
"I found this module relevant to me"	0 (0%)	0 (0%)	2 (12.50%)	10 (62.50%)	4 (25%)
"I understood this module"	0 (0%)	0 (0%)	0 (0%)	5 (31.25%)	11 (68.75%)
"I learned something from this module"	0 (0%)	0 (0%)	2 (12.50%)	9 (56.25%)	5 (31.25%)
Module 2 (*n* = 8)					
"I found this module difficult"	1 (12.50%)	5 (62.50%)	2 (25.00%)	0 (0%)	0 (0%)
"I found this module enjoyable"	0 (0%)	0 (0%)	0 (0%)	7 (87.50%)	1 (12.50%)
"I found this module relevant to me"	0 (0%)	0 (0%)	0 (0%)	5 (62.50%)	3 (37.50%)
"I understood this module"	0 (0%)	0 (0%)	0 (0%)	4 (50%)	4 (50%)
"I learned something from this module"	0 (0%)	0 (0%)	1 (12.50%)	4 (50.00%)	3 (37.50%)

(*table continues*)

	Level of Agreement				
Module 3 (*n* = 8)	**SD**	**D**	**NAND**	**A**	**SA**
"I found this module difficult"	2 (25.00%)	5 (62.50%)	0 (0%)	1 (12.50%)	0 (0%)
"I found this module enjoyable"	0 (0%)	0 (0%)	2 (25.00%)	4 (50.00%)	2 (25.00%)
"I found this module relevant to me"	0 (0%)	0 (0%)	0 (0%)	6 (75.00%)	2 (25.00%)
"I understood this module"	0 (0%)	0 (0%)	0 (0%)	4 (50%)	4 (50%)
"I learned something from this module"	0 (0%)	0 (0%)	0 (0%)	6 (75.00%)	2 (25.00%)
Module 4 (*n* = 9)					
"I found this module difficult"	2 (22.22%)	5 (55.56%)	2 (22.22%)	0 (0%)	0 (0%)
"I found this module enjoyable"	0 (0%)	0 (0%)	2 (22.22%)	3 (33.33%)	4 (44.44%)
"I found this module relevant to me"	0 (0%)	0 (0%)	0 (0%)	4 (44.44%)	5 (55.56%)
"I understood this module"	0 (0%)	0 (0%)	0 (0%)	2 (22.22%)	7 (77.78%)
"I learned something from this module"	0 (0%)	0 (0%)	0 (0%)	3 (33.33%)	6 (66.67%)

(table continues)

	Level of Agreement				
Module 5 (*n* = 9)	**SD**	**D**	**NAND**	**A**	**SA**
"I found this module difficult"	3 (33.33%)	6 (66.67%)	0 (0%)	0 (0%)	0 (0%)
"I found this module enjoyable"	0 (0%)	0 (0%)	0 (0%)	7 (77.78%)	2 (22.22%)
"I found this module relevant to me"	0 (0%)	0 (0%)	3 (33.33%)	2 (22.22%)	4 (44.44%)
"I understood this module"	0 (0%)	0 (0%)	0 (0%)	4 (44.44%)	5 (55.56%)
"I learned something from this module"	0 (0%)	0 (0%)	0 (0%)	5 (55.56%)	4 (44.44%)
Module 6 (*n* = 4)					
"I found this module difficult"	0 (0%)	4 (100.00%)	0 (0%)	0 (0%)	0 (0%)
"I found this module enjoyable"	0 (0%)	0 (0%)	1 (25.00%)	1 (25.00%)	2 (50.00%)
"I found this module relevant to me"	0 (0%)	0 (0%)	1 (25.00%)	0 (0%)	3 (75.00%)
"I understood this module"	0 (0%)	0 (0%)	0 (0%)	1 (25.00%)	3 (75.00%)
"I learned something from this module"	0 (0%)	0 (0%)	1 (25.00%)	1 (25.00%)	2 (50.00%)

SD: Strongly disagree; D: Disagree; NAND: Neither Disagree nor Disagree; A: Agree; SA: Strongly Agree

Overall program feedback. At post-test and follow-up, participants were invited to provide open-ended responses in response to a question regarding their experience of the Self-Compassion Online program ("*If there is any further feedback you would like to provide about the program please enter it here*"). Nineteen participants elected to provide this feedback at post-test, while four participants provided this feedback at follow-up. Overall, participants reported positive experiences with the program, with only two participants reporting negative or neutral feedback ("*[n]ot too bad. Would prefer if the surveys were shorter*" and *"[i]t was ok, but I didn't feel like I was getting anything from it."*). The primary issues with the program involved the length of the meditations and surveys, and finding the content too densely packed.

In general, participants reported finding the program enjoyable and relevant to their academic, professional, and personal lives (e.g., *"I really enjoyed the program. It was something to look forward to each week and I found it to be a source of support. I found the topics covered to be extremely relevant not only to the experiences associated with masters but other areas of my life like interpersonal issues, etc.")*. In particular, participants reported that the program provided them with a source of support, and with techniques to reduce stress or distress during clinical training. In addition, participants reported finding the program well-structured, clear, and engaging. Feedback provided at post-test and follow-up is reported in Appendix F.

Discussion

This preliminary investigation into the effectiveness of an online self-compassion training program for trainee psychologists is encouraging, with significant, large decreases in emotion regulation difficulties, perceived stress, and psychological distress, and significant increases in self-compassion and happiness. All of these changes were maintained at 3-month follow-up. It is important to note that while the focus of the current intervention was on raising self-compassion levels, it cannot be concluded that concurrent changes in other psychological health outcomes occurred as a result of participants' increased self-compassion. In the absence of mediation analyses and the inclusion of a control group, these outcomes may be most accurately interpreted as co-emergent phenomena.

The increases in self-compassion observed in the current study are in line with a growing body of research supporting self-compassion as a variable capable of cultivation through training (see, e.g., Barnard & Curry, 2011b; Neff & Germer, 2013). Importantly, these results also support the proposition that changes in self-compassion can remain robust over time. The increases in happiness observed between pre- and post- test are in line with previous findings that self-compassion is positively correlated with happiness (Hollis-Walker & Colosimo, 2011; Neff, Rude, et al., 2007; Shapira & Mongrain, 2010; Smeets, Neff, Alberts, & Peters, 2014), optimism and gratitude (Breen, Kashdan, Lenser, & Fincham, 2010). Finally, the decreases on psychological distress outcomes support the evidence that increased self-compassion is associated with lower levels of depression, anxiety, and stress (Barnard & Curry, 2011b).

The average increases in self-compassion (0.67 points of a possible 5 at post-test and 0.73 points at follow-up, with a large effect size indicated) in the current

study provide a point of comparison with other intervention studies that have also targeted self-compassion as a primary outcome. In Neff and Germer's (2013) randomized controlled trial of their 8-week *Mindful Self-Compassion* (MSC) program, the intervention group reported an average increase in self-compassion of 1.13 points, with a large effect size indicated. These results can also be compared with mindfulness-based interventions that have evaluated changes in self-compassion – three studies on the effectiveness of MBSR (Birnie, Speca, & Carlson, 2010; Shapiro et al., 2005; Shapiro et al., 2007) reported an average .54 point increase in self-compassion, while three studies utilising MBCT as the intervention (Kuyken et al., 2012; Lee & Bang, 2010; Rimes & Wingrove, 2011) reported an average .30 point increase in self-compassion. Thus, while the current intervention was not as effective in targeting self-compassion as the MSC program, comparison with mindfulness-based interventions suggests that focusing on self-compassion as a primary target is effective. It should be noted that Neff and Germer's (2013) MSC program was a face-to-face intervention, whereas the current study is the first to consider whether a web-based program is a feasible mode of delivery for a self-compassion-based intervention. In addition, the current intervention was 6 weeks duration, as compared with the 8-week format used by Neff and Germer (Neff & Germer, 2013).

Effect sizes for changes in other outcomes in the current study were comparable with effect sizes reported by Neff and Germer (2013). For example, following the SCO program effect sizes for changes in depression, anxiety, stress, and perceived stress were moderate, small, large, and moderate, respectively. For the MSC program, effect sizes for changes in depression, anxiety, and perceived stress were large, moderate-large, and small, respectively. In addition, a moderate effect size was observed for changes in happiness following the SCO program, while a small

effect size was observed for changes in happiness following the MSC program. Finally, moderate-large effect sizes were observed in the current study for changes in overall emotion regulation difficulties between pre- and post-test.

The results of the current study suggest that a web-based intervention is an acceptable method of delivery for self-compassion training among trainee psychologists. This is important given that web-based technologies represent a cost-effective, flexible, accessible, and sustainable form of intervention delivery. Responses on feedback questionnaires indicate that the intervention was acceptable for the majority of the participants, which is a crucial consideration when designing psychological interventions, and may be particularly so when the aim of the intervention is to prevent psychological distress and promote wellbeing among a nonclinical population. The majority of respondents reported that they were able to understand the modules, and that they found them relevant and enjoyable. In addition, the majority of participants reported that they learned something from each module. Participants' responses indicated that overall, they were engaged with the program, and that they found the intervention meaningful and beneficial.

While only 54% of participants completed follow-up measures, statistics from internet intervention research suggest that these attrition rates are well within expected levels: treatment completion rates as low as 0.5% have been reported for "spontaneous" users of an online CBT program for depression and anxiety (Christensen, Griffiths, Korten, Brittliffe, & Groves, 2004) while completion rates of 1% have been reported for users of a web-based CBT intervention for panic delivered in a scientific trial environment (e.g., Farvolden, Denisoff, Selby, Bagby, & Rudy, 2005). This dropout rate may also be compared with dropout from studies of face-to-face stress prevention initiatives for health care professionals; a 44% attrition rate was

reported in a study of MBSR for health professionals conducted by Shapiro et al.
(2005), with participants citing time constraints as their primary reason for dropping
out.

Analysis of the differences between completers and non-completers in the
current study indicated that the only difference between these groups was the level of
perceived stress at pre-test, with non-completers reporting significantly higher levels
of perceived stress prior to starting the intervention. Although there was no follow-up
assessment conducted with participants who dropped out of the program, given the
difficulties reported with time constraints reported by participants who *did* remain in
the program, it may be surmised that the time commitment required by the program
was not feasible for those who dropped out. It is possible that for participants who are
already experiencing a high degree of perceived stress, participation in stress-
prevention interventions may actually add to stress levels by placing further pressures
on their time. As such, it may be wise to implement such interventions earlier on in
postgraduate training (for example, prior to commencing clinical work), when time
demands are less, and stress-prevention strategies can be more easily incorporated
into trainees' schedules.

Despite reporting some difficulties with technological problems, the
participants who remained in the program reported a high degree of engagement and
compliance with the intervention. Given the difficulties with time constraints
described above, it may be argued that web-based intervention delivery may be more
acceptable than face-to-face intervention formats, as the former is able to be accessed
remotely at any time (see, e.g., Wolever et al., 2012). Further research is required to
elucidate the relative benefits of these modes of intervention delivery.

In Study 1, emotion regulation difficulties were found to mediate the link

between self-compassion and depression and stress. Although it is not possible to state whether the changes in psychological distress observed in the current study were mediated by a reduction in emotion regulation difficulties, in the context of the evidence from Study 1 it may be hypothesised that this represents at least one mechanism underlying the observed changes. This finding can be placed in the context of growing evidence that self-compassion buffers against negative psychological outcomes by facilitating more adaptive emotion regulation (e.g., Allen & Leary, 2010; Leary et al., 2007; Neff et al., 2005). Future research is required to examine the mediating role of emotion regulation difficulties in changes on outcome measures related to the SCO program.

Another potential explanation for the salutary effects of self-compassion on psychological distress is that this relationship is mediated by increases in happiness. It has been argued that positive emotions can mediate and moderate the stress response at various points in the stress process (Folkman, 2008; Folkman & Moskowitz, 2000; Lazarus, Kanner, & Folkman, 1980). According to the broaden-and-build theory of positive emotions (Fredrickson, 1998, 2003) increasing one's experience of positive emotions builds one's personal resources by broadening cognitive and behavioural flexibility, thereby contributing to an enduring resilience to stress. It has been found that experiencing positive emotions can lead to more rapid recovery from the cardiovascular effects of negative emotions (Fredrickson & Levenson, 1998; Fredrickson, Mancuso, Branigan, & Tugade, 2000), which may contribute to psychological resilience. While increases in happiness were observed over the course of the intervention in the current study, again it is not possible to say whether these changes mediated any link between self-compassion and psychological distress.

A final explanation for the potential link between increased self-compassion and decreased psychological distress is the possibility that as trainees become more self-compassionate they are less likely to be exposed to stressful events. For example, it is possible that trainees with higher self-compassion are more inclined to protect themselves from certain stressors as an act of self-care. Alternatively, trainees who are high in self-compassion may be less inclined to interpret certain situations as stressful. It is possible that the more stable self-construal that is characteristic of a self-compassionate mindset makes it less likely that stressors will pose a threat to one's identity or feelings of worth or competence. Additionally, it is plausible that trainee psychologists who are high in self-compassion have a higher sense of coping self-efficacy, and are therefore less likely to interpret daily events as stressful. To elucidate these possibilities, further research into the qualitative distinctions in stress responses and coping processes between high- and low- self-compassion individuals is recommended.

The major implication of this research for individuals and training institutions interested in promoting well-functioning among trainee psychologists is that this population appears to benefit from self-compassion training as a way of reducing psychological distress and promoting wellbeing. Importantly, this study suggests that psychoeducational information, and MAB techniques such as goal setting, self-monitoring, self-reflection and meditation can be imparted in an online environment. Thus, self-compassion training may represent an effective, feasible, cost-effective, and sustainable form of stress prevention and wellbeing promotion among the target group.

There are a number of limitations in the current research that should be noted. As this was an open trial with no control group, it cannot be concluded that changes in

the outcome measures were not due to uncontrolled variables such as the passage of time, changing academic, personal, or workplace demands, or training received as part of their postgraduate programs. Despite this, changes in self-compassion support the possibility that there was some degree of specificity of the intervention; in addition, participants' reflections on the benefits they derive from the program indicate that it was a meaningful intervention for them in terms of creating change in their lives. It is also important to note that given that the intervention was self-guided and administered online, nonspecific factors such as participant-facilitator or participant-participant interactions – widely considered to influence outcomes in face-to-face studies (Hollon & Ponniah, 2010) – did not impact the results in the current study.

A second limitation of the current study was the small sample size and self-selection bias, which limits the generalizability of the findings. As participants self-selected into the intervention, they may have been more motivated to complete it and comply with it than the general population of psychology trainees. A larger sample size with randomisation of participants to the intervention or to a control condition is recommended to investigate how well psychology trainees typically engage with and respond to this type of intervention.

A final limitation in the current study concerns the rate of drop-out from the program. While web-based self-help interventions tend to have higher attrition rates than their therapist-assisted equivalents, the current results provide limited information regarding which stage of the program the participants dropped out at, and what factors lead to them dropping out of the program. Given that a number of participants reported difficulties finding the time to do the program, it may be hypothesised that lack of time may be one of the primary reasons behind participants'

attrition. It is suggested that future revisions to the program aim to reduce the density of content and make the program less time-consuming. Further, it is recommended that future evaluations of the program include follow-up assessment with participants who drop out, so that the reasons for attrition can be examined in greater detail.

It should be noted that there is a difference between treatment completion (i.e. completion of the post-test measures) and treatment adherence (i.e. completion of the various stages of the intervention). The use of self-reports of module completion as a measure of treatment adherence in the current study is a considerable limitation, as accurate estimates of treatment effectiveness depend on accurate measurement of treatment adherence. In line with CONSORT-EHEALTH guidelines (Eysenbach, 2011), it is recommended that future research into the effectiveness of the SCO program include metrics such as number of logins, number of modules accessed, and average session time as measures of treatment adherence.

This study provides the first evidence that an online self-compassion training program is acceptable and is potentially effective in increasing self-compassion and happiness and reducing symptoms of psychological distress among trainee psychologists. The results also provide evidence that changes in these outcomes can be maintained over time.

CHAPTER 5: STUDY 2, STAGE 3

An Open Trial of the Self-Compassion Online Program: Content Analysis of

Participants' Responses to Program Exercises

Introduction

In the first stage of Study 2 an online self-compassion training program (SCO) was developed. The second stage of Study 2 found evidence that the SCO program was an effective and feasible way of increasing self-compassion and happiness and decreasing symptoms of psychological distress among trainee psychologists. The aim of the current study was to gain further insight into the experience of trainee psychologists and the relevance of the SCO program for this group. To identify categories and themes related to participants' experiences as trainee psychologists, and their experiences undertaking the SCO program, data provided by participants in response to the program exercises were analysed.

Method

Participants and data collection. Participants were the 37 trainee psychologists who participated in Stage 2 of Study 2. Using Qualtrics and online forms administered via the SCO website, data were collected from participants' online responses to a selection of the exercises contained in the SCO program. Different numbers of participants provided online responses to the selected exercises, with all data provided for a particular exercise used in the analyses. In order to protect participants' privacy and anonymity during data collection, responses across exercises were not linked.

Data analysis. Data in the current study were analysed using qualitative content analysis techniques. It was hoped that this approach would provide a starting point for the development of inductive hypotheses with which to guide future

research, as well as providing insight into appropriate revisions to the program. In the current study, the units of analysis were participants' written responses to exercises delivered as part of the SCO program. These exercises involved open-ended questions (e.g., "What was your experience with the *Just Being* exercise"), and a mixture of open-ended and closed questions (e.g. "How did you find the *Waiting on Yourself* meditation? Was this the first time you have meditated?").

Responses to each exercise were read through several times to obtain a sense of the overall text, and they were then collated into a single text, which formed the unit of analysis. Each text was then broken down into units of meaning that were coded into categories and subcategories. Given the aims of the current study, the generally low level of complexity of the units of meaning, and the limitations presented by online data collection, the primary focus of the current analysis was on the manifest content: these are the expressed, observable components of the text that are represented by categories (Downe-Wamboldt, 1992; Kondracki, Wellman, & Amundson, 2002). The categories comprised content that was identified based on some shared commonality (Krippendorff, 1980). While it has been argued that content within categories should be homogenous, while content across categories should be heterogenous (Patton, 1987), given the intertwined nature of human experiences, the creation of completely distinct and uniform categories may not always be possible (Graneheim & Lundman, 2004). Once the categories were formed, the original texts were re-read to ensure that the categories adequately covered the data before themes were generated.

Themes are recurring concepts across categories that can be linked together to create meaning (Baxter, 1991; Polit & Hungler, 1999), and a theme can be seen as an expression of the latent content of the text (Graneheim & Lundman, 2004). Following

a period of reflection on the content encapsulated in the categories, where relevant, themes were identified that were thought to reflect the underlying meaning of each text. The categories and themes that relate to the major aspects of the program (trainees' experience of stress; the mindfulness, self-kindness, and common humanity aspects of self-compassion; trainees' experience practicing meditation, and the relevance of self-compassion to trainees' professional lives) are discussed below.

Results

      Experience of stress. Twenty-eight participants responded to an exercise asking them to reflect on their cognitive, emotional, physiological, behavioural, and self-relational responses to stress. A dominant theme in participants' responses was a fear of inadequacy, reflected in a tendency to engage in self-criticism and self-blame, and thoughts of incompetence and lack of coping self-efficacy (e.g., *"It's my fault, if only I were more organised, more motivated, more competent. If I'm like this now, how am I going to cope when things are tougher? (not well!)"*. Participants reported a sense of not fulfilling expectations of how they "should" be coping and the detrimental impact this had on their sense of self-worth (e.g., *"I should be able to do better. I must not be good enough"*). In addition, participants reported a tendency to compare themselves negatively with others (*"Everyone else is so much better at this/coping than I am. I can't stand it."*).

      On the other hand, a few participants reported actively coping with stress by focusing on the task at hand, reminding themselves of times that they had coped with difficult situations in the past, and practising mental toughness (e.g. *"Suck it up, I just have to get through this"*).

      In terms of their emotional and physiological responses to stress, a predominant theme in participants' reflections was the feeling of being overwhelmed,

frustrated, and anxious. A number of participants reported feeling worried, down, depressed, or having flat mood, as well as physiological feelings of tiredness, exhaustion, or tension. Some participants also reported feelings of anger, hopelessness, inadequacy, shame, and isolation. For example, one participant described their response to stress as feeling "*[o]verwhelmed, scattered, hot, withdrawn, physically ill, alone, sad, anxious, angry*". One participant noted that feelings of stress didn't necessarily preclude them from taking constructive action, reporting that they felt "*stressed and aroused but proactive enough to do something about it*".

In terms of their behavioural responses to stress, participants' reports varied somewhat. Some participants reported positive behavioural strategies, like taking "*time out to regroup*," while others reported neglecting their diet, exercise and sleep routines. Participants described acting erratically, impulsively, mindlessly, and "childishly". A number of participants reported becoming irritable with others or avoiding people and withdrawing. One participant noted the difference in behaviour between public and private places, reporting that they behaved "*as professionally as I can in public and then collapse into self-pity in private*". While some participants reported a tendency to focus on the stress or task at hand, others described avoiding the situation and procrastinating (e.g."*[b]y procrastinating, avoiding situations, people, feelings, sensations. By eating. By tuning out through reading self-help books, looking online, watching tv. By ignoring the fact that there are people who care about me and withdrawing socially and isolating myself. By completely stepping away from the problem, telling myself it's too hard or that there are no solutions.*"). Many participants' responses indicated that they struggled to maintain balance in their lives during times of stress, and that the need to "get things done" often eclipsed everything

else (e.g. "*do what it takes to get the job done and do it well. Less sleep, poorer balance in life. I have no time for anything/anybody that is not directly related to what needs to be achieved*").

Some participants reported treating themselves well during times of stress, while others noted that their self-relation alternated from kind and caring to angry and critical (e.g. "*Sometimes with kindness and understanding – balancing the work with self-care. Sometimes with negative self-criticism*"). The majority of participants, however, reported that they treated themselves harshly, critically, and poorly in the face of stress (e.g. "*Terribly. I berate myself, I blame myself, I'm judgmental and critical. I call myself names, I don't give myself a break, I focus on all the things I have done wrong or that are problematic and ignore the good things*"). Participants described relating to themselves aggressively, coldly and firmly, and one participant noted that there was the assumption that "*beating myself up will make me work harder or not make mistakes*". Some participants responses indicated that while they were aware of how to relate to themselves in a more adaptive manner, they struggle to enact this at times (e.g. "*With some degree of compassion. Doesn't seem to work most of the time as I feel guilty for that; felt like I don't deserve any compassion because I haven't achieved what I needed to*").

Concerns and challenges related to therapeutic work. Nine participants responded to an exercise asking them to reflect on the concerns that they have about their work as a therapist, and the challenges and stressors they face as part of their therapeutic role. Predominantly, participants described concerns about competency as a therapist, feeling fraudulent (e.g. "*What if I'm not effective? What if I'm just not cut out for this type of work?",* and feeling as though they "should" know what to do or say but didn't (e.g. "*I sometimes feel lost in sessions but feel like I should know where*

to go"). In addition, participants reported concerns about their emotions responses, such as managing countertransference reactions or worrying about crying in response to a client's issues. Some participants mentioned comparing themselves unfavourably to others (e.g. "*everyone else is a better therapist than me and always seems to know what to do*"). Largely, participants responses indicated a high degree of responsibility for therapeutic outcomes and reflected the idea that they would be to blame if therapy was not going "as planned" (e.g. "*If this isn't working there must be something I'm doing wrong or something I could be doing much better*"). Participants' responses also reflected general doubts about being able to help clients and of not knowing what to say in a particular situation.

In terms of the particular stressors related to therapeutic work, participants' responses reflected difficulties working with particular "types" of clients and client issues, as well as struggles with certain aspects of therapeutic process. For example, participants reported finding working with chronic pain clients, clients with personality disorders, children who have survived trauma, and clients with suicide or self-harm risk to be particularly difficult. In addition, participants reported worrying about being liked by clients, and having difficulties with boundary-setting, refraining from projecting onto or over-identifying with clients, and being assertive or directive with clients. In addition, participants mentioned struggling with feelings of uncertainty and ambiguity, in terms of not always being able to predict the issues a client might bring to a session and plan the session accordingly (e.g. "*realising that I can't plan exactly what will happen in session and everything won't always go to plan*"). Participants also reported difficulties working with other professionals, and finding cases with complex legal issues stressful. Finally, one participant highlighted

the challenge of balancing time demands in the face of assignments, paperwork, and clinical work.

Cultivating self-kindness: participants' reflections on self-talk. Fifteen participants responded to an exercise asking them about the nature of their self-talk and their responses to it. Participants' reflections on the nature of their self-talk raised four major themes. The first theme related to awareness of self-talk: it appeared that self-talk was generally something that participants were aware of, although the timeframe of awareness varied. For example, some participants reported awareness of self-talk as it was happening, while others reported becoming more aware of their self-talk retrospectively. One participant noted finding it difficult to be aware of self-talk. Some participants described their awareness of self-talk being linked to their stress levels, for example, "*[w]hen under stress I am only aware of it after, but during most times I can monitor my self-talk (and respond) as it is happening*".

The second theme related to the tone of self-talk: a number of participants reported experiencing self-talk that was negative and critical, as well as self-talk that was either neutral or positive. For some participants, self-talk was primarily negative: within the various descriptions of negative self-talk, participants described critical, catastrophizing, self-doubting and angry self-talk that reflected ideas of themselves as incompetent, worthless, lazy, stupid, and annoying. Negative self-talk also appeared to reflect exacting personal standards and involve global and stable negative judgements of self. For example, one participant described their self-talk as follows: "*Generally critical - not good enough, haven't done enough, hopeless, idiot, disorganised, never get anything done. Also very generalising, focusing on negatives and ignoring positives, and setting up perfect standards for myself and not holding*

others to those. Words that crop up subconsciously are: bad daughter, failure in job, terrible therapist, unlikeable person".

Participants reported that the impact of negative self-talk was that it contributed to stress levels and led to them feeling depressed, sad, anxious, afraid and panicked. The effect of negative self-talk also manifested as physical symptoms, including feelings of tension, nausea, and sleeplessness.

For other participants, positive self-talk was more dominant: within the positive self-talk described were ideas of feeling compassion and kindness for oneself, emphasising that it is acceptable to make mistakes, and being supportive, motivating and reassuring. For example, one participant described their self-talk as "*caring and encouraging of rest and kindness to self*". The nature of self-talk was linked to mood and stress levels: for example, one participant identified "*when I'm feeling stressed or get something wrong then my self-talk is quite negative-I'm never going to be able to do it, I'm no good at this, I'm going to be a terrible psychologist, I don't know what to do. When I'm in a good mood however I am quite encouraging and compassionate towards myself*". Positive or soothing self-talk was primarily identified as relaxing or reassuring, although one participant noted that they had "*trouble accepting my soothing self-talk*".

A third theme reflected in participants' responses to this exercise was the function of self-talk. Both positive and negative self-talk was identified as motivational by some participants. Positive self-talk appeared to function as a form of self-soothing or reassurance, and was used to relieve anxiety or deal with feelings of being overwhelmed. For example, one participant described giving themselves ""*I can do it" messages in the face of feeling stressed and overwhelmed*". On the other hand, negative self-talk was described as being motivating in a harsh and critical

manner, for example: *"I talk down to myself regularly, I tell myself when I'm "being a doofus" and use a firm voice when trying to encourage or motivate myself. The positive self-talk that I have is usually more situational-based whereas the more critical self-talk is personal and global. The criticism I use is not too harsh though."*

The final major theme related to participants' capacity to change the nature of their self-talk. Participants reported a difference between automatic self-talk and self-talk that was constructed or deliberate. Furthermore, participants noted that paying attention to self-talk (such as in the self-talk exercise) helped them to change the way that they were talking to themselves so that they were less critical and more reassuring. For example "*[m]y self-talk varied a lot from quite critical to more supportive, probably because starting this course made me more aware*" and "*[s]elf-talk was primarily encouraging and re-assuring... although it used to be quite critical I think.... noticing the self-talk has helped me to change the way I talk to myself*".

Cultivating mindfulness: participants' responses to "Just Being" exercise. Seventeen participants provided responses to the "Just Being" exercise, which asks participants what it would be like for them to reduce goal-oriented activity or striving in their lives and cultivate present-moment awareness. One of the primary themes that emerged in participants' responses to this question was that that "just being" was theoretically a nice idea, but difficult to put into practice. Participants described a present-moment awareness state as "*a cherished ideal*" and something that represented "*happiness and freedom*". At the same time, "just being" was seen to represent laziness or lack of achievement and was associated with negative feelings such as guilt and anxiety. For example, one participant described "just being" as a state that "*[i]ndicates laziness. Brings up feelings of guilt, anxiety at the thought of not achieving something from a list, wasting time, not "improving myself" or getting*

things done". The conflicting experiences brought up by this exercise was summarised by one participant as a feeling of "*[c]alm and peace. A sense of wholeness. But also in some ways a sense of being unproductive and useless."*

Participants responses also reflected that they placed a lot of value on achieving, and that there was a quite a high degree of pressure to be "doing" things. As a result, this exercise elicited stress around "*not getting things* done". Participants identified that the pressure to achieve was linked to others expectations, as well as their own "*perfectionistic voice*". They reported that the "just being" exercise brought up thoughts of not being good enough and of not trusting themselves to do well unless they push themselves hard. One participant also reported that they felt critical of themselves for struggling with this exercise.

Participants' experiences practising loving-kindness meditation.
Meditation practice – particularly compassion-focused meditations such as self-compassion meditation and loving-kindness meditation – is a key component of the Self-Compassion Online program. An important question to address in the development of the Self-Compassion Online program was whether meditation training could be effectively translated into an online environment, and what (if any) difficulties participants would experience engaging with these practices in a completely self-guided manner. In order to gain insight into these issues, participants' reflections on one of the loving-kindness meditations were analysed. Ten participants provided responses to this exercise.

Overall, participants appeared to respond well to the loving-kindness meditation, reporting that it gave them a sense of calm, clarity, and relaxation. Difficulties with the loving-kindness meditation included thinking of a meditation object (i.e. thinking of someone who evokes feelings of love and happiness),

extending loving-kindness to oneself, staying awake, and accepting the time-frame for the meditation. One participant reported on their changing experience of the meditation as it progressed: "*Initially I was irritated that it would take 20 minutes and looked for other tasks that I could "do" simultaneously. As I began to focus upon the meditation I found a glow emerging from within me that radiated out beyond me*".

Cultivating awareness of common humanity. Nine participants responded to an exercise asking them to reflect on the key themes of Module Four, which focused on cultivating awareness of common humanity. One of the major themes that arose from this reflection was the degree to which participants struggle with being vulnerable. Participants identified that vulnerability involves letting go of control and developing a greater degree of trust with others. It was noted that processes of social comparison can restrict the degree to which one feels comfortable being vulnerable with others, and that vulnerability entails being open about one's joys and successes as well as one's struggles. Interestingly, one participant noted that attempting to become more self-compassionate could become more about being "good at" self-compassion, rather than true self-acceptance: "*As I go through these exercises I like to think that "I'm fine" - I'm happy with myself, compassionate towards myself, connected with other people but I think that is my barrier. I want myself to be these things, so I put pressure on myself to be perfect. I don't want to be vulnerable and I don't like being vulnerable.*"

Another key theme here was the development of authenticity, and the importance of acting in a way that is true to oneself, rather than acting to please others and seek approval. Participants' responses reflected the idea that having an inherent sense of self-worth or of "being enough" was crucial to being able to behave more authentically: "*I need to remind myself that "I am enough" and just be me! The*

benefits of this would be that I would be more authentic and true to myself and stop trying to work towards being what I think everyone wants me to be and I should be". This sense of self-worth was described as something that was quite difficult to cultivate, despite recognition of its value: "*I love the idea of believing I'm worthy, but it seems as realistic as waiting for water to flow uphill*". Participants noted the relevance of being authentic in their work as therapists, reporting that it would allow them to connect more with others, enhance their empathy, and help them model self-worth and the capacity to be vulnerable to their clients.

Relevance of self-compassion to professional life. Nine participants responded to an exercise that asked them to reflect on what relevance (if any) self-compassion had for their professional lives. Content analysis of these responses revealed that an increased sense of acceptance was a dominant theme across participants' responses. This included recognition that working as a psychologist can be challenging and their expectations of their own performance should reflect this: "*there is so much to learn in the helping field and as a student I am just starting out so I should just expect myself to be doing my best and therefore not need to do everything well*". In addition, participants' responses reflected the relevance of heightened self-acceptance: "*to learn to accept myself for who I am even though I feel like a failure sometimes...*". Participants identified that recognising their own limits and not seeing this as a weakness, and recognising the common humanity in their internal processes were important to being able to limit self-criticism and reduce feelings of isolation and stress.

Linked to this was an awareness of the role of self-criticism in exacerbating primary stress responses. Participants identified that awareness of self-criticism and the capacity to reframe negative or self-critical self-talk was relevant to their

professional lives in terms of reducing stress and enhancing wellbeing: "*I think that self-criticism and shame only add secondary stress to original or "pure" stress or pain. I could practice identifying self-critical and other unhelpful thoughts when they arise (attending mindfully to the body as an indicator of this stress), then practising positive, compassionate self-talk to replace the judgement*". In addition, participants highlighted the importance of self-care as a necessary pre-condition for wellbeing, with self-care practices such as seeking supervision, taking time out, and practising mindfulness, self-kindness, and gratitude identified by participants as relevant. Finally, participants conveyed the importance of trusting in their own coping efficacy: "*[r]emind myself that I am learning and it is sometimes unpredictable what clients will say and do and trust in the learning I have done over the previous 6 years that I will find a way to cope*".

Discussion

The aim of the current study was to gain further insight into the experience of trainee psychologists, in terms of the ways in which they appraise and cope with stress, and the ways in which they respond to self-compassion training. Text responses to a selection of exercises administered as part of the *Self-Compassion Online* program open trial (Study 3) were subject to content analysis. The results provide support for the proposition that self-compassion training is a relevant and engaging intervention for psychology trainees, and suggest some interesting directions for future research, as well as some pertinent revisions to the SCO program.

Overall, it appeared that participants' experience of stress was similar to that described in the research on stressors associated with training in the health professions (e.g., Orlinsky & Rønnestad, 2005; Skovholt & Rønnestad, 2003; Skovholt & Trotter-Mathison, 2011). For example, participants reported concerns about their professional

knowledge and competence, worries about whether they would know what to say or do with clients, and fears of being inferior to other trainees, of being found out as fraudulent, and of not being "cut out" for work as a psychologist. Additionally, participants' reports of work-related stresses were similar to those commonly cited in the literature, namely: dealing with ambiguity, working with clients with chronic difficulties and personality disorders, negotiating boundaries, and dealing with cases with complex legal and ethical issues (Barnett et al., 2007; Farber, 1983; Farber & Heifetz, 1981; Kottler, 2003). These findings support the proposition that there are a number of complex stressors inherent to the profession, as well as commonly occurring concerns among trainees that may exacerbate the experience of work-related stress.

The findings regarding participants' responses to their self-talk are in line with cognitive theorists who have proposed that the tone and content of internal dialogue affects perception, mood, and behaviour (Mahoney, 1993; Meichenbaum, 1977). Participants reported the capacity to engage in both positive and negative self-talk, with negative self-talk largely resembling the negative, self-focused catastrophizing described by Meichenbaum and Butler (1980). Given that this form of self-talk has the capacity to negatively affect performance (Hiebert et al., 1998; Meichenbaum & Butler, 1980), it has been argued that teaching trainee therapists to manage negative self-talk is an important aspect of therapists' clinical training (Nutt-Williams & Hill, 1996). Indeed, one of the goals of the SCO program is to help participants become more aware of their self-talk and reframe negative and critical self-statements in a more balanced and self-compassionate manner. An interesting direction for future research would be to look in greater detail at the impact that the SCO program has on

their self-talk, and to determine whether this, in turn, impacts on therapeutic performance.

An interesting point raised by the current research was that participants reported difficulty with enacting processes such as being in the moment (without goal-directed striving) and self-acceptance, despite understanding and appreciating the potential benefits of these processes. This finding is in line with research that individuals may be afraid of developing self-compassion and self-acceptance as they view it as representative of weakness, incompetence, selfishness, or self-pity (Gilbert, McEwan, Matos, & Rivis, 2011). This suggests that a useful revision to the SCO program may be to directly address these fears, either through psychoeducation or the use of behavioural experiments. Given that the SCO program is completely self-guided, it may also be of benefit to provide some normalization around these experiences so that participants are less likely to criticize themselves for struggling to enact these processes.

Participants' responses to an exercise inquiring into to relevance of the SCO program for their professional lives supported the findings of Study 3 that the SCO program is an effective intervention for reducing stress and enhancing wellbeing among this group. Participants reported that increased awareness and acceptance of their own internal processes, as well as of the nature of their profession and the challenges involved in clinical training were of benefit in helping them to be less self-critical and feel less isolated and stressed. In addition, participants reported increased appreciation of the role of self-care practices and self-compassion-based techniques in sustaining resilience and wellbeing over time. This is important as it suggests that there is some degree of specificity for the effects of the SCO program, which cannot be implied from the results of an open trial alone.

While the current results provide some interesting insights into the experiences of the participants in the SCO program, and highlight some valuable avenues for future research, there were a number of factors that may impact the credibility of the current findings. In qualitative terms, credibility refers to how well the selected data and the analytic processes address the research question (Polit & Hungler, 1999). It should be emphasized that in the current study, participants were those who (a) self-elected to participate in the SCO program, and (b) responded to the various exercises contained within the program. These participants likely had experiences that gave them a vested interest in the topics of inquiry, and therefore should not be seen as representative of the wider population of trainee psychologists. Future investigation into some of the issues raised by the current research may wish to select participants with a range of experiences in relation to the area of interest, thereby illuminating the research question from a variety of angles (Adler & Adler, 1988; Patton, 1987).

It should also be noted that responses were provided online, meaning that it was not possible to clarify or expand on responses, or to interpret them in the light of contextual clues. In addition, the data were interpreted by a single researcher, and therefore the findings may reflect a degree of subjectivity. Future research into the topics presented here may wish to optimize credibility by validating the interpretations across researchers or participants, although it is important to note that there may be many meanings implicated by a single text, and some degree of subjectivity is always present in interpretation (Graneheim & Lundman, 2004).

Despite these limitations, this study provides further evidence that self-compassion training is an acceptable and meaningful intervention for trainee psychologists that has the potential to impact the ways in which they relate to themselves, and consequently, the ways in which they respond to professional

stressors. Revisions to the SCO program in line with the recommendations here should be followed by further research regarding the impact of the program on outcomes such as the nature of self-talk, fear of self-compassion, and therapeutic effectiveness.

CHAPTER 6

General Discussion

Introduction

The overall aim of the current research was to investigate the relevance of the self-compassion construct as a way of promoting resilience to occupational stress among trainee and professional psychologists. Specific goals of the research were to (a) clarify the nature of the relationship between self-compassion and psychological distress among psychologists; (b) investigate an emotion regulation model of self-compassion; (c) develop a theoretically- and empirically- grounded online self-compassion training program; and (d) evaluate the relevance, feasibility and effectiveness of this program for preventing distress and promoting psychological wellbeing among postgraduate psychology trainees. This chapter will summarise the main findings of the two studies that comprise this thesis and discuss the implications of these findings in terms of the utility of the self-compassion construct as way of promoting psychological health and reducing psychological distress among trainee and professional psychologists.

Major Findings

Self-compassion and stress among professional and trainee psychologists. The results of Study 1 indicated that after controlling for age and neuroticism, self-compassion has a clear link to depression and stress in psychologists across the career span. In a sample of 198 trainee and professional psychologists in Australia, self-compassion negatively predicted depression and stress, however the relationship between self-compassion and anxiety was non-significant once neuroticism was controlled for. In addition, self-compassion proved to be a significant negative predictor of emotion regulation difficulties. Path analysis of these variables using

Structural Equation Modelling revealed that emotion regulation difficulties fully mediated the relationship between self-compassion and depression, and self-compassion and stress.

Self-compassion training for psychology trainees. In Stage 1 of Study 2, a 6-week online self-compassion training program (Self-Compassion Online; SCO) was developed, based on relevant theory and empirical findings. Stage 2 of Study 2 examined the effectiveness of this program for increasing self-compassion and happiness and reducing emotion regulation difficulties and psychological distress among trainee psychologists.

Using a preliminary, open-trial design, this study found evidence that, among those who completed it, the intervention was effective in increasing self-compassion and happiness, and reducing emotion regulation difficulties, perceived stress, and symptoms of depression, anxiety, and stress. In addition, this study found evidence that these changes could be maintained over time. Attrition rates between pre- and post-test were within expected ranges for an online intervention, and were comparable with previous studies of face-to-face stress prevention programs among health professionals. Further, the majority of the participants in this study reported finding the program relevant and enjoyable, and stated that they could understand and complete the program content, and that they learned something from the program. Overall, participants described the benefits of the program in terms of increased self-acceptance and self-kindness, higher levels of efficacy in managing stress, and greater acceptance of the types of stressors inherent to their profession, as well as of their own limitations as trainees, who are still learning how to negotiate professional challenges. The main difficulty with the program reported by participants was finding

the time to complete it.

Stage 3 of Study 2 reported categories and themes drawn from participants' written responses to the SCO program exercises. The findings support the proposition that while there are a number of stressors that commonly arise in the course of one's work as a psychologist, processes such as self-doubt, self-criticism, perfectionism, and fears of incompetence and inadequacy play an integral role in heightening the stress experience. Despite struggling with constructs such as self-kindness, self-acceptance and being vulnerable, participants reported a clear appreciation of the value of these processes for their personal and professional lives. In addition, participants reported that changing the nature and tone of their self-relation was possible and effective (for example, reframing critical self-talk in a more compassionate way so that it evoked a relaxation rather than a stress response). Overall, these findings support the proposition that self-compassion training is an acceptable and relevant intervention for trainee psychologists that has the potential to create meaningful change in their personal and professional lives.

Unique Contributions of This Research

This research presents a number of unique contributions in terms of understanding the self-compassion construct, trainee psychologists' experience of stress, and the relevance of self-compassion for psychologists across the career span.

Study 1 is the first study to test a predictive model of self-compassion and psychological distress among psychologists, and provides important quantitative support for the proposition that self-compassion is a relevant construct for psychologists in terms of buffering them against depression and stress. In addition, this study is the first to investigate emotion regulation difficulties as a mediating

mechanism in the relationship between self-compassion and psychological distress. While this model needs to be replicated in different populations and with a wider array of outcomes, in the context of previous findings, Study 1 provides evidence that one of the primary pathways by which self-compassion impacts depression and stress is by reducing difficulties with emotion regulation. Given that the evidence regarding mediating mechanisms underlying the link between self-compassion and psychological health is limited, this finding represents an important contribution to the extant literature. In addition, as emotion regulation is implicated in various dimensions of psychopathology, an emotion regulation model of self-compassion potentially represents a robust and parsimonious explanatory model for the role of self-compassion across a range of psychological difficulties.

Study 2 also extends the extant literature in a number of ways. At the time of conducting Study 2, there was no published research describing or evaluating longer-term interventions that aimed to increase self-compassion as the primary outcome measure. Study 2 therefore represents an important contribution to the literature by presenting a framework for a theoretically- and empirically-grounded intervention that aims to increase self-compassion among its participants. Importantly, this study also presents a protocol for a web-based self-compassion intervention that takes into account relevant findings from the internet intervention literature. This provides important insights for researchers interested in adapting extant mindfulness-and-acceptance-based interventions for administration via the internet, as well as providing a starting point for researchers interested in further investigating the feasibility of web-based self-compassion training.

Stage 2 of Study 2 is the first study to examine the effectiveness of a self-

compassion training program for increasing wellbeing and reducing distress among trainee psychologists. As an occupational group, psychologists face a range of specific professional stressors; within this group, the experience of undergoing clinical training presents distinct challenges, for which self-compassion-based interventions are thought to be uniquely suited. Study 3 provides evidence that self-compassion training is effective in increasing self-compassion and happiness, and reducing psychological distress among this population. Given the heterogeneity of symptom severity within this group at pre-test, this study also provides some preliminary insights into the possibility for self-compassion training to reduce symptoms of depression, anxiety, and stress in clinical as well as nonclinical populations.

In addition, Stage 2 of Study 2 adds to a limited number of studies supporting the effectiveness of mindfulness- and acceptance- based (MAB) interventions for increasing wellbeing and reducing stress among trainee psychologists. Importantly, this is one of the first studies to have examined the acceptability and utility of using a web-based program to deliver a MAB intervention. The current results suggest that web-based programs are a feasible and effective mode of intervention delivery for psychology trainees. Moreover, this format may be preferable to face-to-face interventions, given that they offer a greater degree of flexibility and accessibility to a group who commonly report significant limitations on their time. In addition, trainee therapists may prefer to be anonymous when participating in such an intervention, so that they may explore their anxieties and concerns without fear of being judged and ashamed.

Self-compassion: Working mechanisms. Evaluation of the potential utility

of self-compassion as a primary target for interventions promoting psychological health should consider the reasons *why* self-compassion is effective in enhancing psychological wellbeing and reducing psychological distress. Given that research into the working mechanisms of self-compassion is in its infancy, much of this discussion is speculative; however, it provides interesting insights into the relevance of self-compassion training, in terms of whom it is appropriate for, and how it might compare to competing interventions.

 Emotion regulation. An emotion regulation model of self-compassion suggests that self-compassion training may be effective because it reduces problematic emotion regulation in response to stressors. The results of the current research support this proposition. In Study 1, the data supported an emotion regulation model of self-compassion, where emotion regulation difficulties meditated the relationship between self-compassion and depression, as well as the relationship between self-compassion and stress. In Stage 2 of Study 2, participants reported significant decreases in emotion regulation difficulties following self-compassion training. Due to insufficient sample size, this study did not examine whether these changes mediated concurrent decreases in psychological distress or increases in wellbeing; however, previous evidence suggests that self-compassion promotes a balanced perspective of negative emotions, allowing individuals to confront difficult feelings and thoughts, rather than avoiding them or becoming entrenched in them (Neff, 2003b). In addition, there is some evidence that the relationship between self-compassion and depression is mediated by a reduction in specific problematic emotion regulation *strategies*, such as rumination and worry (Raes, 2010).

 Stress appraisals. Another way that self-compassion may act to reduce psychological distress and promote wellbeing is by changing the way that people

appraise stressors. There is evidence that self-compassionate people are more likely to think about negative events in ways that are adaptive: they are more objective, less likely to catastrophize and judge themselves harshly, and more able to see difficult experiences as a normal part of life (Allen & Leary, 2010; Leary et al., 2007). Importantly self-compassion is particularly useful when it comes to negative self-relevant events (Leary et al., 2007), as it promotes a sense of positive self-worth that is independent of performance outcomes.

As noted in Chapter 1, cognitive appraisals of stress may be *primary* - determining the extent to which a particular stressor represents loss, threat, or challenge to an individual, or *secondary* - determining whether the individual has the psychosocial and physical resources to cope with the stressor. It is plausible that self-compassion impacts both primary and secondary appraisal processes. In line with theorists who highlight how stress outcomes are influenced by how one construes oneself, it may be inferred that due to the enhanced sense of self-acceptance and more stable sense of self-worth conferred by self-compassion, certain stressors are less likely to be viewed as threatening to worth and identity. On the other hand, it is likely that individuals who are low in self-compassion interpret negative events in ways that are personal, global, and enduring, thereby making them more likely to make primary appraisals of stressors as representing loss or threat.

Self-compassion may also impact secondary appraisals of stress in a number of ways. First, self-compassion may act as a coping strategy or resource itself: it provides a framework for reinterpreting and coping with events in ways that are self-serving and conducive to meaning-making. Evidence suggests that self-compassion is an effective strategy for coping with depressed mood (Diedrich, Grant, Hofmann, Hiller, & Berking, 2014), and that self-compassion is linked with the ability to re-

interpret negative events as meaningful learning opportunities (Leary et al., 2007; Neely et al., 2009; Shepherd & Cardon, 2009). Second, there is preliminary evidence that self-compassion is associated with increased self-efficacy (Iskender, 2009) and optimism (Neff, Rude, et al., 2007): as such, it may be hypothesised that self-compassionate individuals are more likely to feel able to cope with certain stressors because they appraise them as temporary, specific, and external (Chang, 1998).

These propositions are supported by the findings of Stage 3 of Study 2: participants reported a greater sense of acceptance of their internal processes, and an understanding that difficulties and setbacks were a normal part of clinical training, rather than an indication that they lacked competence or worthiness as a psychologist. Furthermore, participants reported actively using self-compassion as a coping strategy for stressful events (e.g. being mindful of their responses, reducing self-criticism and being kinder to themselves, and reminding themselves that others may also feel this way). These findings suggest a number of avenues for future research in terms of investigating the way trait self-compassion impacts the nature and outcome of stress appraisals, and also in terms of further examination of how the SCO program might change trainee psychologists' work-related stress appraisals over time.

Positive emotions. An alternative explanation for the positive impact of self-compassion on psychological health can be provided with reference to broaden-and-build theory (Fredrickson, 1998, 2003), which posits that increasing one's positive affect is central to the promotion of wellbeing and resilience to psychological distress. According to this theory, self-compassion increases individuals' experience of positive emotions, which, in turn, are thought to buffer against and undo the negative effects of stressful encounters (Fredrickson & Levenson, 1998; Fredrickson et al., 2000; Garland et al., 2010). It is suggested that experiencing positive emotions

expands individuals' thought–action repertoires, allowing them access to a broader range of cognitive processes and enhancing behavioural flexibility, which over time builds personal resources.

This may be a viable explanation for the working mechanisms of self-compassion for a number of reasons. First, self-compassion is associated with increased positive affect, both in correlational studies (e.g., Hollis-Walker & Colosimo, 2011; Neff, Rude, et al., 2007) and experimental manipulations (Leary et al., 2007) and interventions (e.g., Neff & Germer, 2013; Shapira & Mongrain, 2010). In the current research, participants scored significantly higher on authentic happiness – a measure of eudemonic wellbeing – following a self-compassion intervention. Authentic happiness reflects not only the experience of positive emotions, but also dimensions of *meaning* and *engagement*. The construct of "engaged living" involves a sense of mindful, present-moment interaction with one's daily experiences – a process found to be linked to resilience in occupational contexts (Chaskalson, 2011). Further, the ability to make meaning out of one's stressful experiences is argued to enhance resilience in the face of different stressors (Park & Folkman, 1997). In this way, these dimensions of the authentic happiness construct resemble the resources described by broaden-and-build theory.

In the context of revised models of transactional stress, which look at the buffering role of positive emotions across the stress process (Folkman, 2008; Folkman & Moskowitz, 2000), it may be surmised that the sense of eudemonic happiness promoted by self-compassion impacts stress responses on a number of different levels. For example, the positive emotions that accompany an increased sense of self-compassion may impact the way that individuals appraise stress; there is evidence that level of positive affect impacts the way that individuals interpret

particular events (Ashkanasy et al., 2004; Lazarus et al., 1980). In addition, the positive emotions generated by self-compassion may influence the way an individual copes with the event: the valence of affect during a stressful encounter has been found to determine the type of coping strategies that are employed in response to it (Zeidner, 1994). Finally, it may be hypothesised that self-compassion promotes *meaning-focused coping* (see, e.g., Park & Folkman, 1997) via this mechanism, leading to the experience of positive outcomes event in the face of unfavourable outcomes.

Implications of Findings and Future Directions

For the prevention and treatment of occupational stress. As outlined in Chapter 1, there is a notable need for prevention initiatives that protect psychologists and other health care professionals from stress, distress, and burnout. Such initiatives may be particularly relevant for clinicians in training (Shapiro & Carlson, 2009), and researchers interested in stress-prevention among health care professionals have emphasised the value of cultivating capacities for self-awareness, self-regulation, and self-care (Barnett et al., 2007; Grepmair et al., 2007; Shapiro & Carlson, 2009). Extending these findings and suggestions, the current research suggests that self-compassion is a negative predictor of distress among psychologists, and that self-compassion training may be effective in creating sustained change in psychological distress and wellbeing among psychology trainees. In addition, the current findings provide some evidence that self-compassion training is acceptable and effective when delivered using an online program.

These findings are important, given that researchers in the field emphasise the development of stress prevention programs that are positive - i.e., they promote wellbeing in addition to reducing distress - and sustainable, generating changes that

can be maintained over time (Lawson & Myers, 2011; Wise et al., 2012). In addition, the current results suggest that the SCO program is an accessible and cost-effective intervention, which is relevant given that trainee psychologists tend to report limited time and resources as barriers to accessing stress prevention and treatment solutions (Shapiro & Carlson, 2009). Overall, the findings of Study 2 support revisions to the SCO program in terms of reducing the length and complexity of the program, normalising common experiences within the program, and making the program more accessible in terms of technological improvements and the duration of specific modules. Given the attrition rate in Study 2, it may be useful to conduct further research into the types of intervention delivery that psychology trainees find most acceptable, and to use this feedback to inform decisions about future revisions of the program (for example, delivering it via an App or using a combination of face-to-face and online delivery). Future research using a cohort-controlled design is recommended to investigate the effectiveness of the revised program for promoting wellbeing and preventing psychological distress during clinical training. Comparing a "clinical training as usual" condition with a "clinical training plus SCO participation" would provide insight into the influence of clinical experience and learning gained in postgraduate training, and allow these variables to be controlled when examining the impact of the SCO program. A further step would be to test the effectiveness of the SCO program relative to other interventions that are supported for reducing stress among trainee health care professionals, such as mindfulness-based stress reduction (MBSR; e.g., Newsome, Waldo, & Gruszka, 2012; Shapiro et al., 2007) and acceptance-and-commitment-based interventions (e.g., Stafford-Brown & Pakenham, 2012), using a randomized, controlled trial with an active treatment control.

With further research, there is a rationale for including the SCO program as part of the curriculum for postgraduate psychology students. An additional recommended direction for future research is the analysis of changes in emotion regulation difficulties as a predictor of the outcomes of the SCO intervention. This avenue of inquiry is supported by the evidence presented in the current research that emotion regulation is a key mediator in the self-compassion –stress relationship. In addition, given that emotion regulation plays an integral role in professional stress and job satisfaction (Rosen, Halbesleben, & Perrewé, 2013), it may be hypothesised that self-compassion is a relevant target for organisational wellbeing initiatives across different occupational groups. Further study of self-compassion as a predictor of behaviour and psychological health within organisations is therefore an interesting area for future research.

For the prevention and treatment of psychological distress. The current findings add to a growing body of research supporting self-compassion as a reliable and robust negative predictor of psychological distress outcomes, and support the proposition that increases in self-compassion may support reductions in psychological distress over time. While the target population in the current research was a non-clinical one, clinical significance analyses in Stage 2 of Study 2 revealed that some participants were experiencing clinical or subclinical levels of depression, anxiety, and stress at baseline. After participating in the SCO program, a number of these participants were classified as improved or recovered on depression and stress outcomes. This suggests that there is some potential for the SCO program as a treatment for psychological distress in clinical or subclinical populations. However, it should be noted that this hypothesis is extremely tentative, given that these results are from the first trial of the SCO program, which was uncontrolled, therefore limiting the

extent to which changes can be attributed to the impact of the program and not some confounding factor. In addition, a small proportion of participants in Stage 2 of Study 2 reported worsening symptoms of anxiety between pre- and post- test. It is possible that self-compassion training is contraindicated for certain individuals or clinical populations. Preliminary research indicates that some individuals may harbour fears of self-compassion (Gilbert et al., 2011), which is a factor that should be taken into consideration when determining who self-compassion training may be appropriate for.

With this caveat in place, it is recognised that given the key predictive role of emotion regulation across a range of psychological disorders (Aldao et al., 2010; Werner & Gross, 2010), self-compassion potentially represents a parsimonious, transdiagnostic target for psychological intervention. A more comprehensive examination of the meditating role of emotion regulation difficulties in the relationship between self-compassion and psychological distress outcomes is recommended. Such research would provide further insights into the relevance of the SCO program for clinical populations. As the use of different emotional regulation *strategies* (e.g. acceptance, avoidance, and reappraisal) differentially predicts psychopathology (Aldao et al., 2010), specific investigation into the way self-compassion influences the tendency for an individual to employ specific emotion regulation strategies in the face of negative emotional experiences is warranted. Such research would provide insight into the question of whether self-compassion is always beneficial in stressful encounters. On this point, it is important to note that what represents a protective factor in one stressful situation, may represent a vulnerability in another (Adamson, Beddoe, & Davys, 2014)

For promoting wellbeing. It has been acknowledged that there is a high level

of demand for psychological interventions for individuals who are not clinically unwell but wish to increase their wellbeing (Wood & Tarrier, 2010). The current results add to the body of research linking self-compassion with wellbeing-related outcomes such as happiness, optimism and gratitude (Neff, Rude, et al., 2007). On this point, it is important to note the distinction between *hedonic* wellbeing (also known as subjective wellbeing) and *eudemonic* wellbeing, which has also been referred to as psychological wellbeing (Ryan & Deci, 2001). Hedonic wellbeing refers to an individual's emotional functioning and their subjective satisfaction with their life, and reflects a combination of high positive affect, low negative affect, and high satisfaction with life (Diener, 1984). On the other hand, eudemonic wellbeing focuses on how individuals interact with the world in meaningful ways, and reflects constructs such as self-acceptance, autonomy, purpose in life, positive relationships with others, environmental mastery, and personal growth (Ryff, 1989; Ryff & Keyes, 1995).

In Stage 2 of Study 2 in the current research, sustained increases in eudemonic wellbeing (operationalised as scores on a measure of authentic happiness) were observed following participation in the SCO program. These results add to preliminary research indicating that self-compassion training can enhance wellbeing in enduring ways (Neff & Germer, 2013; Shapira & Mongrain, 2010). This is important not only for its potential to promote desired positive outcomes in non-clinical populations, but also because positive functioning plays a key role in preventing disorder and predicting clinically relevant outcomes (Fredrickson, 2003; Fredrickson et al., 2000; Wood & Tarrier, 2010). Given that deficits in eudemonic wellbeing represent a robust risk factor for distress (Wood & Joseph, 2010), these results provide further support for the utility of the SCO program in promoting resilience. In order to determine whether increases in psychological wellbeing drive

changes in negative outcomes following self-compassion training, a preliminary step would be to investigate whether the relationship between self-compassion and psychological distress is mediated by increases in eudemonic happiness.

For enhancing therapeutic effectiveness. Underscoring the importance of stress management and self-care interventions as a means of reducing trainee psychologists' distress and improving wellbeing is a body of research that suggests that the "person" of the therapist – in terms of their personal characteristics and intrapersonal resources – play an integral role in therapeutic processes and outcomes for both therapist and client (e.g., Andrews, 2000; Baldwin, 2000; Crits-Christoph & Mintz, 1991; Lambert & Barley, 2001; Luborsky, McLellan, Digner, Woody, & Seligman, 1997; Wampold & Brown, 2005).In particular, it has be found that common factors such as therapeutic alliance and therapist empathy reliably influence therapeutic outcomes (e.g., Norcross & Wampold, 2011). Given that self-compassion is associated with compassion for others (Neff & Pommier, 2012), and techniques involved in self-compassion training have been highlighted as particularly relevant for health professionals for their capacity to promote empathy (e.g., Boellinghaus et al., 2014; Kristeller & Johnson, 2005; Neff & Germer, 2013), it follows that increasing psychologists' self-compassion through training may increase their capacity for forming stable, empathic relationships with their clients.

Additionally, a number of variables that are theoretically linked to self-compassion have been found to predict therapeutic effectiveness. For example, trainees with a greater degree of self-communication have been found to be rated as more competent by their supervisors, as well as more responsive to the feelings of their clients (Allen, 1967). Self-awareness, in terms of understanding one's personal psychological processes, is thought to be a key process in therapeutic effectiveness

(Pieterse, Lee, Ritmeester, & Collins, 2013) and ethical decision-making (Mattison, 2000), and meta-cognitive skills such as mindfulness have been identified as a vital target in counselor training (Fauth, Gates, Vinca, Boles, & Hayes, 2007). In a study of 4,000 therapists, Orlinsky, Botermans, and Rønnestad (2001) found that therapists rated "getting personal therapy" as the second most salient positive influence on their professional development. The authors argued that getting personal therapy should be "strongly recommended" to trainees, as a way of increasing self-knowledge, enhancing awareness of one's impact on others, and recognizing and accepting one's limitations and weaknesses (Orlinsky et al., 2001, p. 147).

The results of Stage 3 of Study 2 provide some support for the notion that undertaking the SCO program provided therapeutic benefits for participants along the dimensions described by Orlinsky et al. (2001), and positively impacted on the way they worked with clients. Participants reported increased acceptance of the inherent stressors of working as a psychologist, suggesting that they may be less likely to be reactive to certain clients and issues that may have previously represented acute sources of stress. In addition, participants reported an increased appreciation of communicating more openly and authentically, and described the relevance of this for their interactions with clients. These descriptions of the relevance of the SCO program to participants' professional lives indicates that this training supports *integrated* changes in participants – i.e., changes that inform their therapeutic relationships with clients (Wise et al., 2012). Additional research is recommended to determine how such changes may affect therapeutic processes and outcomes.

An initial avenue of inquiry may be to investigate whether participation in the SCO program increases levels of empathy and compassion for others. Increasingly, these outcomes are being recognised as a key target in training programs for health

professionals across a range of disciplines (Beddoe & Murphy, 2004; Boellinghaus et al., 2014; Ely, 2012; Krasner et al., 2009). In addition to discerning whether this intervention increases therapists' *felt* sense of compassion for others, it would be interesting to consider whether clients rate therapists as higher on expressed compassion and empathy following training. Along similar lines, it may be worthwhile to consider whether participation in the SCO program impacts psychologists' ratings of their own therapeutic effectiveness, as well as the ratings awarded to them by clients or supervisors.

Limitations and Recommendations for Future Research

There were a number of limitations in the current research that highlight worthwhile avenues for further evaluation.

Research design. Due to the cross-sectional research design used in Study 1, and the lack of a control group in Stage 2 of Study 2, the results of the current research cannot fully address questions of causality between self-compassion and distress outcomes, nor can the changes on the outcomes observed in Stage 2 of Study 2 be reliably linked to the impact of the SCO program. In order to address the question of causation, future research would benefit from the use of a controlled experimental design to investigate the impact of changing self-compassion levels over time. Comparing the SCO intervention to a no-treatment control is relevant for seeing how the intervention fares in comparison to what is essentially "treatment as usual" among trainee psychologists. As previously mentioned, a second step in evaluating the utility of this program would be to compare its effectiveness to more established treatments, such as MBSR or Acceptance and Commitment Therapy (ACT).

Evaluation of specific occupational distress outcomes. One of the primary

aims of the current research was to consider self-compassion in the context of the negative consequences *occupational* stress; however, the measures of psychological distress used across studies were non-specific. Although psychological distress symptoms generally precede burnout, and professional impairment (D'Souza et al., 2011; Kopp et al., 2010; Rosenberg & Pace, 2006), they should not be seen as equivalent to or necessarily predictive of these outcomes. While the use of these measures was deemed appropriate given the heterogeneity of our samples (in terms of the types and duration of stressors experienced), future research in this area may wish to consider the relevance of self-compassion to specific occupational health outcomes such as burnout.

Analysis of moderators and mediators. As previously discussed, Study 1 provides some of the first insights into emotion regulation as a fundamental working mechanism in the relationship between self-compassion and stress. An important gap to address in Study 3 was the failure to evaluate the role of changes in emotion regulation difficulties in predicting changes in psychological distress. In light of the results of Study 1 and previous research highlighting emotion regulation as a key change process in acceptance- and mindfulness-based therapies (e.g., Gratz & Tull, 2010), it is recommended that changes in emotion regulation difficulties be measured throughout the course of the intervention to determine whether these changes precede and predict changes in psychological distress. As noted previously, in the light of evidence supporting the buffering role of positive emotions in the stress process (Folkman, 2008; Fredrickson et al., 2000), it is also recommended that eudemonic happiness be tested as a mediator of the self-compassion-distress relationship, before considering this as a potential change process in self-compassion-based interventions. Finally, in the light of evidence that some individuals experience fears of self-

compassion (Gilbert et al., 2011), it may be worthwhile investigating whether this factor moderates responses to self-compassion training.

Summary and Conclusions

In the past two decades there has been increasing recognition that occupational stress for psychologists presents unique challenges, and can have serious and far-reaching consequences for psychologists themselves, their clients, and the profession as a whole. Research into constructs and interventions that have the potential to promote resilience to distress, as well as enhance professional well-functioning among psychologists has been identified as an ethical imperative within an emerging health care paradigm that sees the wellness of clinicians as an essential part of care provision. Overall, the results of the current research suggest that self-compassion training is an effective way of building positive resources and reducing psychological distress, and is of significant value in psychologists' personal and professional lives. Future research should investigate the effectiveness of self-compassion training relevant to other stress-prevention initiatives, as well as examining specific mechanisms of change.

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Appendix A

Demographic Questionnaire

1. Age (years):

2. Gender:

3. Profession:

Postgraduate Psychology Student   ☐
(Please indicate Course)

Counsellor   ☐
Psychologist   ☐
Counselling Psychologist   ☐
Clinical Psychologist   ☐
Educational Psychologist   ☐
Psychoanalyst   ☐
Health Psychologist   ☐
Others (please specify)   ☐

4. Academic Qualifications:

Diploma	☐	Master's Degree	☐
Bachelor	☐	PhD/Doctorate	☐
Grad Diploma	☐	Others (please specify)	☐
Post Grad Diploma	☐		

5. Years of Experience in Clinical Practice: _____ (in years and months)

6. Hours spent in Clinical Practice (per week):

Appendix B

Study 1 Email Invitation

Dear _____

I am writing to you regarding a research study that I am currently conducting, investigating the relationships between self-compassion and distress in currently professional Australian psychologists and postgraduate psychology trainees.

The primary aim of this research is to examine the relationship between self-compassion and distress in psychologists, and to investigate whether emotion regulation plays a role in this relationship. Responses are anonymous, and will inform future interventions for stress prevention and wellbeing in psychologists. The survey will take around 20 minutes of your time.

Any psychologist or psychology trainee currently registered with AHPRA is welcome to participate. You are also welcome to pass this information on to any colleagues you feel would be interested in participating. Participants will be rewarded for their time by having the opportunity to enter a draw to win one of two $150 vouchers.

If you would like to participate, the survey may be accessed at

https://www.qualtrics.com/_____

The study is being conducted by Amy Finlay-Jones (amy.finlay-jones@postgrad.curtin.edu.au), toward a Doctor of Philosophy (Clinical Psychology) at Curtin University. The research is supervised by Associate Professor Clare Rees (c.rees@curtin.edu.au).

Appendix C

Study 1 Participant Information Sheet and Consent Form

AIMS OF THE RESEARCH

The aim of this research is to examine the relationship between **self-compassion** and **distress** in **psychologists**, and to investigate whether emotion regulation plays a role in this relationship. Responses are anonymous, and will inform future interventions for stress prevention and wellbeing in psychologists. The survey will take around 20 minutes of your time.

PARTICIPATION DETAILS

Any psychologist or psychology trainee currently registered with AHPRA is welcome to participate. You are also welcome to pass this information on to any colleagues you feel would be interested in participating. At the end of the survey, you will have the chance to enter your contact details to be entered into the draw to win one of two $150.00 ColesMyer vouchers.

VOLUNTARY PARTICIPATION & INFORMED CONSENT

Please be aware that participation is voluntary, and you may withdraw from the study at any time. Once you have submitted data to the online survey, I will assume that you have consented to participate and allow me to use your data in this research.

CONFIDENTIALITY

All information provided will be treated confidentially by both myself and my research supervisor. The information you provide will be kept separate from your personal details, and only I will have access to these. In addition, your contact details will only be used to contact you in the event you are selected in the prize draw.

ETHICAL CONSIDERATIONS

The study is being conducted by Amy Finlay-Jones (amy.finlay-jones@postgrad.curtin.edu.au), toward a Doctor of Philosophy (Clinical Psychology) at Curtin University. The research is supervised by Associate Professor Clare Rees (c.rees@curtin.edu.au). This study has been approved by the School of Psychology and Speech Pathology Ethics Committee and by the Curtin University HREC, (Approval Number XXXX). Should you have any concerns about the conduct of this project please contact the Committee either by writing to the School of Psychology and Speech Pathology, Curtin University of Technology, GPO Box U1987, Perth, 6845, or by emailing c.rees@curtin.edu.au.
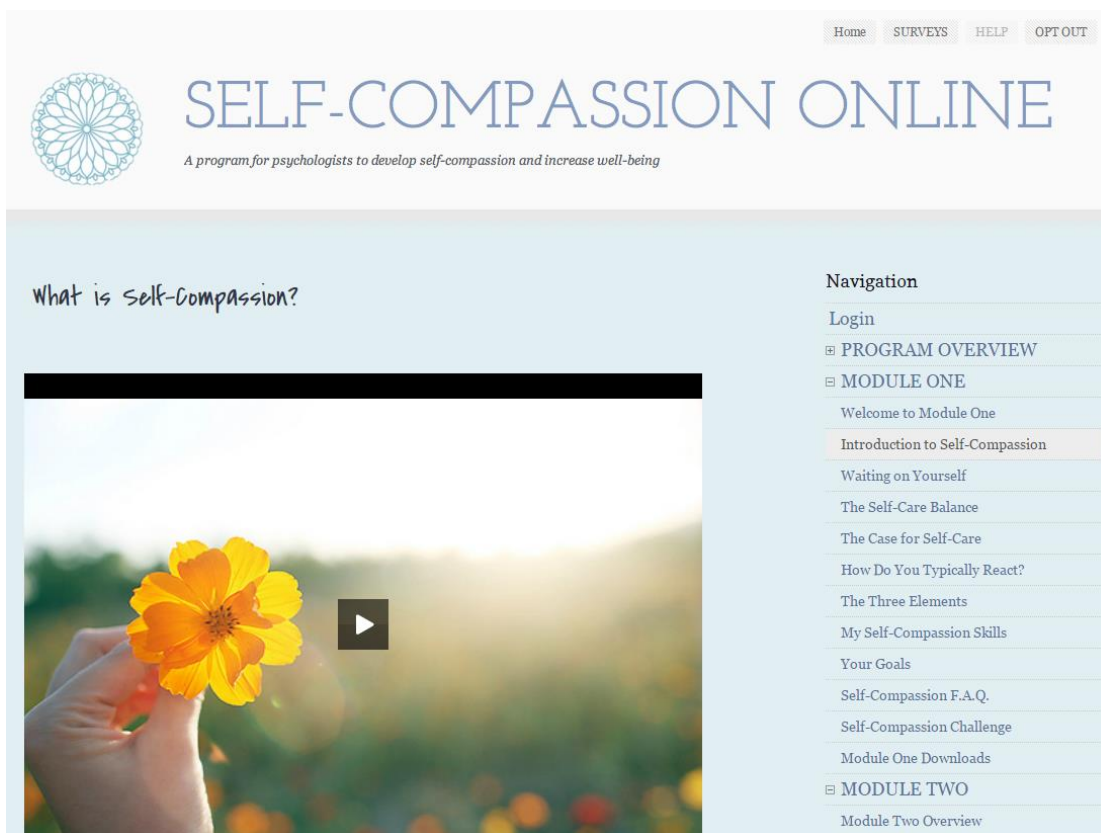
FURTHER INFORMATION

If you require further any further information about the study, please don't hesitate to contact me at amy.finlay-jones@student.curtin.edu.au, or my thesis supervisor, Associate Professor Clare Rees at c.rees@curtin.edu.au

Thank you for taking the time to read this letter. If you are happy to participate in this research, please click the button below to continue to the survey. Your participation in this research is greatly appreciated.

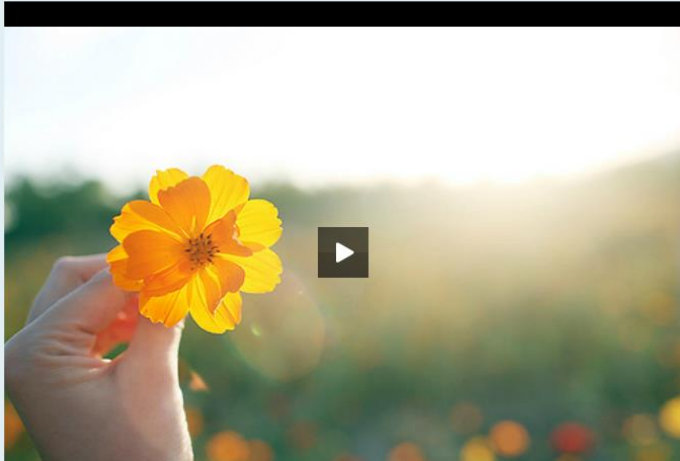Appendix D

Screenshot of the Self-Compassion Online Program

Appendix E

Study 2 Participant Information and Consent Form

PROJECT TITLE: Evaluation of the Self-Compassion Online Program for Trainee Psychologists

CHIEF INVESTIGATOR: Amy Finlay-Jones, PhD Candidate, School of Psychology, Curtin University, Ph +61 433 503391, Email: amy.finlay-jones@postgrad.curtin.edu.au

ABOUT THIS STUDY

The purpose of this research is to investigate if the Self-Compassion Online program is effective at raising self-compassion and improving psychological well-being amongst postgraduate psychology students currently engaged in clinical work.

ABOUT SELF-COMPASSION ONLINE

Self-Compassion Online is a 6-week internet based program that aims to increase participants' self-compassion and improve their psychological well-being. Self-Compassion Online is designed to provide a convenient, user-friendly way to learn about the nature of self-compassion and how to develop it in your own life.

ELIGIBILITY

The Self-Compassion Online program is available to postgraduate psychology students, who are currently enrolled in a Clinical or Counselling Psychology Masters, PhD, or Doctorate program, and are also currently engaged in clinical work.

WHAT DOES THE RESEARCH INVOLVE?

Interested participants will be asking to complete a series of surveys to assess their eligibility for the study. Once admitted to the program, you will have access to a series of 8 modules, administered over the course of 8 weeks. The module content will take approximately 2 hours per week to work through, although it is up to you

how much of the module you complete. You will be able to work through the modules at your own pace, at a time that is suitable to you, and to revisit the content of previous modules whenever you wish. Participants will be asked to complete a short survey at the end of each week to monitor their progress. In addition, participants will be asked to complete a series of surveys at completion of the program, and again 4 weeks after the program has ended.

REGISTRATION

If you wish to register for this study, please read the following participation information. If, after reading the information, you consent to participate in the study, please indicate your consent on the following page. The registration process will then proceed as follows:

- You will be asked to fill out a survey that will assess your eligibility and suitability for the program.
- Eligible applicants will receive an email regarding their participation in the program.
- You will be asked to complete additional online surveys before, immediately after, and 12 weeks after completing the program.

VOLUNTARY PARTICIPATION

Participation in this research is voluntary. If you do not wish to participate, you do not have to. If you choose to participate and then change your mind, you can withdraw from the research at any time without any negative consequences.

CONFIDENTIALITY

All identifying information collected will remain confidential to those outside the study. The information will be stored for five years in a locked cupboard at the Curtin University Psychology and Speech Clinic. The data from each person will be identified only by the six-digit code you will be assigned at registration. If the study is published, you will not be identified.