Does caring for yourself lead to seeking care from others? Investigating the relationship between

self-compassion and interpersonal emotion regulation

by

Jessica Rae Dupasquier

A thesis

presented to the University of Waterloo

in fulfilment of the

thesis requirement for the degree of

Doctor of Philosophy

in

Psychology

Waterloo, Ontario, Canada, 2020

Examining Committee Membership

The following served on the Examining Committee for this thesis. The decision of the

Examining Committee is by majority vote.

External Examiner   Nancy Kocovski, Ph.D.

Supervisors   Allison Kelly, Ph.D.

                                           David Moscovitch, Ph.D.

Internal Members   Dillon Browne, Ph.D.

                                           Uzma Rehman, Ph.D.

Internal-External Member   Denise Marigold, Ph.D.

Author's Declaration

This thesis consists of material all of which I authored or co-authored: see *Statement of Contributions* included in the thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Statement of Contributions

Jessica Dupasquier was the sole author for the General Introduction, bridging sections, and the General Discussion, which were written under the supervision of Drs. Allison Kelly and David Moscovitch and were not written for publication.

This thesis consists in part of three manuscripts written for publication. Exceptions to sole authorship of material are as follows:

Research presented in Study 1:

This research was conducted at the University of Waterloo by Jessica Dupasquier under the supervision of Drs. Allison Kelly and David Moscovitch and was based on secondary analyses of data that were collected as part of a larger study investigating the links between self-compassion and body image (Kelly & Stephen, 2016). Jessica Dupasquier contributed to formulation of the research questions and data analytic plan in consultation with Dr. Allison Kelly. Elizabeth Stephen was responsible for data collection. Jessica Dupasquier, Allison Kelly, and Sydney Waring contributed to the data analyses. Jessica Dupasquier wrote the draft manuscript, to which all co-authors contributed intellectual input.

Citation: Dupasquier, J.R., Kelly, A.C., Waring, S.V., & Moscovitch, D.A. (2020). Self-compassionate college women report receiving more social support in the face of distress: Evidence from a daily diary study. *Personality and Individual Differences, 154*. DOI: 10.1016/j.paid.2019.109680

Research presented in Study 2:

This research was conducted at the University of Waterloo by Jessica Dupasquier under the supervision of Drs. Allison Kelly and David Moscovitch. Jessica Dupasquier designed the study

with consultation from Dr. Allison Kelly, Dr. David Moscovitch, and Vanja Vidovic. Vanja Vidovic and Ariella Brym-Lenton collected the data. Jessica Dupasquier was responsible for data analyses and drafted the manuscript, to which each co-author contributed intellectual input.

Citation: Dupasquier, J.R., Kelly, A.C., Moscovitch, D.A., & Vidovic, V. (2020). Cultivating self-compassion promotes disclosure of experiences that threaten self-esteem. *Cognitive Therapy and Research, 44,* 108-119. DOI: 10.1007/s10608-019-10050-x

Research presented in Study 3:

This research was conducted at the University of Waterloo by Jessica Dupasquier under the supervision of Drs. Allison Kelly and David Moscovitch. Jessica Dupasquier designed the study with consultation from Drs. Allison Kelly and David Moscovitch. Jessica Dupasquier and Bethany Nightingale were responsible for collecting the data. Jessica Dupasquier conducted data analyses and drafted the manuscript, to which each co-author contributed intellectual input.

Citation: Dupasquier, J.R., Kelly, A.C., & Moscovitch, D.A. (In preparation). Self-compassion predicts interpersonal emotion regulation strategies in response to being ghosted.

As lead author of these three studies, I was responsible for conceptualizing study design and/or data analytic planning, carrying out data analyses, and drafting and submitting manuscripts. My coauthors provided guidance and/or input during each step of the research and provided feedback on draft manuscripts.

Abstract

The benefits of self-compassion for *intra*personal emotion regulation have been well-documented, but few studies to date have examined how self-compassion might relate to the use of *inter*personal strategies that aim to alleviate negative emotional states. Research has shown that self-compassion positively predicts motivations to seek care from others and is associated with decreased feelings of shame – a negative predictor of help-seeking. Such findings suggest that self-compassion could encourage the use of interpersonal emotion regulation in the face of emotional pain. However, highly self-compassionate individuals also tend to experience less distress in relation to negative self-relevant events, and distress is a key motivator for help-seeking. It is therefore possible that highly self-compassionate individuals may only seek others' support when their level of distress is relatively high and exceeds their capacity to self-soothe. Three studies sought to determine whether self-compassion would predict increased use of interpersonal emotion regulation behaviours (i.e., distress disclosure and social support-seeking), and whether this association would depend on the level of distress experienced such that self-compassion would predict increased use of such behaviours only when distress was relatively high. Study 1 investigated the moderating effects of within-person and between-person levels of distress on the link between self-compassion and the use of social support using daily diary methods. Participants' average levels of self-compassion over the week predicted increased social support, and this link was stronger among participants who experienced greater distress compared to others on average over the week, and within a participant on days when they experienced more distress than was usual for them. In Study 2, experimental methods were used to test whether a self-compassionate writing exercise would result in greater behavioural disclosure of a self-esteem threatening event relative to two comparison conditions (self-esteem

and free writing exercises) and whether this effect would be mediated by decreases in shame. For events that were highly self-esteem threatening, the self-compassion condition resulted in greater disclosure compared to the free writing condition, but not compared to the self-esteem condition. Furthermore, the moderated effect of condition was not mediated by decreases in shame from pre- to post-intervention. Study 3 examined the links between self-reported trait self-compassion, distress, and interpersonal emotion regulation in relation to a recent, standardized rejection experience: being ghosted. Contrary to Studies 1 and 2, no moderating effect of distress on the relationship between self-compassion and interpersonal emotion regulation was found. Through path analysis, self-compassion showed both a direct positive relationship to interpersonal emotion regulation and an indirect negative relationship to interpersonal emotion regulation through decreased distress. Additionally, a multiple mediator analysis indicated that the perceived utility and risk of disclosing distress to close others were implicated in the relationship between self-compassion and interpersonal emotion regulation. The results of the present research suggest a consistent link between trait levels of self-compassion and greater use of interpersonal emotion regulation strategies in naturalistic settings, though this relationship may be somewhat suppressed by self-compassion's intrapersonal regulatory benefits in decreasing distress. The positive association between self-compassion and interpersonal emotion regulation strategies may largely be accounted for by their perceived utility. Trait and experimentally induced self-compassion may not encourage interpersonal regulatory efforts under conditions where the utility of interpersonal emotion regulation is unclear (e.g., in experimental settings with strangers, when self-esteem threat is low).

Acknowledgments

I am grateful to my supervisors, Dr. Allison Kelly and Dr. David Moscovitch. Thank you for the knowledge you have shared over these past six years, your encouragement, and the wonderful examples you set as researchers, clinicians, and human beings. I will always be thankful to have had you as my mentors. Thanks also to my internal committee members, Dr. Dillon Browne and Dr. Uzma Rehman, who helped to expand my perspective on this research. This work was greatly improved by your insightful feedback.

Thanks to my wonderful cohort, Chantal, Kira, Sarah, Siobhan, and Tammy. You were always there to listen, laugh, and cry with me. You kept me sane. With you, I always felt at home. I am grateful to my family, who through incredibly difficult circumstances continued to support me in pursuing my dreams and fulfilling my potential. I thank you all for your boundless love. Finally, endless thanks to my greatest supporter and most loving partner, Tim. You have been the shining light guiding me to the end of the grad school tunnel. It was a long road, and I'm so glad we made it here together.

Table of Contents

List of Figures

List of Tables

General Introduction and Literature Review

Self-Compassion

The concept of self-compassion as it is currently known in clinical and social psychology is a product of cross-pollination between Buddhist philosophy and Western psychological science. Current definitions of self-compassion stem mainly from the work of two researchers, Paul Gilbert and Kristen Neff, whose lines of research offer complimentary but unique perspectives on the nature of the construct. Whereas both researchers suggest that self-compassion involves relating to oneself in a non-judgmental and caring way, their conceptualizations diverge in one key respect: whether self-compassion encompasses a self-attitude or a set of motivated processes.

Neff (2003) proposed that self-compassion is a self-attitude that involves perceiving one's experiences through a particular set of lenses. These lenses are characterized by three positive components that each has its own negative counterpart: 1) self-kindness versus self-judgment, 2) mindfulness versus overidentification, and 3) common humanity versus isolation. Self-kindness involves taking a caring, loving stance toward one's feelings, thoughts, and behaviours in the face of perceived personal faults as opposed to critically berating oneself (i.e., self-judgment). Mindfulness involves acknowledging and understanding one's distressing emotions with a degree of distance such that one does not become inextricably fused with them (i.e., overidentification with one's feelings). Common humanity refers to the recognition that the human condition includes the experience of suffering; thus, rather than experiencing shame and isolation in their experience of distress, being self-compassionate involves maintaining feelings of connectedness to others and taking a step back from one's immediate experience to see it in the context of a larger whole.

1

Whereas Neff's conceptualization of self-compassion focuses largely on the content of individuals' self-related cognitions, Gilbert developed a theory of compassion based on evolutionary science that proposes self-compassion is best conceptualized as a set of *motivated processes* (Gilbert et al., 2017). He posits that because humans evolved to live in groups to facilitate our survival, we have a set of biosocial goals to help ensure our needs are met within social contexts. The activation of these goals triggers a set of processes that facilitate goal attainment. Gilbert (2005) dubbed these goal-oriented states *social mentalities*, defined as the "organising patterns that coordinate motivational, emotional, and various other psychological competencies" in the pursuit of a social goal (Liotti & Gilbert, 2011, p. 14). Gilbert (2014) identified five such mentalities that are necessary for the survival of the human species. For the purposes of the present paper, only the three mentalities that are most likely to be implicated in experiences of distress will be discussed: competitive, care-eliciting/seeking, and care-giving.

Social mentalities are characterized by construals of the self and others as inhabiting reciprocal social roles. When a competitive mentality is active, the individual is oriented towards improving and/or maintaining their relative status in the group and the self is viewed in its relative position of power to others. Attention and other cognitive processes would be coordinated to determine the dynamics of superiority/inferiority between the self and others, the relative likelihood that competing would have a successful result, and whether subordination may be a more useful strategy to achieve one's goals. The individual would then be motivated to act accordingly. In contrast, a care-seeking mentality involves a view of the self as requiring protection, reassurance, or support from others. Rather than seeing others as competitors, this mentality would involve viewing others as potential sources of care that may fulfill one's needs. Thus, one's cognitive resources would be oriented towards identifying an appropriate source of

support and encouraging social approach behaviours. When a care-giving mentality is active, these social roles are reversed. The self is viewed as a provider of care, while the other is viewed as being in need and a recipient of care. Thus, cognitive resources would be allocated to processes such as determining the other's needs and finding effective strategies to offer appropriate support.

Though these mentalities are fundamentally social in nature, Gilbert posits that our cognitive capacities for self-awareness allow these mindsets to be directed toward oneself. For example, taking an inwardly competitive mentality might involve making comparisons of one's own behaviours to a particular standard. Comparing oneself to an inferior standard might lead to more narcissistic self-relating, whereas comparing oneself to a superior standard may lead to self-criticism and berating oneself for one's flaws. Self-compassion, on the other hand, is thought to involve focusing the mentalities of care-seeking and care-giving inward (Hermanto & Zuroff, 2016). Thus, one is simultaneously seen as in need of *and* a source of compassion. For these care-focused goals and their corresponding mentalities to be activated, Gilbert suggested that one must first detect the need for those goals to be satisfied. Gilbert and colleagues (2017) thus define self-compassion by its two core processes: 1) sensing and engaging with one's own suffering (*compassionate engagement*), and 2) taking committed action toward alleviating and/or preventing that suffering (*compassionate action*).

For illustrative purposes, one might imagine an individual whose romantic relationship has been terminated by their partner and is experiencing feelings of sadness, anger, confusion, and loneliness. According to Gilbert, a self-compassionate response would first involve a recognition of their feelings. Becoming aware of their distress, they would approach their emotions openly with the goal to connect with their internal experience. They may identify and

sit with their emotions, attend to the sensations that arise and where they are felt in the body, and notice the thoughts that seem to be eliciting or reinforcing those feelings. From compassionately engaging with their distress rather than immediately distracting from it, they would experience a desire to respond to their distress in a caring way and implement strategies that they believe would be helpful, such as offering themselves some words of acknowledgment and comfort, taking a new perspective on the situation, or calling a supportive friend to talk.

Social Mentality Theory and Emotion

As outlined by Social Mentality Theory (Liotti & Gilbert, 2011), social mentalities are inextricably linked with emotional processes. It is thought that the primary reason humans evolved to experience emotions is that emotions ensure the survival of the organism. This is illustrated through a tripartite model of emotion in which human beings are posited to possess three interconnected but distinct affective systems that motivate action to satisfy their needs: 1) a drive system that triggers positive, high-arousal affect to motivate resource acquisition, 2) a threat system that produces negative affect to motivate the avoidance of bodily harm, and 3) a soothing system that promotes positive, low-arousal affect to facilitate recuperation (Depue & Morrone-Strupinsky, 2005; Gilbert, 2014; Panskepp, 2010). Specific social mentalities may activate corresponding affective systems. For example, in an academic context where achievement goals are salient and a competitive mentality is operating, the affective system activated may depend on one's perceptions of relative status. For an individual who perceives themselves as relatively capable and successful in the academic arena and for whom this area satisfies needs for status and self-esteem, the drive system may become active and they may feel energized and motivated to act in ways that will help them succeed (e.g., studying, completing assignments). In contrast, an individual who perceives themselves to be in a position of relative

academic inferiority may experience activation of the threat system and feel fear and anxiety, motivating avoidance or procrastination. A care-giving mentality, on the other hand, may trigger sympathy, empathy, and/or other affiliative emotions likely to activate the soothing system and motivate supportive behaviours towards others or oneself.

Although the adoption of a given social mentality may trigger the activation of a given affective system, the activation of one or more of the three affective systems may also trigger the adoption of a particular social mentality. For example, threat-based feelings of sadness or shame are common responses to perceived failures or negative self-relevant events. For some people, these emotions may naturally trigger a competitive mentality and the goal to self-protect, motivating the individual to withdraw submissively from others with the goal of concealing flaws and reducing the likelihood of public humiliation (Kemeny et al., 2004). However, the deliberate activation of a care-seeking goal may override this automatic response, prompting social approach rather than withdrawal that could reduce the activation of the threat system and stimulate the soothing system while restoring a sense of belonging. Thus, these motivational and affective processes are seen as separate but interrelated phenomena.

The particular social mentality and affective processes that are activated in any given situation may in part be determined by an individual's personal and social history. People who have received less responsive care in their relationships may have difficulty both in seeing others as potential sources of care and in stimulating their soothing system to produce feelings of *social safeness*, defined as experiencing one's social world as calming, safe, and warm (Gilbert et al., 2009). In such cases, individuals may rely more on the competitive mentality to meet their needs and experience an overactivation of the drive and threat systems. Indeed, these principles form the basis of Compassion Focused Therapy (Gilbert, 2009), a clinical treatment which aims to

balance the activation of the drive, threat, and soothing emotion systems by activating and training compassionate motivational processes and competencies.

Measures of Self-Compassion

Neff (2003) was the first to develop a measure of trait self-compassion. The Self-Compassion Scale contains 26 questions constituting 6 subscales, each targeting self-compassion's separate positive or negative components. For over a decade, the Self-Compassion Scale has been the standard for researchers studying self-compassion, and many researchers have developed variations of the measure to assess state self-compassion (Breines & Chen, 2013), shorten the length of administration (Raes et al., 2011), assess domain-specific self-compassion (Altman et al., 2017), and assess self-compassion in a variety of languages (e.g., Arimitsu, 2014; Coroiu et al., 2018; Kotsou et al., 2016; Mantzios & Wilson, 2013; Souza & Hutz, 2016).

In recent years the validity and psychometric properties of the Self-Compassion Scale have come into question. For example, it remains contentious whether results of the Self-Compassion Scale are best examined as a single total-score, or whether a two-, three-, or even six-factor solution is most appropriate (Brenner et al., 2017; Castilho et al., 2015; Montero-Marín et al., 2016; Muris & Petrocchi, 2016; Tóth-Király et al., 2017). Furthermore, some researchers have cast doubt on whether Neff's construct of self-compassion represents a positive protective factor or simply captures the absence of self-criticism, thus raising important questions about the discriminant validity of self-compassion from other constructs (e.g., self-criticism, neuroticism; Muris et al., 2016; Pfattheicher et al., 2017). In the face of such criticisms, defenders of the Self-Compassion Scale have continued to provide evidence for the validity of the scale and the use of a single-factor structure (Neff, 2016; Neff, Long, et al., 2018; Neff, Tóth-Király, & Colosimo, 2018; Neff, Tóth-Király, Yarnell, et al., 2018). Despite the ongoing debate

within the research community regarding the Self-Compassion Scale, much of the research on self-compassion has been and continues to be based on Neff's conceptualization; until recently, few alternatives were available to psychological scientists interested in measuring the construct.

In 2017, Gilbert and colleagues published their own measure of self-compassion. The Compassion for Self section of the Compassionate Engagement and Action Scales promised new possibilities for self-compassion research, particularly in relation to Gilbert's theoretical model. The Compassion for Self section consists of two subscales assessing the core processes involved in Gilbert's conceptualization of self-compassion: 1) Self-Compassionate Engagement (sensitivity to and tolerance of one's distress; 6 items), and 2) Self-Compassionate Action (responding to one's distress in helpful ways; 4 items). Initial factor analyses suggested the two subscales could be analyzed separately or as a combined total score (Gilbert et al., 2017). Preliminary results demonstrated that Gilbert's Compassion for Self subscales correlate highly with the positive items from Neff's Self-Compassion Scale (r = .60), supporting its construct validity. Gilbert's measure also appears to show more discriminant validity from the negative items on Neff's Self-Compassion Scale (self-judgment, overidentification, isolation) and other measures of self-criticism; whereas the correlations between measures of self-criticism and Gilbert's Compassion for Self subscales range from -.23 to -.29, the positive items from Neff's Self-Compassion Scale correlate more strongly with those measures of self-criticism (r's = -.35 to -.42; Gilbert et al., 2017). The Compassion for Self subscales of the Compassionate Engagement and Action Scales therefore provide an alternative and potentially less problematic approach to studying self-compassion, opening new doors for researchers to test hypotheses in relation to Gilbert's conceptualization of self-compassion. Nonetheless, very few studies have been conducted with this novel measure. Consequently, the findings presented on trait self-

compassion within the current literature review refer to research conducted with Neff's Self-Compassion Scale unless otherwise specified.

Self-Compassion Versus Self-Esteem

Self-esteem refers to one's overall self-evaluation and is characterized by self-liking and perceived competence (Rosenberg, 1965; Tafarodi & Milne, 2002). Although self-compassion involves taking a positive attitude toward oneself and tends to be closely related to self-esteem (r's = .56 to .68; Barnard & Curry, 2011), it has traditionally been conceptualized as a distinct construct. From a theoretical perspective, Gilbert suggests that self-esteem and self-compassion are related to the activation of different affective and motivational systems (Gilbert, 2014). One of the proposed evolutionary functions of self-esteem is its role as an internal social barometer, our 'sociometer' that is tasked with assessing our relative social value/rank and adjusting our behaviours to ensure our survival within the tribe (Leary et al., 1995). Thus, in contrast to the care-giving and care-seeking social mentalities associated with self-compassion, attending closely to feelings of self-worth is likely to incite a competitive social mentality with a focus on social hierarchy (McEwan et al., 2012). Some preliminary neuropsychological research supports the notion that self-esteem-related processing results in differential brain activation when compared to experiences of compassion. Simon-Thomas and colleagues (2012) found that pride-inducing pictures led to the activation of the posterior medial cortex associated with self-referential processing, whereas compassion-inducing pictures activated the midbrain periaqueductal gray area, which has been found to play a role in parental nurturance behaviours.

Self-esteem is often dependent on external circumstances, as appraisals of one's self-worth fluctuate with success/failure, praise/criticism from others, and life events (Neff & Vonk, 2009; Orth & Luciano, 2015). Focusing on increasing one's self-esteem may activate one's drive

system, which may further contribute to striving for success and feelings of pride (Kammeyer-Mueller et al., 2008; Kreibig et al., 2010). A focus on maintaining or defending existing self-esteem against threats such as perceived failures or negative social experiences may contribute to the use of self-protective strategies such as self-handicapping, sandbagging, or denial (Gibson, 2007; Lupien et al., 2010; Mar et al., 2006). Unfortunately, such strategies can prevent an accurate assessment of one's actual faults and therefore undermine self-improvement goals or reparative social behaviours when individuals have caused harm to others or their relationships (see Crocker & Park, 2004 for a review).

Thus, an essential difference between self-compassion and self-esteem is that self-compassion is driven by care-focused rather than competitive, evaluative processes. Indeed, it is precisely in situations where one has experienced a perceived personal failure or setback that self-compassion is expected to be most effective. Self-compassion has uniquely been linked to an acceptance of flaws as well as the use of fewer strategies that aim to protect self-image (Petersen, 2014; Zhang & Chen, 2016). Individuals higher in trait self-compassion as well as those who have successfully engaged in a self-compassion intervention show a desire to improve on rather than deny personal faults or mistakes, have more positive beliefs about failure, are more likely to persevere in their goals, and show greater personal improvements after failures or setbacks (Breines & Chen, 2012; Ferguson et al., 2015; Leary et al., 2007; Miyagawa et al., 2019; Moffitt et al., 2018; Neff et al., 2005; Shimizu et al., 2016; Zhang & Chen, 2016; Zhang & Chen, 2017). Consequently, self-compassion has been shown to be a better predictor of stable feelings of self-worth than global self-esteem (Neff & Vonk, 2009). Self-esteem and self-compassion also demonstrate unique relationships with other self-related constructs and emotion outcomes. For example, self-esteem alone predicts narcissism (Neff & Vonk, 2009), and self-compassion

contributes uniquely to overall variance in positive and negative affect while also buffering the effects of stress on negative affect, even when controlling for the effects of self-esteem (Krieger et al., 2015; Leary et al., 2007; Neff & Vonk, 2009).

Taken together, the evidence suggests that the construct of self-compassion is distinguishable from self-esteem and is associated with unique benefits. Nonetheless, the two may mutually influence one another. As previously mentioned, heightened levels of self-compassion may help maintain self-esteem in the face of difficult personal experiences or failures (Neff & Vonk, 2009). Higher levels of trait self-compassion have been found to buffer the negative association between low implicit self-esteem and subjective well-being (Phillips et al., 2017), suggesting that using self-compassionate thinking may help to preserve more positive self-evaluations and feelings toward the self. Just as it is possible to show compassion towards a person that one dislikes, it is possible to exhibit self-compassion without heightened levels of self-esteem. However, self-esteem may facilitate self-compassion by making it *easier* to be kind to oneself or to feel deserving of compassion (Donald et al., 2018; Wood et al., 2009).

Self-Compassion, Coping, and Intrapersonal Emotion Regulation

Ample research has shown that self-compassion is positively associated with emotional well-being and adaptive responses to adversity. A 2012 meta-analysis by MacBeth and Gumley demonstrated that self-compassion has a strong negative relationship ($r = -.54$) with psychopathology such as symptoms of depression, stress, and anxiety. A separate 2015 meta-analysis by Zessin and colleagues demonstrated that trait self-compassion is positively associated with positive affect and life satisfaction (r's $= .39$ and $.62$, respectively) and negatively associated with negative affect ($r = -.47$). Higher levels of self-compassion are inversely related to negative affect experienced after marital separation (Sbarra et al., 2012), making social

comparisons (Choi et al., 2014), being evaluated on social characteristics (Luo et al., 2018), receiving a negative evaluation (Leary et al., 2007), experiencing setbacks with personal goals (Miyagawa et al., 2018), or living with HIV (Brion et al., 2014). Self-compassion also predicts decreased distress during experiences of chronic academic stress (Zhang et al., 2016) or homesickness (Terry et al., 2013). Self-compassion may additionally moderate the effects of pre-conscious processes that can negatively affect emotional health. For example, trait self-compassion has been shown to protect against the negative impact of weaker positive attentional biases – a cognitive process implicated in effective emotion regulation – on subjective well-being (Phillips et al., 2017).

The positive emotional effects of self-compassion are thought to be a result of the way that self-compassionate individuals respond to difficult experiences both psychologically and physiologically. From a physiological standpoint, trait self-compassion predicts decreased reactivity to stressors as evidenced by reduced sympathetic nervous and inflammatory stress responses to social-evaluative tasks (i.e., the Trier Social Stress Task; Breines, Thoma et al., 2014; Breines et al., 2015). Additional research has demonstrated that trait self-compassion is related to increased heartrate variability (HRV) – a marker of adaptive emotion regulation – both at baseline without a stressor present as well as during the presence of a stressor such as recalling a personal failure (Ceccarelli et al., 2019; Luo et al., 2018; Svendsen et al., 2016). Taken together, these findings suggest that self-compassion is linked to increased activity of the parasympathetic nervous system, which functions to facilitate rest, recuperation, and self-soothing, effectively modulating the body's sympathetic stress response and supporting its role in reducing activation of the threat system (Appelhans & Luecken, 2006; Porges, 2007; Thayer & Lane, 2000). Furthermore, trait self-compassion has been linked to a specific oxytocin

receptor genotype associated with increased self-soothing, and lower reactivity to stress (Wang et al., 2019). Such physiological benefits may both facilitate access to and be a product of the repeated use of effective coping strategies employed by highly self-compassionate individuals in response to stressful events (Phillips et al., 2017).

Indeed, following distressing events, self-compassion encourages the use of adaptive coping and emotion regulation strategies that facilitate emotional recovery from distressing experiences (Allen & Leary, 2010; Inwood & Ferrari, 2018). For example, higher trait levels of self-compassion predict increased self-reported use of positive reinterpretation after undergraduate students' academic failures (Neff et al., 2005) and in relation to chronic illness (Sirois, et al., 2015). Higher self-compassion has also been linked to increased acceptance, increased self-reflection, and increased feelings of coping self-efficacy in the face of difficult and unchangeable circumstances, resulting in reduced stress and negative affect (Samaie & Farahani, 2011; Sirois et al., 2015; Zhang & Chen, 2016). One study found that after negative life events or crises, trait levels of self-compassion predicted increased posttraumatic growth (i.e., positive changes in perceived future possibilities, ways of relating to others, personal strengths, spiritual experiences, and appreciation of life as a result of negative life events; Wong & Yeung, 2017). These changes were partially accounted for by the link between self-compassion and adaptive emotion regulation strategies such as positive reframing and meaning-making.

Trait self-compassion is also inversely related to negative psychological responses to difficult experiences such as negative automatic thoughts and appraisals (Arimitsu & Hofmann, 2015a; Chishima et al., 2018; Reis et al., 2015), emotional intrusiveness (Sbarra et al., 2012), post-event processing after negative social experiences (Blackie & Kocovski, 2018; Blackie & Kocovski, 2019), and rumination (Samaie & Farahani, 2011; Svendsen et al., 2017). In addition,

12

self-compassion predicts decreased use of avoidant coping strategies such as denial, mental disengagement, experiential avoidance, and thought suppression (Chishima et al., 2018; Costa & Pinto-Gouveia, 2013; Neff et al., 2005; Neff & Vonk, 2009; Sirois et al., 2015; Thompson & Waltz, 2008). In response to negative experiences that qualify as Criterion A traumas (as defined by the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders or DSM-5; American Psychiatric Association, 2013), self-compassion predicted more positive affective responses and reduced psychopathology after trauma and during treatment for PTSD in both adolescents and adults (Barlow et al., 2017; Valdez & Lilly, 2016; Zeller et al., 2015). In disaster responders, self-compassion significantly predicted reduced vicarious traumatization (Macedonia, 2018).

Some researchers have conceptualized self-compassion as an emotion-regulation strategy in its own right (Trompetter et al., 2017). A variety of self-compassion interventions have been developed and studies have proliferated on the self-regulatory and associated therapeutic effects of adopting a compassionate mentality. Specific types of interventions include compassionate writing exercises (Kelly & Waring, 2018; Leary et al., 2007; Siegel & Kocovski, 2020), imagery practices (Diedrich et al., 2014; Kelly et al., 2009; Naismith et al., 2019; Rockliff et al., 2011), and meditations (Albertson et al., 2015; Arch et al., 2014; Hofmann et al., 2011; Siegel & Kocovski, 2020). In comparison to control conditions, self-compassion interventions have been found to decrease stress and anxiety in the face of social evaluative tasks (Arch et al., 2018) as well as decrease negative affect and increase positive affect after a negative mood induction (Odou & Brinker, 2015). Such interventions have been found to be at least as effective as cognitive reappraisal at reducing negative and depressed affect (Arimitsu & Hofmann, 2017; Cândea & Szentágotai-Tătar, 2018; Diedrich et al., 2014; Ehret et al., 2018). They have also

been shown to potentiate the effects of cognitive restructuring for decreasing depressive

symptomology in clinical samples when used as a preparatory strategy (Diedrich et al., 2016).

Self-compassion interventions produce larger decreases in negative affect than self-esteem

enhancing strategies in the wake of distressing self-relevant events (Arimitsu & Hofmann, 2017;

Leary et al., 2007; Zhang & Chen, 2016), suggesting that practicing self-compassion may be a

more effective way of coping than efforts at boosting self-esteem. Further research supports the

regulatory impact of compassion-focused interventions using physiological outcomes, with

studies showing that participants who were randomly assigned to engage in both single and long-

term compassionate meditations demonstrated greater resting HRV and decreased sympathetic

arousal than those assigned to control conditions (e.g., active rumination, mundane imagery,

achievement-oriented imagery; Kirschner et al., 2019; Kok et al., 2013). Moreover, self-

compassion interventions have been shown to increase HRV as well as decrease participants'

inflammatory stress responses and sympathetic nervous system activation in response to stressful

social evaluative tasks (Arch et al., 2014; Pace et al., 2009).

      Self-Compassion and Shame. Some researchers have emphasized the salutary effects of

self-compassion on the experience and expression of shame, a particularly powerful form of

negative affect characterized by a global devaluation of the self and feeling flawed and unworthy

(Gilbert, 2005; Tangney et al., 1992). From Gilbert's (2009) theoretical position, self-

compassion increases one's ability to self-soothe and experience a sense of internal warmth and

social safeness in the face of potentially self-threatening events. The activation of the soothing

system is thought to decrease the tendency to react in a punitive, self-critical way using a hostile,

competitive mentality. Since self-criticism is thought both to contribute to and be reinforced by

shame, the activation of a compassionate mentality antithetical to that of self-criticism decreases

the affective shame experience. Through the lens of Neff's framework, each positive component of self-compassion serves to counteract the shame response (Barnard & Curry, 2011). First, self-kindness reduces negative self-evaluation central to the shame experience. Second, feelings of common humanity render the need to withdraw unnecessary; when others have shared in one's experience, it alleviates the shame-based motivation to self-isolate. Third, paying mindful attention to one's internal experience allows one to see one's thoughts and emotions in a detached way rather than over-identifying with them and seeing oneself as "bad," which feeds into a sense of shame.

Research has supported the view of self-compassion as a shame remedy through studies demonstrating an inverse relationship between trait self-compassion and general shame-proneness (Brion et al., 2014; Gilbert, 2005; Kelly et al., 2014; Rose & Kocovski, 2020; Vazeou-Nieuwenhuis & Schumann, 2018), as well as specific shame experiences such as body shame (Albertson et al., 2015; Breines, Toole et al., 2014; Mosewich et al., 2011) and shame about HIV status (Brion et al., 2014). Notably, the negative link between self-compassion and shame remains significant even when controlling for self-esteem (Mosewich et al., 2011). Moreover, self-compassionate writing, imagery, and meditation interventions have been shown to reduce feelings of shame in response to distressing experiences (Cândea & Szentágotai-Tătar, 2018; Johnson & O'Brien, 2013; Kelly et al., 2009; Naismith et al., 2019).

Taken together, these findings provide support for the notion that individuals who are highly self-compassionate may be particularly effective at regulating their negative emotions and actively coping after the occurrence of negative experiences as opposed to mentally avoiding or disengaging from their distress. Furthermore, practicing self-compassion may improve intrapersonal forms of emotion regulation. Interestingly, the research on self-compassion and

emotion-focused coping has emphasized the internal processes by which individuals modulate their own negative affect. However, the existing studies in this area have largely ignored a crucial component of how affect is regulated – through contact with others. Indeed, as Gilbert's Social Mentality Theory highlights, human beings do not live in a solitary world (Liotti & Gilbert, 2011). Our experiences (both emotional and otherwise) are constantly being shaped by the presence of and interactions with those around us.

Interpersonal Emotion Regulation

It is impossible to deny that human beings rely on one another to regulate their distress. From birth, infants depend on their caregivers to regulate their affect by assessing and meeting their basic needs, which in turn shapes their developing capacity to self-regulate and function socially over time (Feldman, 2015; Sameroff, 2010). The sensitivity and synchronicity of these early regulatory relationships contribute to children's attachment styles and underlying working models of the way they relate to others and expect others to relate to them, including their expectations of support (Collins & Read, 1990; Feldman, 2015; Hazan & Shaver, 1987). As children age and develop, they typically continue to seek regulatory support from caregivers in increasingly diverse ways (e.g., verbal, behavioural) and for increasingly complex issues (e.g., emotional, psychological; Bowlby, 1969). Moreover, the number and type of people that play regulatory roles in the individual's life also expands further (Sameroff, 2010). Whereas initially parental figures are the main sources of comfort, as individuals move toward adolescence and progress into adulthood, they often shift into seeking support primarily from friends and romantic partners (Gariépy et al., 2016).

There is a long history of research on the emotional effects of social support (Gariépy et al., 2016; Lakey & Orehek, 2011), sharing affective states and distress (Kahn & Hessling, 2001;

Rimé, 2009), and the presence of others during emotional experiences (Coan, 2011; Schachter, 1959). However, these lines of research on the modulation of emotion through social means had remained disjointed until a group of researchers at Stanford University sought to develop a unifying theory on how people use interpersonal strategies to alter their emotional experiences – a concept that has come to be known as *interpersonal emotion regulation* (Zaki & Williams, 2013).

According to Zaki and Williams (2013), interpersonal emotion regulation has several defining features. First, for regulation to be *inter-* rather than *intra*personal, the regulation episode must take place within a social interaction. That is, the presence of another person is an essential component of the regulatory process. Neuropsychological studies have found that parts of the brain associated with emotion regulatory processes are differentially activated when alone versus when in the presence of others. For example, the dorsolateral prefrontal cortex implicated in intrapersonal regulation of emotions is less active when surrounded by supportive others (Beckes & Coan, 2011; Coan & Maresh, 2013), suggesting that interpersonal regulation may have a distinct impact on brain functioning. Recent psychological research also supports the conceptualization of interpersonal emotion regulation as a measurable construct that can reliably be distinguished from intrapersonal regulation (Hofmann et al., 2016; Litman, 2006; Williams et al., 2018).

Second, for a social interaction to be considered a form of emotion regulation, one or more individuals in the interaction must have a regulatory goal in mind (Zaki & Williams, 2013). This implies that the mere modulation of emotion in an interpersonal context does not necessarily constitute an episode of interpersonal emotion regulation – rather, this modulation must be *intentional* and preceded by a *motivation* to do so.

Third, interpersonal emotion regulation processes can be initiated by different participants within a given social interaction. It is useful to specify which member of the interaction intentionally engages in the regulatory process – the person who is experiencing the emotion being regulated, or another individual. Interpersonal emotion regulation is considered *intrinsic* when the person experiencing distress initiates the social interaction with the intent to regulate their own affect. For example, if Yui were to go to her friend Ehsaan to help her feel better after a negative experience, Yui would be engaging in intrinsic regulation. Interpersonal emotion regulation is considered *extrinsic* when the person initiating the regulatory episode is not the individual experiencing the emotion being regulated. Thus, if Ehsaan were to intentionally offer Yui support to help her feel less distressed, Ehsaan would be engaging in extrinsic regulation.

Fourth, interpersonal emotion regulation may either be *response-dependent*, where regulation requires feedback received from the interaction partner, or *response-independent*, where regulation can occur without any reaction or feedback from the interaction partner. For example, Yui might share her feelings surrounding her negative experience with Ehsaan. Through the process of sharing her feelings with the goal of changing her affective response, Yui might start to feel a little better as she begins to organize and clarify her internal experience (Rimé, 2009), resulting in response-independent regulation. If Ehsaan subsequently offered her some comforting words, however, the emotion regulatory effect of his support would depend on what he does and says in an effort to make Yui feel better (i.e., response-dependent regulation). Responses may furthermore be verbal or non-verbal in nature. For example, emerging research suggests that touch and handholding in the context of close, secure relationships can have

emotion regulatory effects (Debrot et al., 2013; Flores & Berenbaum, 2017; Lougheed et al., 2016).

Although these classifications provide a helpful way to categorize different interpersonal emotion regulation experiences, a single regulatory interaction may include intrinsic and extrinsic as well as response-dependent and response-independent elements as individuals engage in a transactional process. Thus, interpersonal emotion regulation is the product of a dynamic social interaction occurring within each participant's larger social context and social history, where the behaviours, cognitions, and emotions experienced by each partner reciprocally affect and are affected by the other (Sameroff, 2010).

As with intrapersonal forms of emotion regulation, the aim of any interpersonal emotion regulation episode can be to increase or decrease either negative or positive affect. Though the upregulation of positive affect is a worthy clinical target, particularly for psychological difficulties that are often accompanied by positivity deficits (e.g., depression, social anxiety, posttraumatic stress disorder; Frewen et al., 2017, Kashdan et al., 2013; Vanderlind et al., 2020), the present work focuses on decreasing distress, which is the most common target of clinical intervention. People's tendency to alleviate their own negative emotional states by choosing to engage with others and to use specific interpersonal emotion regulation strategies has direct implications for clinical work, including expanding clients' affect-regulation repertoires and increasing their willingness to seek and persist in treatment, either of which may facilitate and maintain recovery from psychological difficulties (Kahn, et al., 2001; Rimé, 2009). Thus far, two interrelated strategies and their associated processes have comprised much of the focus of the existing literature on intrinsic (i.e., self-directed) interpersonal emotion regulation: 1) seeking social support, and 2) distress disclosure.

Social Support-Seeking

Although it is possible to receive social support incidentally without actively seeking it out, in the context of intrinsic interpersonal emotion regulation, the goal to regulate one's own affect is evidenced through explicit *support-seeking* behaviours. This involves the active mobilization of support resources in order to cope with a stressor and/or one's negative affect (Eckenrode & Wethington, 1990; Meltzer et al., 2012). Such behaviours can include looking for an empathetic, affiliative response from others (emotional support-seeking) or tangible help or advice about how to manage (instrumental support-seeking). The types of support sought from others may depend on contextual factors, where social (versus achievement-oriented) stressors are more likely to provoke a desire for emotional rather than instrumental support (Rife et al., 2016). Self-reported support-seeking tendencies have most frequently been assessed using the emotional and instrumental support subscales of the COPE Inventory (Carver et al., 1989). Whereas emotional support-seeking has consistently been found to positively predict well-being and decreased depressive symptoms (Hill, 2016; Ambriz, et al., 2012), the effects of instrumental support-seeking have not been studied as extensively.

Presumably, the positive effects of support-seeking occur indirectly through increases in perceived and/or received social support (Melrose et al., 2015). For example, seeking social support from multiple sources tends to predict increases in perceived support availability, improved well-being, and self-esteem (Armstrong & Kammrath, 2015; Cheung et al., 2015). Naturally, the emotional impact of support-seeking will depend on the perceived quality of the support received, making it a response-dependent form of interpersonal emotion regulation. As social support provision is a dynamic, transactional process, it is important to recognize that the

effectiveness of support received may be impacted by factors related to the support-seeker, the support-provider, as well as the relational context.

The effectiveness of the support-provider can depend on the type of support offered. For example, one study found that when a support-provider engaged in cognitive reframing, it effectively helped facilitate distressed participants' longer-term emotional recovery, whereas participants only experienced temporary emotional relief in response to a listener who was instructed to respond empathically without cognitive reframing (Nils & Rimé, 2012). Another study found that using an emotion regulatory strategy selected by a long-term romantic partner was more effective than implementing self-selected strategies (Levy-Gigi & Shamay-Tsoory, 2017), suggesting there may be benefits to receiving regulatory support from someone with an alternative perspective. However, the regulator's effectiveness at selecting appropriate support strategies may depend on their relational history with the individual, including levels of intimacy and closeness. It has been demonstrated that experiencing more trust and intimacy in the context of close relationships predicts the use of more effective emotion regulation strategies, with downstream effects on lowering depressive symptoms (Marroquin & Nolen-Hoeksema, 2015). The effectiveness of support offered may also depend on the extrinsic regulator's regulatory skill (e.g., capacity to organize information, provide new perspectives, self-regulate emotions; Butler et al. 2014; Nozaki & Mikolajczak, 2020). There is ample research in both social and clinical psychological literature to suggest that individuals higher in empathy tend to be more effective extrinsic regulators (Levy-Gigi & Shamay-Tsoory, 2017; see Zaki, 2020 for a review). Extrinsic regulators can also have their own goals for what kind of regulation they would like to achieve in the interaction depending on personal motives or context, which influence the form and effectiveness of their regulatory efforts (Netzer et al., 2015; Niven, Henkel et al., 2019; Niven,

Troth et al., 2019; Pauw et al., 2019). These regulatory goals may sometimes be at odds with the goals of the individual seeking to have their emotions regulated.

The emotional effects of social support may also depend on factors related to the support-seeker. Individual characteristics such as self-esteem or intrapersonal regulatory resources as well as preferences for particular support types may all play a role in the effectiveness of social support (Francis, 2017; Horowitz et al., 2001; Hyman et al., 2003; Marigold et al., 2014; Wenzel et al., 2019). For example, individuals low in self-esteem tend to engage in more indirect forms of support-seeking such as sulking or whining, resulting in lower quality support (Don et al., 2019). Thus, individuals lower in self-esteem may be less effective at seeking support from others. Altan-Atalay and Saritas-Atalar (2019) found that individuals with more negative beliefs about their intrapersonal emotion regulatory resources reported fewer depressive symptoms when they reported receiving social support with reappraisal strategies, whereas no benefits were conferred by such support for individuals with high levels of perceived self-regulatory efficacy. The effectiveness of support may also depend on the mindset of the support-seeker. Social support is more likely to have a positive impact under circumstances where the person seeking support is in a deliberate, motivated care-seeking mentality rather than engaging in threat-based, automatic processing (Bastin et al., 2014; Horn & Maercker, 2016). The mindset and behavioural approach taken by the support-seeker may impact not only how their interaction partner is likely to respond to their overture, but also the way in which they may receive that response in turn.

It is clear from the discussion above that effective social support provision is a complex process. Nonetheless, when people receive effective social support or perceive they have social support available to them when they want it, they tend to experience improved psychological outcomes. Received instrumental and emotional social support have been found to buffer the

negative effects of stress on well-being (Morelli et al., 2015; Ozbay et al., 2007), as have

increased perceptions of social support availability (Cohen et al., 1986; Cohen & Wills, 1985).

For example, after a traumatic event, people's perceptions of the availability of social support

predict post-trauma psychopathology (Maheux & Price, 2016). More broadly, perceptions of

increased social support protect against depressive symptoms across the lifespan (Gariépy et al.,

2016; Holahan et al., 2006; Marroquín, 2011).

Distress Disclosure

Distress disclosure can be defined as the act of disclosing upsetting or negative affect-

provoking personal experiences (Kahn & Hessling, 2001) and can include the disclosure of

personal problems, cognitions, and painful emotions. Distress disclosure can be viewed as an

antecedent or component of support-seeking, as eliciting support from others requires that others

have some degree of awareness about one's suffering which can be facilitated by explicit

disclosure. In fact, measures of emotional support-seeking often incorporate elements of distress

disclosure (Carver et al., 1989). Studies have shown that distress disclosure tendencies positively

predict perceived social support (Kahn & Hessling, 2001) and disclosing distress tends to elicit

social support from others (Graham et al., 2008; Kennedy-Moore & Watson, 2001). As with

support-seeking, the emotional effects of distress disclosure can depend on whether such

disclosures are reciprocated by effective support, but certain emotional benefits may be drawn

from disclosing distress even without an ideal response from one's listener. For example,

discussing one's emotional experience involves an initial internal process of examining,

labelling, and organizing the experience to present a coherent narrative to one's listener. This

process can help reduce emotional ambiguity and negative affect (Kircanski et al., 2012; Kross et

al., 2005; Lieberman et al., 2011) and promote novel insights into one's distress (Kennedy-

Moore & Watson, 2001) regardless of how the listener responds. As distress disclosure tendencies have been found to correlate negatively with expressive suppression (Kahn, et al., 2012) and correlate positively with facial expressions of sadness (Kahn, Cox et al., 2017), individuals who tend to inhibit or avoid their emotions may have difficulty engaging with and explicitly conveying their distress to others.

The self-reported trait-like tendency to disclose distress has been associated with increased well-being and life satisfaction (Kahn & Hessling, 2001; Kahn, Wei et al., 2017; Saxena & Mehrotra, 2010), intent to seek professional help for emotional difficulties (Vogel & Wester, 2003), success in psychotherapy (Kahn et al., 2001), and decreased psychological distress (Frattaroli, 2006; Kahn & Garrison, 2009; Lepore et al., 2000; Ward et al., 2007). Daily self-ratings of actual distress disclosure in anticipation of or in response to a negative event were also related to decreased distress (Panagopoulou et al., 2006). These benefits have been recorded in relation to disclosures made to close others such as family, friends, or romantic partners, as well as to mental health professionals such as counsellors and psychologists. In clinical samples, self-disclosure predicted decreases in psychopathological symptoms for those attending a brief course of psychotherapy, suggesting openness regarding one's emotional experiences may be an important contributor to therapeutic success (Sloan & Kahn, 2005). Conversely, both qualitative and quantitative studies have found that distress concealment through non-disclosure or inauthentic disclosure in one's personal life or therapy can result in poorer psychological, emotional, and social support outcomes (Farber et al., 2004; Hewitt et al., 2003; Larson et al., 2015; Masuda et al., 2011). Although distress disclosure can sometimes have negative consequences if it is done inappropriately, such as in a relational context that is not trusting, safe, close, and caring, or in situations where highly intimate disclosure violates social norms (Kelly

& McKillop, 1996; Kennedy-Moore & Watson, 2001), it can clearly result in important benefits when utilized appropriately (Collins & Miller, 1994).

Gender Differences in Interpersonal Emotion Regulation

Early research on distress disclosure and support-seeking have found consistent gender differences in interpersonal emotion regulation strategy use. Meta-analytic reviews demonstrated that women are more likely to use coping strategies that utilize verbal expressions of distress to others (Tamres et al., 2002) and engage in more self-disclosure generally (Dindia & Allen, 1992). Moreover, distress disclosure tends to be greater when the target of the disclosure is female (Dindia & Allen, 1992). More recent research on the topic has begun to disentangle how gender roles may have distinct effects from gender identity, with individuals who endorse more historically "feminine" qualities (e.g., warmth, emotional sensitivity) reporting increased disclosure about negative emotions (Greenland et al., 2009) and support-seeking (Reevy & Maslach, 2001) regardless of their gender identity.

The Effects of Utility and Risk on Interpersonal Emotion Regulation

Although Zaki and Williams (2013) developed a helpful, descriptive model of interpersonal emotion regulation and its defining features, they have yet to offer a framework for understanding the variables that may influence or predict its use for particular people within specific contexts. Drawing from the literature on self-disclosure, Omarzu's (2000) Disclosure Decision Model serves to fill this gap. Though Omarzu's model (Figure 1) was originally formulated to explain when and how individuals would engage in general self-disclosure, the model has clear applications to distress disclosure in particular and to support-seeking by extension, given that distress disclosure constitutes an important component of support-seeking.

Figure 1

Omarzu's (2000) Disclosure Decision Model
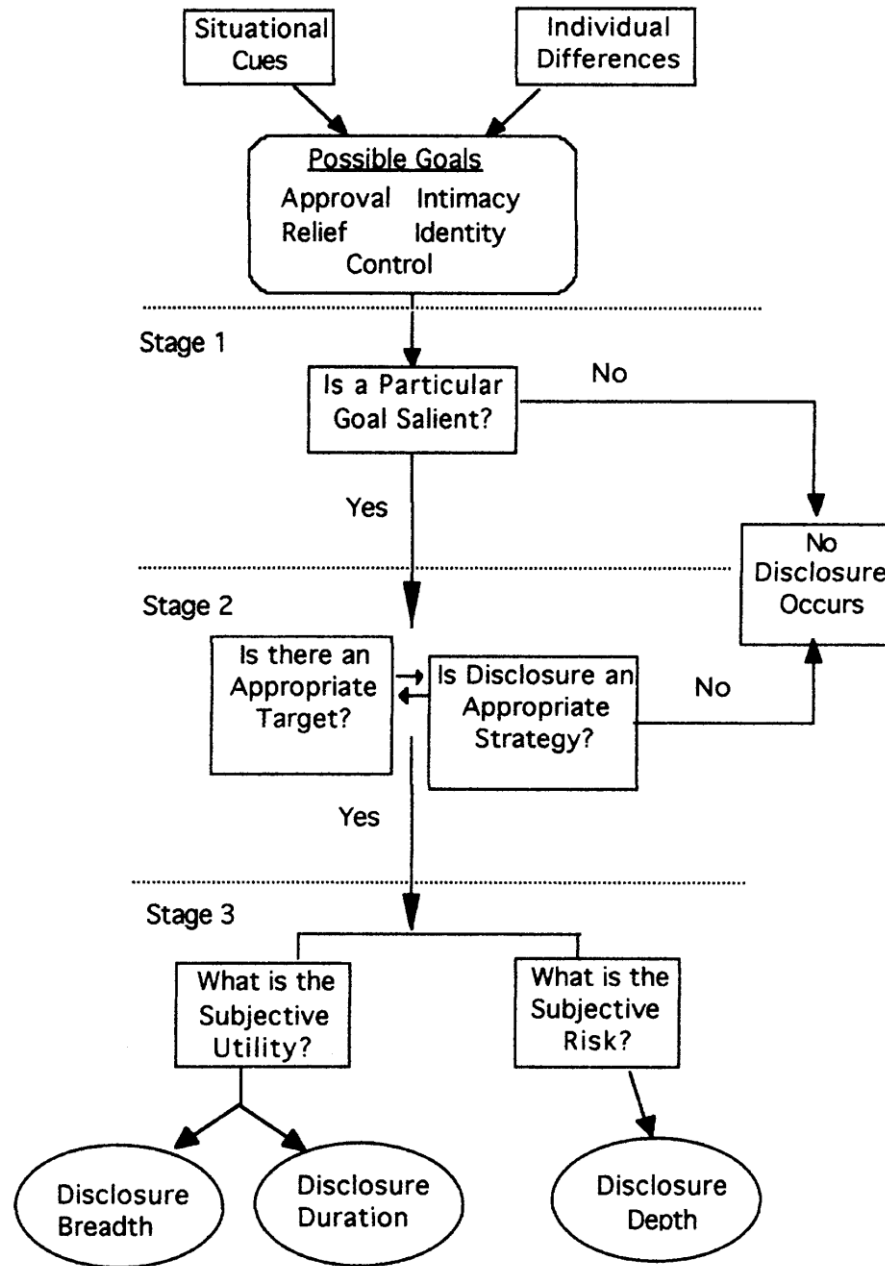
Note: Figure reproduced from: Omarzu, J. (2000). A Disclosure Decision Model: Determining how and when individuals will self-disclose. *Personality and Social Psychology Review*, *4*, 174–185. https://doi.org/10.1207/S15327957PSPR0402_05

First, for disclosure to occur, there must be a salient goal at hand. In the case of distress disclosure or support-seeking, this goal would necessarily be geared towards the downregulation of negative affect and possibly upregulation of positive affect, which Omarzu's model characterizes as "relief" (Omarzu, 2000; Zaki & Williams, 2013). Second, the individual must perceive that there is a target to disclose to or seek support from, and that distress disclosure to or support-seeking from that target would represent an appropriate way to modulate their emotional experience. The Disclosure Decision Model suggests that if these criteria are met, the individual will disclose their distress. However, the quality of the disclosure (i.e., the extent and depth of disclosure) is thought to be determined by the perceived utility (e.g., how valuable and rewarding will it be to modify one's current affect?) and the perceived risk (e.g., what is the likelihood of negative consequences of making the disclosure or support-seeking?) of the disclosure. Research has demonstrated that individuals who tend to engage in more distress disclosure anticipate both decreased risk and increased benefits from such disclosures (Vogel & Wester, 2003). Though Omarzu (2000) originally hypothesized that perceived utility would contribute to disclosure breadth and disclosure duration whereas perceived risk would contribute to disclosure depth (see Stage 3 of Figure 1), to my knowledge, there is no empirical evidence to support these specific pathways in this stage of the model. Thus, the present research focused on the contribution of perceived utility and risk on support-seeking and *both* the extent and depth of distress disclosure rather than the contributions of perceived utility and risk to separate distress disclosure qualities.

According to the "fever model" of disclosure, current distress intensity has a prominent influence on the perceived utility of engaging in interpersonal emotion regulation behaviours. Indeed, numerous studies suggest that the greater one's current distress, the greater one's willingness to disclose (Burchill & Stiles, 1988; Rimé et al., 1998; Stiles et al., 1992). Another

27

important factor that is thought to impact one's willingness to engage in distress disclosure is one's perception of how effective such disclosure is likely to be for helping to modulate one's current affective state (Williams et al., 2018). Indeed, increased willingness to confide in others about distressing experiences and seek support is associated with anticipated positive outcomes (Pierce & Lydon, 1998; Terry, 1991; Uchino, 2009; Vogel et al., 2005), interpersonal trust and acceptance (Gaucher et al., 2012; McCarthy et al., 2017), and a supportive stance from the support-provider (Collins & Read, 1990; Hill, 1991). Thus, people tend to be selective in their support-seeking and may engage in increased support-seeking when they are experiencing a high degree of distress and expect support to be available, helpful, and of high quality.

Distress disclosure and support-seeking are thought to be reduced as the perceived risk of receiving cold, rejecting, or critical responses from others increases. Such risks are likely to be perceived as particularly prominent in the presence of self-conscious forms of negative affect, such as shame. Indeed, people tend to avoid disclosing shameful experiences to others (Macdonald & Morley, 2001), and shame-proneness has been linked to decreased tendencies towards distress disclosure and help seeking (Greenland et al., 2009; Hook & Andrews, 2005; Pineles et al., 2006; Swan & Andrews, 2003). At least one study has shown that the link between shame and decreased disclosure is mediated by expectations of unsupportive responses or negative reactions from others (DeLong & Kahn, 2014). Thus, for individuals who experience more shame, fears of rejection and further damage to their self-worth may outweigh the potential benefits of disclosure. For this reason, disclosure and support-seeking are most likely to occur within the context of a trusting relationship, where the perceived risks are lower (Ignatius & Kokkonen, 2009). The perception that the other individual will likely keep any potentially embarrassing or self-threatening information confidential increases the likelihood and intimacy

of disclosures (Larzelere & Huston, 1980; Woods & McNamara, 1980), which is particularly

important in the case of sharing distressing information, as the disclosure of such emotionally

sensitive material is associated with a greater sense of vulnerability.

Self-Compassion and Interpersonal Emotion Regulation

Much of the research on self-compassion and interpersonal emotion regulation has

focused on how self-compassion relates to tendencies to regulate *others'* emotions, or extrinsic

emotion regulation. For example, in a study of college roommates' relationships, it was found

that undergraduate participants whose relational goals focused on supporting their roommate's

well-being and offering them support also tended to have higher levels of self-compassion

(Crocker & Canevello, 2008). Breines and Chen (2013) demonstrated that activating a support-

giving mindset by offering compassion to others also resulted in increased compassion towards

the self. Neuroimaging has revealed that the same parts of the brain that are active when offering

compassion towards others are also active when participants are asked to imagine relating to

themselves in a caring, reassuring way (Longe et al., 2010). This research supports Gilbert's

Social Mentality Theory (Liotti & Gilbert, 2011) by highlighting the positive relationship

between externally and internally focused care-giving mindsets.

The theoretical underpinnings of self-compassion suggest that it should also positively

predict intrinsic (self-directed) interpersonal emotion regulation. First, according to Social

Mentality Theory, self-compassion is thought to be motivated in part by the physiological,

cognitive, and emotional effects resulting from the activation of care-seeking goals, which could

be aimed either at oneself *or* others (Liotti & Gilbert, 2011). Through their willingness to engage

with experiences of suffering, self-compassionate individuals may be better able to tolerate their

negative affect sufficiently to explore those needs out loud with others. In attending to their

negative affect and actively engaging in strategies to alleviate their own distress, self-compassionate individuals would be expected to be highly aware of and willing to utilize both intra- and *inter*personal emotion regulatory resources. Research has found that self-compassion is positively related to self-reported care-seeking tendencies at the trait level (Choo & Marszalek, 2019; Hermanto & Zuroff, 2016). Self-compassionate individuals also tend to be more secure in their attachment orientations (Arambasic et al., 2019; Mackintosh et al., 2018; Neff & McGehee, 2010; Øverup et al., 2017), feel safer in their social environments (Kelly & Dupasquier, 2016), and sense that close others are more accepting of their flaws even when controlling for close others' actual acceptance (Zhang et al., 2020), suggesting that self-compassion may be associated with greater interpersonal comfort and reduced perceived risk of disclosing one's distress to others with the hopes of eliciting their support.

Second, because self-compassion interventions tend to result in reduced feelings of shame (Cândea & Szentágotai-Tătar, 2018; Johnson & O'Brien, 2013; Kelly et al., 2009; Naismith et al., 2019), this tendency toward care-seeking may be facilitated by a sense that their distress and need for care is natural and understandable rather than feeling that their distress is a sign of weakness or a defect which could lead to concealment of negative affect (Heath et al., 2017; Macdonald & Morley, 2001). Supporting this theory, research on reactions to living with HIV found that trait self-compassion buffered the negative impact of shame on willingness to seek medical care (Brion et al., 2014). A separate study found that individuals higher in self-compassion tended to report less desire to withdraw from others after imagined shame-inducing scenarios (Vazeaou-Nieuwenhuis & Schumann, 2018).

Finally, these associations between self-compassion and interpersonal emotion regulation are further supported by neurological findings that higher trait self-compassion is linked to

genetic variations in oxytocin receptors that predict greater resting activation of brain networks responsible for empathy, social cognition, support-seeking, and social connection (i.e., right angular gyrus, medial prefrontal cortex, anterior cingulate cortex; Wang et al., 2019). These brain regions have also shown heightened activation and altered properties after self-compassion training (Klimecki et al., 2014; Leung et al., 2013).

A small number of additional studies have supported a positive association between self-compassion and intrinsic (self-directed) interpersonal emotion regulation. In a correlational study on individuals suffering from lung cancer and their romantic partners, it was found that for both partners, their own level of self-compassion predicted increased communication regarding the illness with their partner (Schellekens et al., 2017). Similarly, research on reactions to living with HIV revealed that self-compassion predicted increased disclosure of HIV status to others (Brion et al., 2014). Another study found that higher levels of self-compassion tended to predict lower perceived risks of distress disclosure for individuals who usually attempted to control and hide their emotions from others, suggesting that self-compassion may encourage those who normally avoid expressing their emotions to overcome their fears of emotional disclosure (Heath et al., 2017).

Although a positive relationship between self-compassion and interpersonal emotion regulation has been supported by prior research, other studies have contradicted these findings, suggesting a null or even negative relationship between self-compassion and interpersonal emotion regulation. For example, previous studies with undergraduate populations have found that trait self-compassion was unrelated to emotional and instrumental social support-seeking after a perceived academic failure (Neff et al., 2005) and that trait self-compassion was unrelated

31

to tendencies to vent emotions or seek the company of others for daily hassles or inconveniences (Leary et al., 2007).

What might account for these discrepant findings? For individuals who are effective intrapersonal emotion regulators and show reduced stress reactivity, the need for regulatory assistance may be reduced. Indeed, research supports the notion that highly self-compassionate individuals initially react to negative events with decreased negative affect (Leary et al., 2007) as well as associated reduced sympathetic (Breines et al., 2015) and increased parasympathetic arousal (Ceccarelli et al., 2019; Luo et al., 2018; Svendsen et al., 2016). Furthermore, interpersonal emotion regulation has external requirements (i.e., the presence of an available regulator), making intrapersonal efforts more accessible and thus more likely to be used early after the onset of distress. Thus, interpersonal regulation likely occurs only after some efforts at intrapersonal regulation have initially been attempted. The efficacy with which highly self-compassionate individuals tend to regulate their emotions using intrapersonal means suggests that they may not always experience the need to share their affective experiences with others for regulatory purposes. It is possible that highly self-compassionate individuals actually tend to engage in *less* disclosure of negative experiences and support-seeking, because they generally experience less distress (Neff et al., 2005; Sbarra et al., 2012; Sirois et al., 2015; Zhang & Chen, 2016). However, in the event of particularly intense negative experiences, highly self-compassionate individuals might find intrapersonal coping insufficient or simply desire additional support from close others. As previous studies have failed to account or control for the degree of distress participants experience in their analyses of self-compassion in relation to interpersonal emotion regulation, it seems important to examine how distress might moderate the relationship between self-compassion and interpersonal emotion regulation.

Aims of the Current Program of Research

Within the context of the literature reviewed above, the overarching goal of the present program of research is to investigate the links between self-compassion, distress, and the use of interpersonal emotion regulation strategies. The following pages outline three studies relating to this central theme, each building upon the last to investigate: (a) whether and how self-compassion relates to interpersonal emotion regulation use and (b) the role of emotional distress in this relationship. In particular, this program of research has sought to: (a) examine the correlational relationship between trait self-compassion and trait-like distress disclosure tendencies; (b) disentangle between- and within-person variability in the use of social support as it relates to self-compassion and distress within a daily diary multilevel modeling framework; (c) empirically test the proposed causal relationship between self-compassion and distress disclosure through experimental means while investigating the role of reduced shame as a potential mediator; and (d) examine the relationships between self-compassion, distress, distress disclosure, support-seeking, and their potential mediators using path analysis.

Study 1: Self-Compassionate College Women Report Receiving More Social Support in the

Face of Distress: Evidence from a Daily Diary Study

The following chapter has been reproduced and adapted with publisher permission from: Dupasquier. J.R., Kelly, A.C., Waring, S.V., & Moscovitch, D.A., Self-compassionate college women report receiving more social support in the face of distress: Evidence from a daily diary study, *Personality and Individual Differences,* published 2020, Elsevier. The published version is available online at: https://doi.org/10.1016/j.paid.2019.109680.

Background

Self-compassion is a personality trait associated with better well-being, emotion regulation, and resilience in the face of setbacks (Barnard & Curry, 2011; Zessin et al., 2015). Neff (2003) defines self-compassion as the tendency to respond to personal distress with kindness and caring as opposed to judgment, mindfully acknowledge distressing emotions rather than become over-identified with them, and recognize that one's experiences are common to humanity rather than unique and isolating. Research to date has focused on identifying the intrapersonal strategies in which self-compassionate individuals engage to cope with distressing situations. These studies have found that self-compassionate people tend to use more positive, active coping strategies and less avoidant coping, and that these strategies result in reduced stress and negative affect (Neff et al., 2005; Sirois et al., 2015; Zhang & Chen, 2016). Although self-compassion and the coping skills with which it is associated have been considered *intra*personal in nature, the resilience of self-compassionate individuals may also stem from their *inter*personal coping strategies; however, there has been limited research on this topic to date. A better understanding of the interpersonal resources that self-compassionate individuals use at times of

distress could highlight a broader range of mechanisms through which self-compassion promotes emotion regulation and well-being.

One of the most important interpersonal contributors to well-being is social support. Social support has been found to buffer the negative effects of stress on well-being (Ozbay et al., 2008), to protect against depressive symptoms across the lifespan (Gariépy et al., 2016), and significantly predicts well-being outcomes when one desires the support being offered (Francis, 2017). Support from others can also help shape the way individuals process emotional situations (Davis & Brekke, 2014; Rimé, 2009). Given that people do not always have the necessary resources to cope with distressing events on their own (e.g., Cline et al., 2015), social support is a crucial coping strategy during difficult times. We propose that self-compassionate individuals may be more likely to access and use social support in the face of distress.

According to Social Mentality Theory, self-compassion is motivated in part by the activation of care-seeking goals, encouraging a person to seek out care from oneself *or* from others (Liotti & Gilbert, 2011). These care-seeking goals should facilitate self-compassionate individuals' awareness of and openness to their interpersonal emotion regulatory resources at times of distress. Indeed, empirical research has found that self-compassion is positively related to self-reported care-seeking tendencies (Hermanto & Zuroff, 2016), secure attachment (Neff & McGehee, 2010), and feeling safe in social environments (Kelly & Dupasquier, 2016). Therefore, self-compassion may be associated with greater comfort and interest in receiving support from others.

It is also thought that self-compassion decreases the tendency to react to stressors in shame-provoking, self-critical ways (Gilbert, 2009). Shame is characterized by a desire to conceal one's experiences from others, and interventions that increase self-compassion have

been found to decrease shame and the perceived risk of revealing negative personal information

to others (Cândea & Szentágotai-Tătar, 2018; Dupasquier et al., 2018; Kelly et al., 2009).

Consequently, self-compassion may undermine the urge to isolate from others and instead

promote a desire to share one's experiences. Indeed, self-compassionate individuals view distress

and the need for care as universal and understandable, which may further increase receptiveness

to social support (Heath et al., 2017; Macdonald & Morley, 2001). To this end, individuals

higher in trait self-compassion report less social withdrawal (Hamrick & Owens, 2019) and

increased mindful engagement with difficult emotions (Gilbert et al., 2017), which suggests they

may provide more effective signals to others when they are distressed, facilitating others' ability

to recognize their need and offer support.

Despite the conceptual link between self-compassion and social support, research

examining this relationship directly has produced mixed results. Previous studies have found that

trait self-compassion was unrelated to emotional and instrumental support-seeking (Neff et al.,

2005), tendencies to vent emotions or seek the company of others (Leary et al., 2007), and

perceived social support from close friends (Salazar, 2015). In contrast, others have found that

trait indicators of self-compassion *were* positively related to perceived social support (Toplu-

Demirtaş et al., 2018), and that increased self-reassurance, a construct closely linked to self-

compassion, was related to more received support within a given day as well as on average

across days of a week (Hermanto et al., 2017).

The studies cited above varied greatly in their methodological designs, the specific

measures of self-compassion that were used, and their operationalization of social support

constructs, any of which could account for these disparate findings. What is common among

these studies, however, is that the role of affect was not examined as a potential moderator of the

link between self-compassion and social support. Given that highly self-compassionate individuals tend to experience lower levels of distress, accounting for affect experienced is crucial for understanding how self-compassion might relate to received social support. Self-compassion may only be related to support when distress is high – that is, when it is arguably most needed. Individuals experiencing lower levels of negative affect (NA) may perceive that support is unnecessary or their distress may be imperceptible by close others, resulting in relatively little support regardless of their level of self-compassion. Increased NA, on the other hand, may signal that the individual is having difficulty coping using their own resources and that they may benefit from social support.

Aims and Hypotheses

The present eight-day daily diary study sought to investigate the relationship between self-compassion and received social support in college-aged women at varying levels of distress. College-aged students have been found to differ from one another in their typical levels of NA and show significant intraindividual variability in distress based on situational factors (Merz & Roesch, 2011). It was therefore hypothesized that undergraduate women who were more self-compassionate would receive greater amounts of social support when their average distress levels across days was higher than others' average distress levels (between-persons), and when their distress on a given day was higher relative to their personal average (within-persons).

Methods

Procedure

Over eight consecutive days, participants received a daily email at 4:00pm with a link to an online survey administered through Qualtrics^{TM}, which they were instructed to complete before 11:00pm based on their experiences that day. This time frame was provided to

accommodate participants' schedules and ensure that they would be reporting on their daily experiences toward the day's end. An eight-day period was selected to obtain numerous level-1 data points for multilevel analyses while balancing participant burden (Maas & Hox, 2005). Participants were asked to complete a total of seven surveys within the eight days and had to complete a minimum of four surveys in their entirety to be included in analyses, ensuring accurate estimation of within-persons effects. Informed consent was obtained from all participants.

Participants

These data were collected as part of a larger study investigating the links between self-compassion and body image, which focused specifically on female participants (Kelly & Stephen, 2016). Initially, 146 female undergraduate students were recruited from a large Canadian university to participate in the study in exchange for partial credits towards a psychology course. Of these, 110 (75.3%) participants achieved the minimum cut-off of four complete surveys and an additional 14 (9.6%) participants were removed, as they failed to complete a minimum of four daily surveys within the appropriate time frame. Little's (1988) MCAR test for missing data was non-significant ($\chi^2(937) = 877.21$, $p = .92$), indicating that data were missing completely at random and thus were unlikely to bias the findings of the present study. Participants who completed fewer than four surveys did not differ significantly from participants who completed four or more surveys on mean levels of self-compassion ($t(144) = -0.06$, $p = .95$), NA ($t(144) = 0.94$, $p = .35$), or received social support ($t(143) = 0.99$, $p = .32$) across the surveys they did complete, or levels of self-compassion ($t(144) = 0.46$, $p = .65$), NA ($t(144) = -0.66$, $p = .51$), or received social support ($t(142) = 0.76$, $p = .45$) on their first survey. The final sample included 96 women who completed an average of 6.7/8 surveys ($SD = 1.2$).

Participants' mean age was 19.7 (SD = 1.93). The ethnic breakdown was: 50% Caucasian, 21% East Asian, 9.7% South Asian, 4.8% Black/African, 1.6% Southeast Asian, 1.6% Middle Eastern, 1.6% West Indian/Caribbean, and 1.6% Aboriginal (8.1% unidentified; demographic data were missing from 3 participants).

Measures

All measures were administered through nightly surveys on Qualtrics[TM]. Instructions for each measure specified that participants should rate the items based on their experiences "today".

Self-Compassion. The Self-Compassion Scale – Short Form (Raes et al., 2011) is a 12-item version of Neff's (2003) original 26-item measure of self-compassion. Items were rated on a scale from 1 (*not at all*) to 5 (*frequently*) in relation to participants' experiences on that particular day (e.g., "I tried to be understanding and patient towards those aspects of my personality I don't like"). The average of participants' daily ratings over the course of the eight days of the study was used as a measure of dispositional self-compassion, referred to below as "mean" self-compassion. Historically, dispositional self-compassion has been measured using one-time trait measures; however, such measures conflate state and trait components of personality constructs. Assessing stable aspects of repeated state measures over time when longitudinal data is available may be a more informative way to assess trait tendencies (Roberts, 2018).[1]

As is suggested for hierarchically structured data, between- and within-person reliability was assessed using Geldof, Preacher, and Zyphur's (2014) procedure for calculating omega.

---

[1] Although initially I was also interested in whether daily levels of self-compassion might predict social support at the within-persons level, models accounting for within-persons variability in self-compassion showed no relationship between daily fluctuations in self-compassion and the use of social support. Thus, daily self-compassion was not included in the final model.

Between-persons omega was .96 and within-persons omega was .86, indicating strong internal consistency.

Negative Affect. The 10-item NA subscale of the Positive and Negative Affect Schedule (Watson et al., 1988) assessed daily distress. Participants rated emotion-adjectives (e.g., "Distressed", "Upset") on a scale from 1 (*very slightly or not at all*) to 5 (*extremely*) based on their experiences that day. Between-persons omega was .96 and within-persons omega was .87, indicating strong internal consistency.

Received Social Support. As a measure of received social support, participants responded to an amended version of the Social Provisions Scale (Cutrona & Russell, 1987). The original Social Provisions Scale assessed six "social provisions" that were proposed to be basic functions of relationships: attachment (provision of emotional support), social integration (providing a sense of belonging), guidance (provision of advice or information), reliable alliance (the availability of tangible aid), reassurance of worth (others' recognition of one's competence and skills), and opportunity for nurturance (that one is also responsible for the care of others). The social provisions of interest for the present study were attachment, guidance, reliable alliance, and reassurance of worth, as they relate more specifically to emotion regulation. An additional item was included to assess general support received. In the shortened, amended scale used in the present study, participants were asked to respond to six items related to social support and these four social provisions by rating the extent to which "another person provided…advice or guidance" or they "had interactions with others in which the other person provided…a sense of emotional security and well-being" on a Likert-type scale from 1 (*not at all*) to 7 (*very much*). Between-persons omega was .95 and within-persons omega was .81, indicating good internal consistency.

Though this six-item composite measure has not been used in prior studies, a three-item version of the Social Provisions Scale used successfully in previous daily diary studies demonstrated adequate reliability and validity (see Hermanto et al., 2017 for details). The addition of three items in the present study served to improve content validity and within-persons internal consistency.

Data Analyses

A series of multilevel models employing maximum likelihood estimation were conducted using PROC MIXED in SAS 9.4 (SAS Institute, 2012). Across the main analyses, the predictor of interest was dispositional self-compassion, a level-2 between-persons variable representing the mean of participants' daily self-compassion scores across the week. The moderator of interest was NA, which was examined at both level-2 and level-1. Level-2 NA was calculated in the same way as level-2 self-compassion. Level-1 NA was calculated by subtracting participants' personal mean NA across days from their NA raw score on a given day (Snijders & Bosker, 2012). Therefore, within-persons NA scores, referred to below as "daily" scores, represented the extent to which an individual's level of NA on a given day deviated from her personal average level. Two separate models were constructed in which received social support across study days served as the criterion variable. In Model 1, fixed effects were mean self-compassion, mean NA, and daily NA. In Model 2, the interactions between mean self-compassion and both mean and daily NA were added as additional fixed effects. Level-2 predictors were grand mean centered prior to analyses. All models included 1) an autoregressive covariance structure for level-1 residuals and 2) a random effect for the intercept and slopes.

Simulations run by Scherbaum and Ferreter (2009) suggest that in order to detect a medium-sized fixed effect ($\gamma = .50$) with adequate power ($\beta = .80$), an average level-1 sample

size of 6 (a conservative estimate for the present study) requires a level-2 sample size of 40. Calculations of power estimates for cross-level interactions (e.g., interaction between mean self-compassion and daily NA) require a consideration of effect size, level-1 and level-2 sample sizes, as well as the standard deviation of level-1 slopes and are thus more complex (Mathieu et al., 2012). Simulations have shown that as effect size decreases, the impact of level-1 and level-2 sample sizes and the standard deviation of level-1 slopes on power is increasingly limited. As effect sizes in cross-level interactions are often small, tests of cross-level interactions such as the one examined in the present study are very frequently underpowered.

The Johnson-Neyman technique for hierarchical data (Preacher et al., 2006) was used to probe significant interactions to determine at what levels of mean and daily NA mean self-compassion significantly predicted received social support. Because the level-1 predictor (e.g., daily NA) is commonly examined as the focal predictor in multilevel research (Preacher et al., 2006), a secondary analysis probed the interaction by examining simple slopes for daily NA predicting received social support at various levels of mean self-compassion, conceptualized in this analysis as the moderator.

Results

See Table 1 for descriptive statistics, zero-order correlations, and intraclass correlation coefficients (ICCs). See Table 2 for multilevel analyses.

Table 1

Descriptive Statistics and Zero-Order Correlations for Between-Persons Variables and

Intraclass Correlations

	Self-compassion	Negative affect	*ICC*	*Mean*	*SD*
Self-compassion	-	-	.63	3.38	0.58
Negative affect	-.52***	-	.53	1.89	0.61
Received social support	.30**	.21*	.57	3.37	1.30

Note: Mean levels of received social support were computed for the purpose of examining

between-persons correlations. Descriptive statistics refer to mean (between-subjects) variables.

ICCs represent the proportion of variability in each variable accounted for by between-persons

(level-2) differences. Although self-compassion was only treated as a between-persons variable

in analyses, an ICC is provided for interest.

***$p<.001$, **$p<.01$, *$p<.05$

In Model 1, daily NA did not significantly predict received social support within-persons.

At the between-persons level, both mean self-compassion and mean NA positively predicted

support received. Model 2 revealed that mean self-compassion significantly interacted with both

daily and mean NA to predict received support. Though the preceding results are based on a

subset of recruited participants (see Participants section for details), when all available

participant data ($N = 146$) were included in analyses, the pattern of results remained consistent.

Table 2

Fixed Effects for Mean Self-Compassion, Mean NA, and Daily NA Predicting Received Social

Support Across All Days

	Model 1				Model 2			
	B	*SE*	*F*	*r*	*B*	*SE*	*F*	*r*
Mean SC	1.22	0.23	28.60**	0.48	1.37	.22	37.33**	0.54
Mean NA	1.06	0.22	23.43**	0.45	1.24	0.22	31.56**	0.51
Daily NA	-0.01	0.10	0.01	0.00	0.03	0.09	0.07	0.01
Mean SC x Mean NA					0.76	0.25	9.00*	0.30
Mean SC x Daily NA					0.49	0.19	6.85*	0.12

Note. Between-persons *df* were 93 in Model 1 and 92 in Model 2. Within-persons *df* were 455 in

Model 1 and 454 in Model 2. Effect size *r* was computed based on Rosnow and Rosenthal's

(1996) formula $[F/(F + df)]^{1/2}$ whereby .10 = small effect, .30 = medium effect, and .50 = large

effect.

**p<.001, *p<.01

Probing the level-2 interaction in Model 2, a significant positive relationship was found

between mean self-compassion and received social support at levels of mean NA above 0.86 out

of 5, which was 1.03 units (1.69 SDs) below the sample mean. The minimum mean NA observed

in the present sample was 1 out of 5, indicating that mean self-compassion was consistently

related to greater received social support within the bounds of the present data. However, as

mean NA increased, this positive relationship increased in strength (see Figure 2a). Indeed, at

1SD below the sample mean of NA, the simple slope estimate was $B = 0.91$, $SE = 0.24$, $p < .001$,

but at 1SD above the sample mean of NA, it was $B = 1.83$, $SE = 0.30$, $p < .001$.

For the cross-level interaction between mean self-compassion and daily NA, a significant positive relationship emerged between mean self-compassion and received social support at levels of daily NA above -1.39 from participants' personal means. The minimum level of daily NA observed in the present sample was -0.93 from participants' personal means; therefore, mean self-compassion consistently demonstrated a significant relationship with received social support within the bounds of the present data. However, as daily NA increased, the positive relationship between mean self-compassion and social support increased in strength (see Figure 2b). That is, the predicted differences between individuals higher and lower in mean self-compassion tended to be significantly larger on days where participants experienced more NA (0.5 units above participants' personal means: $B = 1.61$, $SE = 0.24$, $p < .001$) as compared to days when participants experienced less NA (0.5 units below participants' personal means: $B = 1.13$, $SE = 0.25$, $p < .001$).

Figure 2

Simple Slopes at Varying Levels of (a) Mean NA and (b) Daily NA With 95% Confidence Bands
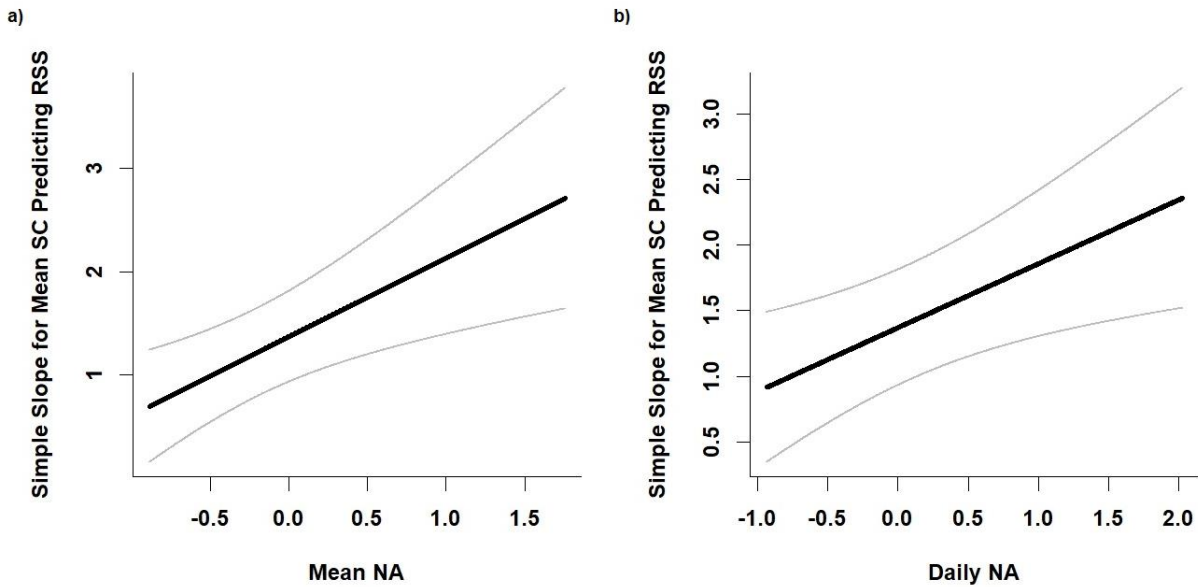
Note: SC = Self-compassion, RSS = Received social support.

Secondary Analysis

Our secondary analysis probed simple slopes for daily NA predicting received social support at various levels of mean self-compassion, here conceptualized as the moderator. There was a significant *positive* relationship between daily NA and received social support at levels of mean self-compassion *above* 3.92 out of 5, which was 0.54 units (0.93 SDs) above the sample mean; and a significant *negative* relationship between daily NA and social support at mean levels of self-compassion *below* 2.78 out of 5, which was 0.60 units (1.03 SDs) below the sample mean. The simple slopes at these two cut-offs were $B = 0.29$, $SE = 0.15$, $p = .05$ and $B = -0.26$, $SE = 0.13$, $p = .05$, respectively. Therefore, individuals higher in mean self-compassion tended to report more social support on days when they experienced more NA than usual, whereas individuals lower in self-compassion reported receiving significantly *less* support on days when

their NA increased above their norm.

Discussion

The current findings shed light on the interpersonal patterns of self-compassionate undergraduate women at times of distress. Specifically, it was found that college women with higher mean levels of self-compassion reported receiving increasing levels of support as their NA exceeded that of others and their own personal mean level, whereas those with lower mean levels of self-compassion experienced fewer benefits to perceptions of received social support as they experienced increasing levels of NA compared to others. Furthermore, individuals lower in self-compassion reported receiving *less* rather than more social support on days when their NA was higher than their personal mean. These results extend our understanding of the link between self-compassion and received social support by suggesting that in the face of both more stable and transient distress, self-compassion may facilitate access to social support.

There are multiple possible explanations for the observed differences in perceptions of received support between undergraduate women higher and lower in self-compassion. First, in the face of prolonged distress or more stable levels of heightened negative affectivity relative to others, individuals who are lower in self-compassion may be less effective at regulating their own distress, which could force them to rely more heavily on others to help them cope and exhaust support providers (Forest et al., 2014). That is, they may seek *more* support, but less support is available. Individuals who are more self-compassionate may be better able to combine interpersonal support resources with effective intrapersonal emotion regulation skills, which could help them to maintain more responsive levels of support. Alternatively, it is possible that those who experience more negative affectivity and are lower in self-compassion are less willing to seek and/or are less receptive to support as compared to individuals higher in self-compassion

47

due to a perceived lack of support providers, concern about feeling like a burden, or other self-critical/negative cognitions (Arimitsu & Hofmann, 2015a).

These same concerns might help to explain why college women lower in self-compassion reported receiving less support on days of higher-than-usual distress and more support on days of lower-than-usual distress. They may feel that revealing strong negative emotions to others in process of garnering social support poses too great a risk, or they may reveal their distress in ways that evoke less supportive responses from others. In contrast, those higher in self-compassion, who reported receiving greater social support on more distressing days, may be more mindful of, willing to express, or effective at expressing their difficult feelings (Gilbert et al., 2017), alerting themselves and others to the need for support as distress arises. Interestingly, a significant main effect of self-compassion was found in which self-compassion predicted greater levels of received social support even at lower levels of NA. As such, their use of social support when distress is low could be indicative of non-regulatory, affiliative goals (e.g., relationship development, bonding).

The present findings reveal that although the personality trait of self-compassion is typically seen as promoting effective *intra*personal coping, it can also predict adaptive interpersonal processes that affect well-being – namely, receiving social support. Results suggest that college-aged women who are lower in self-compassion may be at a "double deficit" (both intra- and interpersonal) when it comes to their coping resources. One potential implication of these findings is that self-compassion interventions could help undergraduate women low in self-compassion cope more effectively with their distress and thereby reduce the load on their interpersonal resources, allowing potential support providers to feel more motivated to respond to their distress when it does increase. Additionally, practicing self-compassion may help to

reduce shame and encourage them to express their distress to others when their usual response is to withdraw (Kelly & Waring, 2018; Dupasquier, Kelly, Moscovitch, & Vidovic, 2020), allowing others to offer them care. Future research should explore these possibilities.

Limitations

The present daily diary approach had several strengths, including distinguishing between- and within-persons sources of variability in self-reported received social support, decreasing the burden on participant recall, and allowing a novel assessment of more stable self-compassion tendencies. Nevertheless, this study had several limitations. First, participation was restricted to female undergraduates, making the generalizability of the findings to other demographics unclear. The relationship between self-compassion and social support may differ for older adults or those with different gender identities. Second, the dispositional measure of self-compassion that was obtained by aggregating daily scores over the eight-day study period may be a less reliable indicator of trait-like tendencies than repeated measures over a longer course of time (e.g., months, years). Additionally, the correlational nature of the study and timing of the administration of questionnaires prevent conclusions about the directionality of these relationships. For example, since all variables were assessed at a single timepoint at the end of the day, it is unclear whether NA preceded support received or vice versa. A significant number of participants were also excluded due to survey non-completion or non-compliance with timing instructions (34.3%). Though there was evidence to suggest that missing data were unlikely to introduce bias (i.e., the results of Little's MCAR test, no apparent differences between study completers and non-completers) and the pattern of results remained consistent when all participants were included in analyses, these exclusions further limited the sample size, resulting both in potentially decreased representativeness as well as power to detect true effects in the

data. It is thus especially important that the present findings receive replication with larger, more representative samples. Furthermore, the self-report measure of social support assessed support *received* rather than support that was actively sought by the individual. Thus, the link between self-compassion and support-seeking behaviours remains unknown. Finally, because this measure of received social support relied on participants' subjective reports, it is impossible to know whether these ratings reflect *actual,* objective levels of support received.

Conclusions

Findings from the current study suggest that more self-compassionate undergraduate women garner more social support – particularly under conditions of heightened persistent or transient distress. These results highlight the potential value in examining the effects of self-compassion on the dynamic interplay between intrapersonal and interpersonal coping in order to fully understand its impact on positive psychological outcomes. Interventions geared toward increasing self-compassion could provide vulnerable individuals with greater access to social support resources that facilitate improved mental health and well-being.

Study 2: Cultivating Self-Compassion Promotes Disclosure of Experiences that Threaten

Self-Esteem

Study 1 provided support for a positive relationship between self-compassion and the use of social support as an interpersonal emotion regulation strategy as well as the role that distress plays in strengthening this relationship. However, as highlighted above, the study was also limited in several ways that affect interpretation of the results.

First, due to the difficulties in establishing directionality or a causal relationship in Study 1, Study 2 aimed to rectify this issue by using experimental methodology to examine the link between self-compassion and the active process of support-seeking through distress disclosure. As Study 1 did not examine the relationship between self-compassion and distress disclosure specifically, Study 2 additionally sought to establish the nature of the relationship between trait levels of self-compassion and distress disclosure tendencies.

Second, although Study 1 had good ecological validity in assessing participants' daily experiences of NA and social support in their real-world lives, it was unclear whether general NA reported by participants was tied to any specific negative experiences that may have been more challenging or threatening to share than transitive fluctuations in mood. As distress disclosure and support-seeking often happen in the context of a specific negative emotional experience, Study 2 sought to examine distress disclosure in relation to a specific negative event that threatened their self-esteem. Though the concept of self-esteem threat differs somewhat from the conceptualization of "distress" as outlined in the General Introduction, the subjective experience of having one's self-esteem threatened is often highly distressing (vanDellen et al., 2011). Self-esteem-threatening events thus presented a pertinent context in which to study self-compassion's effect on distress disclosure given their ability to evoke self-critical processes and

feelings of shame (Johnson & O'Brien, 2013; Leary et al., 2009). This context also provided the opportunity to compare how self-compassion and self-esteem enhancing processes might differentially impact distress disclosure in relation to such events. Though attempting to boost self-esteem may seem to be the obvious choice when repairing self-esteem, goals to preserve or enhance self-esteem may prevent rather than promote sharing distressing experiences with others by activating self-protective rather than compassionate goals, making a comparison between self-esteem and self-compassion enhancing approaches an important aim of Study 2.

Study 1's focus on ecological validity additionally required the use of purely self-report measures of interpersonal emotion regulation rather than actual disclosure or support-seeking behaviours. Thus, another aim of Study 2 was to obtain a more objective, behavioural measure of interpersonal emotion regulation.

Finally, though the results of Study 1 could be explained by several different mechanisms, none were directly investigated. Thus, an added goal of Study 2 was to examine shame reduction as a potential mechanism through which self-compassion might indirectly contribute to distress disclosure, given the theoretical and empirical associations between shame and both self-compassion and distress disclosure, as described in the General Introduction above.

The following chapter has been reproduced and adapted with publisher permission from: Dupasquier. J.R., Kelly, A.C., Moscovitch, D.A., & Vidovic, V., Cultivating Self-Compassion Promotes Disclosure of Experiences that Threaten Self-Esteem, *Cognitive Therapy and Research*, published 2020, Springer Science+Business Media, LLC, part of Springer Nature. The published version is available online at: http://dx.doi.org/ 10.1007/s10608-019-10050-x.

Background

When negative events (e.g., personal disappointments, failures, rejections) are perceived

as being meaningful and pose a strong threat to our feelings of self-worth or self-esteem, they

can activate or reinforce negative self-schemas that contribute to the development of

psychopathology (Seeds & Dozois, 2010). Threats to self-esteem are closely tied to feelings of

shame, which are thought to be central to many psychological problems (Cândea & Szentagotai,

2013; Leary et al. 2009; Velotti et al., 2017). Although it is possible to recuperate from threats to

self-esteem using intrapersonal coping strategies, some experiences may be difficult to recover

from alone. For experiences in which we are overcome with emotional distress and self-

regulation fails, we may need to draw on others' resources to help us cope (Zaki & Williams,

2013). For example, others can facilitate recovery from distressing experiences by providing a

new perspective, offering suggestions for how to cope, or simply lending a compassionate ear.

Eliciting this social support from others requires *distress disclosure*, the process through which

one provides the other with information about one's negative emotional state (Kahn & Hessling,

2001)*.*

Revealing difficulties to others may help buffer the negative effects of self-esteem threat

(vanDellen et al., 2011). Indeed, distress disclosure predicts increased subjective well-being and

social support, as well as decreased depressive symptoms and perceived stress (Kahn et al.,

2001; Saxena & Mehrotra, 2010; Ward et al., 2007). Unfortunately, the shame provoked by self-

esteem-threatening events may promote a desire to conceal experiences from others, making it

difficult to obtain support, prolonging distress, and jeopardizing emotional well-being (DeLong

& Kahn, 2014; Macdonald & Morley, 2001; Moscovitch, 2009). What, then, can facilitate

distress disclosure in the face of threats to self-esteem?

One obvious approach that might facilitate disclosure would be restoring self-esteem.

Research has demonstrated the short-term benefits of self-esteem enhancing interventions for

restoring positive feelings towards the self after self-esteem threat (Greenberg et al., 1992; Leary et al., 2009; vanDellen et al., 2011). However, the effects of such strategies can be temporary and may actually prevent rather than promote distress disclosure by increasing sensitivity to future threats to self-worth (Crocker, 2002). That is, self-esteem boosting strategies may activate the goal to maintain self-worth rather than to seek care, encouraging an avoidant style of coping and resistance to recalling or sharing perceived failures with others for fear that this may trigger feelings of shame. Such processes would prevent rather than promote distress disclosure.

A promising alternative strategy may be to practice self-compassion. Self-compassion (Neff, 2003) involves responding to present-moment thoughts and feelings in a non-judgmental way, recognizing how people are connected by universal experiences of failure and suffering, and treating oneself with caring and warmth in the face of distress. As self-compassion interventions have been shown to reduce negative emotions and feelings of shame in relation to highly shame-provoking experiences (Arimitsu & Hofmann, 2017; Johnson & O'Brien, 2013; Kelly et al., 2009), adopting a more self-compassionate stance may reduce the desire to conceal the self from others and thereby promote distress disclosure. Furthermore, since self-compassion is thought to promote engagement with one's suffering and decrease avoidant coping that might thwart disclosure (Gilbert et al., 2017), it may promote more active care-seeking strategies in the face of threats to self-worth. Indeed, self-compassion has been linked to the activation of interpersonal schemas of care-giving and care-receiving. In a recent set of correlational studies, Hermanto and colleagues found that greater self-compassion was related to an increased tendency toward care-seeking and greater received social support from others (Hermanto & Zuroff, 2016; Hermanto et al., 2017). Unlike attempts to boost self-esteem, efforts at cultivating self-compassion are aimed at alleviating one's own suffering and the aversive feelings (e.g.,

54

shame) caused by threats to the self, shifting the emphasis from maintaining feelings of personal adequacy to self-care and support-seeking.

A small number of previous studies have linked self-compassion to distress disclosure specifically. Schellekens et al. (2017) studied patients with lung cancer and their romantic partners and found that for each individual in the couple, their own dispositional level of self-compassion predicted the degree to which they disclosed their emotional experience of the cancer with their partner. In a separate study, trait self-compassion was found to buffer the negative relationship between emotional control and perceived risks of distress disclosure, suggesting that self-compassion may help those who normally have difficulty expressing their emotions be less fearful of negative consequences of emotional disclosure (Heath et al., 2017). While the findings of these studies are promising, they were correlational in nature, relied solely on self-report measures of disclosure, and did not assess the extent to which participants' distressing experiences threatened participants' self-esteem. Therefore, the impact of self-compassion on actual disclosure of self-esteem threatening events remains unknown.

Aims and Hypotheses

Using experimental methods and behavioural measures of disclosure, I sought to test the theory that practicing self-compassion promotes the disclosure of highly self-esteem threatening events, and that the effects of self-compassion on disclosure can be explained by changes in feelings of shame. I hypothesized, first, that participants randomly assigned to a writing exercise aimed at increasing their self-compassion would make more elaborated and revealing disclosures about a self-esteem threatening event than those assigned to two comparison conditions: a self-esteem enhancing writing exercise and a free writing exercise. The free writing condition was included to control for benefits of writing or thinking about the experience in general (see

Pennebaker, 1997). Second, I hypothesized that the effects of self-compassion on enhancing disclosure would be mediated by reductions in shame.

An additional minor goal was to investigate the correlational relationship between trait tendencies to disclose distress to others as an interpersonal emotion regulation strategy and trait self-compassion, testing the hypothesis that they would be positively correlated.

Methods

Procedure

Informed consent was obtained from all individual participants included in the study. During recruitment, participants were informed that the aim of the study was to test ways in which people could recover emotionally from past negative experiences. Prior to being invited into the lab for the experimental session, participants were emailed a link to complete a set of trait measures, including measures of self-compassion and distress disclosure. The average amount of time elapsed between completion of this measure and the in-lab session was 5.09 days ($SD = 3.46$).

See Figure 3 for a visual representation of the flow of in-lab experimental procedures. Once participants arrived at the lab, they were asked to select a negative experience that (a) occurred during the past five years, (b) presently made them feel badly about themselves (i.e., posed a threat to their self-esteem), (c) involved failure, humiliation, and/or rejection, and (d) they had not previously disclosed in detail. For ethical purposes, participants were instructed not to select any experiences that involved criminal activity, neglect, abuse (physical or sexual), or trauma.

Figure 3

Flow of Experimental Procedures

Select/recall negative experience		Measure self-esteem threat, pre-manipulation shame		Writing exercise: self-compassion, self-esteem, or free writing		Measure post-manipulation shame		Disclosure via letter		Funnel debriefing
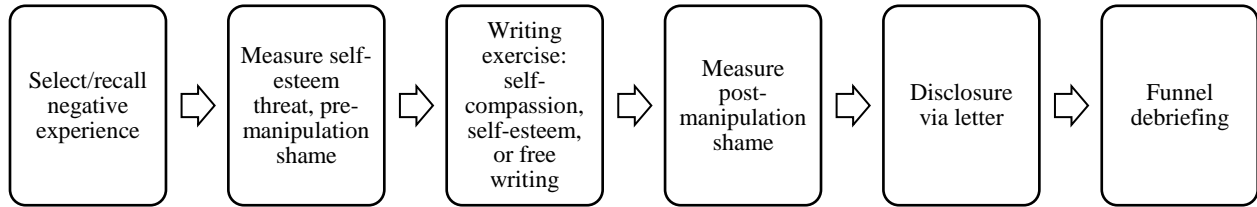
Next, participants were asked a number of open-ended questions about their selected experience to ensure vivid recall. They were also asked to rate the degree to which the event currently made them feel badly about themselves (the measure of self-esteem threat) and current feelings of shame.

Subsequently, participants were randomly assigned to complete one of three experimental writing manipulations: (a) a self-compassion exercise, (b) a self-esteem boosting exercise, or (c) a free writing exercise (see Appendix for full instructions). These manipulations were modeled after the writing exercises developed by Leary et al. (2007, study 5). Previous studies have demonstrated that with similar manipulations, the self-compassion condition resulted in increased state self-compassion as compared to the two other conditions (Breines & Chen, 2012; Seekis et al., 2017) and the self-esteem condition uniquely resulted in increased self-esteem (Seekis et al., 2017). Participants were informed that the exercise was meant to relieve negative feelings stemming from their selected experience. Although they could write for as long as they chose, we attempted to standardize the approximate time participants wrote by asking them not to exceed 10 minutes on the exercise.

After the writing exercise, state shame was measured once more. Participants were then provided with a cover story that allowed for the assessment of the manipulation's impact on

distress disclosure. They were informed of the potential benefits of distress disclosure and told that they would have the opportunity to engage in a supportive conversation with another female participant as an additional method of coping, beginning with writing a letter describing their negative experience to this conversation partner, who would also be sharing a personal letter with them. Researchers emphasized that participants should share only what they wished with their partner, which included the option to disclose nothing at all. Participants would then exchange letters, and subsequently meet to discuss. They were told this procedure was necessary to ensure that the act of meeting in-person would not result in coerced disclosure. Although no strict time limits were imposed, participants were again advised that writing their letter should take no longer than 10 minutes.

After participants completed their letters, the study was terminated. Their letters were not actually read by other participants, and no interaction took place. Researchers conducted a funnel debriefing procedure to probe for suspicion regarding deception. This debriefing progressed from open-ended questions (e.g., "Did anything seem strange or odd to you?") to more specific, closed-ended questions (e.g., "How much did you believe you would actually be meeting another participant to share your experience on a scale from 0 to 100?"). Participants who fully doubted the existence of their conversation partner were excluded from analyses ($n = 4$). Finally, participants were fully debriefed and given the chance to raise questions or concerns.

Participants

All participants were female undergraduate students recruited from the psychology subject pool of a large Canadian university. Given that previous research has demonstrated the impact of gender (both of the discloser and the listener) on self-disclosure (Dindia, 2002) and support-seeking (Reevy & Maslach, 2001), the present study included only female participants

so that all participants were aware they would be disclosing to a same-sex conversation partner. As remuneration, they received bonus credits towards a psychology course in addition to five Canadian dollars.

A power analysis using G*Power (version 3.1; Faul et al., 2009) indicated that detecting a medium-sized effect of condition (Cohen's $f^2 = .15$) with adequate power ($\beta = .80$) would require a minimum sample size of 68. Previous research has demonstrated that to achieve adequate power in mediational analyses using bias-corrected bootstrapping methods where coefficients for the paths that contribute to the indirect effect are medium-sized, the estimated sample size required is 71 (Fritz & MacKinnon, 2007). To account for dropout and possible exclusions, we recruited 111 participants, and 90 completed the study in its entirety (i.e., both the online questionnaires and in-lab session). Little's (1988) MCAR test was non-significant ($\chi^2(408) = 410.24$, $p = .46$), suggesting the data were missing completely at random. Furthermore, study non-completers showed no significant differences in age ($t(107) = -.59$, $p = .55$) or trait self-compassion scores ($t(101) = 0.07$, $p = .94$) when compared to study completers. Though predicted cell counts were too small for Chi-Square tests to be valid, observations of descriptive frequency statistics indicated that participants who did not complete the study did not meaningfully differ with regards to demographic characteristics such as ethnic composition or years of post-secondary education. In sum, analyses of the missing data indicated that attrition did not significantly bias the results of the present study.

Of the 90 participants who completed the study, five participants were excluded from analyses due either to suspicion of deception (see Procedure section for details) or an inability to select a negative experience meeting study inclusion criteria. The final sample consisted of 85 participants ($M_{age} = 20.14$, $SD = 2.28$), 35 (41.2%) of whom identified as Caucasian, 16 (18.8%)

as East Asian, 14 (16.5%) as South Asian, five (5.9%) as Southeast Asian, two (2.4%) as West

Indian/Caribbean, two (2.4%) as Middle Eastern, two (2.4%) as Black/African, one (1.2%) as

Hispanic, and four (4.7%) did not identify their ethnicity. Twenty-nine participants were in their

first year of undergraduate studies (34.1%), 13 were in their second year (15.3%), 20 were in

their third year (23.5%), 15 were in their fourth year (17.6%), and seven were in their fifth year

or above (8.2%). Data were missing for one participant's level of education.[2]

Measures

All questionnaires were administered via Qualtrics™, an online survey tool based in the

US.

Trait Self-Compassion. The full-length, 26 item version of Neff's (2003) Self-

Compassion Scale was used to assess trait self-compassion (see General Introduction for details).

Items that corresponded to the three opponent-processes were reverse-scored, and a total self-

compassion score was computed by taking the average of all 26 items. The measure showed

excellent internal consistency ($\alpha = .94$).

Trait Distress Disclosure. The Distress Disclosure Index was developed by Kahn and

Hessling (2001) to measure the tendency to conceal versus disclose psychological distress. On a

scale from 1 (*strongly disagree*) to 5 (*strongly agree*), participants rated their agreement with 12

items regarding their typical level of disclosure to close others (e.g., "When I feel upset, I usually

confide in my friends", "I usually seek out someone to talk to when I am in a bad mood"). Total

scores are calculated by taking the average of the 12 item scores, where greater scores indicate a

greater tendency to disclose distress to others. A review of previous research demonstrated the

---

[2] This same sample of participants was used in previously published analyses constituting my MA thesis, in which I examined the effects of practicing self-compassion on the relationship between fear of receiving compassion and the desire to conceal negative experiences from others (Dupasquier, Kelly, Moscovitch, & Vidovic, 2018).

Distress Disclosure Index to be a highly reliable instrument with alpha coefficients ranging from .89 to .95 (Kahn et al., 2012), and the Distress Disclosure Index has been found to significantly predict behavioural measures of actual emotional disclosure (Kahn, Cox et al., 2017; Kahn et al., 2002). Cronbach's alpha in the present study was .96.

Trait Self-Esteem. The Rosenberg Self-Esteem Scale (Rosenberg, 1965), a widely used measure of trait self-esteem, was administered to ensure that random assignment resulted in groups with equivalent levels of self-worth at baseline. The 10 items (e.g., "I feel that I have a number of good qualities") were rated on a Likert-type scale from 0 (*strongly disagree*) to 4 (*strongly agree*) and demonstrated excellent internal consistency ($\alpha = .92$).

Previous Disclosure Regarding the Negative Experience. Participants responded to the item, "How much have you shared about your thoughts and feelings regarding this negative experience with others?" on a 5-point Likert-type scale directly after bringing their negative experience to mind.

Self-Esteem Threat. To assess how self-esteem threatening participants' recalled event was, they responded to the single item, "Right at this moment, how badly does this experience make you feel about yourself?" on a visual analogue scale ranging from 0 (*not at all*) to 100 (*very badly*). Scores on this item will be referred to as "SE threat" below.

State Shame. The State Shame and Guilt Scale (SSGS; Marschall et al., 1994) assesses present-moment feelings of shame, guilt, and pride. The current study was only concerned with the shame subscale consisting of five items (e.g., "I want to sink into the floor and disappear") rated on a 5-point Likert-type scale. Cronbach's alphas were .82 and .88 at pre- and post-manipulation, respectively, indicating good internal consistency.

Expected Helpfulness. To verify that each writing exercise was perceived as being

equally credible, participants were presented with a short description of the exercise to which they had been randomly assigned and asked to respond to a single item "How helpful do you think this written exercise would be if you really pushed yourself to get into it?" on a 5-point Likert-type scale directly before completing the writing exercise.

Effort. To determine whether participants were engaged in the experimental manipulation, participants were asked to respond to a single item, "How much effort did you honestly apply to the written exercise?" on a 5-point Likert-type scale directly after completing the writing exercise.

Disclosure Depth. Two independent research assistants, blind to condition, rated the level of disclosure in participants' letters on four items. These were created for the purposes of the present study based on rating scales from previous disclosure research (Barak & Gluck-Ofri, 2007; Houghton & Joinson, 2012) and on Omarzu's (2000) model of self-disclosure, and assessed: (a) detail (i.e., descriptions of what happened [e.g., who, what, when, where]); (b) intimacy (i.e., revealing something about themselves or their personal/subjective experience); (c) expression of negative emotions (i.e., revealing negative feelings they had/have about the experience); and (d) expression of negative thoughts (i.e., revealing negative interpretations of or attitudes towards the experience). Ratings were made on a scale from 1 (*reveals very little/not at all*) to 5 (*reveals a great deal*). The raters were trained for reliability using a set of example letters. A two-way mixed model for average-measure intraclass correlation coefficients (ICC) indicated good interrater reliability ($ICC = .84$-$.91$); therefore, an average rating was created for each item collapsing across the two coders. Furthermore, as all four items were highly intercorrelated ($r = .45$-$.87$) and had good internal reliability ($\alpha = .87$), a composite score of overall disclosure depth was created by taking the mean of the four items.

Disclosure Length. As a second objective measure of distress disclosure, I examined how well-elaborated participant's written letters were by calculating total letter word count using the *Linguistic Inquiry and Word Count: 2015* (LIWC2015; Pennebaker et al., 2015) software.

Data Analytic Strategy

Main analyses were conducted in IBM SPSS Statistics 20 (2011). Multiple regression was used to examine the main effect of condition on disclosure depth, disclosure length, and shame in separate regression analyses. In each analysis, the criterion variable was regressed on two dummy-coded variables, together representing the main effect of condition, where the reference condition (coded as 0 within each dummy variable) was self-compassion. To examine changes in shame, residual change scores were computed by saving the unstandardized residuals from regressing post-manipulation state shame on pre-manipulation state shame.

Results

Data Integrity

For the 90 participants who completed the study, missing data for individual items were imputed using the expectation-maximization method for each measure separately (Enders, 2010). Missing data were not imputed when a participant did not complete the majority of the scale. Overall, the percentage of data imputed across measures was .0004% for the trait measure of self-compassion, .005% for the measure of trait distress disclosure, 0% for the trait measure of self-esteem, and 0% for all measures administered during the experimental session in-lab. When data are missing completely at random and less than 5% of data is missing, a single imputation using expectation-maximization provides unbiased parameter estimates while improving power of analyses (Enders, 2010; Scheffer, 2002). No univariate (> 3 *SD*s above or below the mean) or multivariate outliers (Mahalanobis' distance $p < .001$) were found. Residuals of all analyses

appeared normally distributed.

Equivalence of Conditions

Descriptive statistics of all variables by condition are provided in Table 3. No significant differences emerged between conditions in mean age ($F(2, 78) = 0.20$, $p = .82$), ethnic background ($\chi^2(20) = 24.35$, $p = .23$), the degree of self-esteem threat posed by the negative experience ($F(2, 82) = 0.62$, $p = .54$), state shame prior to the writing exercise ($F(2, 82) = 0.76$, $p = .47$), trait self-compassion ($F(2, 82) = 0.19$, $p = .83$), trait self-esteem ($F(2, 82) = 0.03$, $p = .97$), credibility of the writing exercise ($F(2, 82) = 0.13$, $p = .88$), the degree to which participants had previously disclosed their negative experience to others ($F(2, 82) = 0.62$, $p = .54$), or self-reported effort applied to the assigned writing exercise ($F(1, 82) = 0.82$, $p = .44$). The overall mean for the amount participants had previously disclosed their negative experience was 2.20 ($SD = 1.08$) out of 5, and the overall mean rating of effort applied during the writing exercise was 3.65 out of 5 ($SD = 0.84$). Therefore, participants across conditions both selected experiences they had not fully shared with others previously and applied themselves reasonably well to their assigned writing exercise.

Table 3

Means and Standard Deviations of Study Variables

	Self-compassion (n = 29)		Self-esteem (n = 30)		Free writing (n =26)		Scale range
	Mean	*SD*	*Mean*	*SD*	*Mean*	*SD*	
Age	20.07	1.78	20.24	2.91	19.96	1.97	N/A
Trait self-compassion	2.55	0.76	2.65	0.52	2.59	0.58	1-5
Trait distress disclosure	2.92	1.17	3.14	0.91	3.50	0.97	1-5
Trait self-esteem	1.87	0.76	1.83	0.44	1.83	0.51	0-4
Event SE threat	61.52	24.01	61.50	17.87	55.92	22.04	0-100
Pre-manipulation shame	2.52	1.05	2.25	0.79	2.28	0.94	1-5
Post-manipulation shame	1.67	0.92	1.59	0.66	1.94	1.07	1-5
Disclosure depth (ratings)	3.16	0.97	3.23	0.87	3.24	0.90	1-5
Disclosure length (word count)	163.52	84.65	167.17	72.70	176.88	86.22	N/A

Zero-Order Correlations

As shown in Table 4, trait levels of self-compassion were significantly positively correlated with trait-level tendencies to disclose distress to others. Trait self-esteem also demonstrated a significant positive relationship with trait distress disclosure. Zero-order correlations between general distress disclosure tendencies and behavioural measures of disclosure were surprisingly non-significant. Furthermore, whereas trait self-compassion had no significant relationship with disclosure word count, it demonstrated a significant *negative*

relationship with disclosure depth at the zero-order level. Trait self-esteem demonstrated a significant negative relationship with both disclosure variables. Disclosure depth and length were strongly correlated.

Though the correlations between trait self-compassion and distress disclosure outcomes appeared somewhat smaller than those between self-esteem and these same outcomes, statistical comparisons of the correlations (Steiger, 1980) revealed that there were no significant differences between the strength of the correlations for self-compassion versus self-esteem predicting trait distress disclosure ($z = -1.13$, $p = 0.13$), disclosure depth ($z = 0.99$, $p = 0.16$), or disclosure length ($z = 1.09$, $p = 0.14$).

Table 4

Zero-Order Correlations Between Study Variables

	1	2	3	4	5	6	7
1. Trait self-compassion							
2. Trait distress disclosure	.27*						
3. Trait self-esteem	.77***	.35**					
4. Event SE threat	-.19†	-.02	-.34**				
5. Pre-manipulation shame	-.42***	-.08	-.54***	.48***			
6. Post-manipulation shame	-.28*	.02	-.37***	.19†	.71***		
7. Disclosure depth (ratings)	-.28*	-.18†	-.35**	.11	.07	-.01	
8. Disclosure length (word count)	-.14	-.05	-.22*	.09	.01	-.12	.84***

†$p < .10$, *$p < .05$, ** $p < .01$, *** $p < .001$

Main Effects

No significant main effect of writing condition was found for either disclosure depth or length (see Table 5). However, there was a significant main effect of writing condition on residual change scores for shame. T-tests of the two dummy-coded contrasts identifying the self-compassion condition as the reference revealed that the self-compassion condition resulted in significantly larger decreases in shame scores than the free writing condition but not the self-esteem condition (see Table 3 for group means). In an identical analysis replacing one of the dummy-coded contrasts to identify the free writing condition as the reference, a non-significant difference was found between the self-esteem and free writing conditions such that the self-

esteem condition resulted in larger decreases in shame. Since no effect of condition on disclosure was found, a mediation analysis was not conducted.

Table 5

Main Effect and Dummy-Coded Contrasts of Condition on Disclosure Outcomes and Residual Change Scores for Shame

	Disclosure depth					Disclosure length					Residual change in state shame				
	B	*SE*	95% CI	ΔR^2	ΔF	*B*	*SE*	95% CI	ΔR^2	ΔF	*B*	*SE*	95% CI	ΔR^2	ΔF
Main Effect				.001	0.06				.005	0.20				.08	3.62*
SCvSE	0.07	0.24	[-0.40, 0.54]			3.65	0.02	[-38.38, 45.68]			0.11	0.16	[-0.21, 0.43]		
SCvFW	0.07	0.25	[-0.42, 0.56]			13.37	0.08	[-30.22, 56.96]			0.43	0.17	[0.10, 0.76]*		
FWvSE	-0.00	0.24	[-0.49, 0.48]			-9.72	21.74	[-52.97, 33.53]			-0.32	0.16	[-0.65, 0.01][†]		

Notes: SC = self-compassion condition, SE = self-esteem condition, FW = free writing condition. Results for contrasts were taken from two separate regression analyses per dependent variable: the first using the self-compassion condition as the reference (for SCvSE and SCvFW) and the second using the free writing condition as the reference (for FWvSE).

[†]*p* < .10, **p* < .05

Post Hoc Analyses

As we were specifically interested in whether cultivating self-compassion would promote the disclosure of highly self-esteem threatening events, we examined participants' reports of how badly they felt about themselves due to the event. Although participants were asked to recall an event that currently made them feel badly about themselves, there was a wide range of ratings on the 0-100 scale of self-esteem (SE) threat ($M = 59.80$, $SD = 21.30$, range $= 97$). We therefore used moderated linear regression to investigate SE threat as a moderator variable to explore the impact of condition on outcomes at different levels of SE threat. This approach enabled us to examine whether the self-compassion condition would result in greater disclosure of events that were *highly* threatening to participants' self-esteem.

In the first step of the regression, SE threat (grand mean centered) and the two dummy-coded variables identifying self-compassion as the reference condition were entered to represent the main effects of condition and SE threat. Finally, one interaction term was entered for each of the dummy-coded variables, together representing the condition by SE threat interaction. To probe this interaction, we used the Johnson-Neyman technique (Bauer & Curran, 2005) for identifying regions of significance for the effect of condition at various levels of SE threat with the PROCESS (Hayes, 2013) macro. Finally, we tested mediated moderation by conducting a path analysis with IBM AMOS 22 (Arbuckle, 2013) to examine the indirect effects of each interaction term through shame (a direct effect and first stage mediated moderation model; see Edwards & Lambert, 2007).

Moderated Linear Regression and Follow-up Analyses. Results of the moderated regression analyses revealed that condition interacted with SE threat to predict both disclosure depth and length (see Table 6, step 2; Figure 4 and Figure 5). T-tests of the two interaction terms entered in step 2 revealed that the slopes for SE threat predicting disclosure depth and length in the self-compassion condition were significantly different from the slopes in the free writing condition, but not the self-esteem condition. In an identical analysis replacing one of the dummy-coded contrasts to identify the free writing condition as the reference, it was found that the relationship between SE threat and disclosure depth and length also differed significantly between the self-esteem and free writing conditions.[3]

---

[3] As the effectiveness of the experimental manipulation might be affected by trait self-compassion, models were also tested in which trait self-compassion was included as a covariate and an additional moderator. Consistent with zero-order correlations, trait self-compassion was found to have a significant negative relationship with depth of disclosure, and no significant relationship with length of disclosure. It did not significantly moderate the effects of either experimental condition or SE threat on disclosure outcomes, nor did it significantly change the results of the condition-by-SE threat interaction.

Table 6

Moderated Linear Regressions for the Main and Interaction Effects of Condition and Self-Esteem Threat on Disclosure

	Disclosure depth					Disclosure length				
	B	*SE*	95% CI	ΔR^2	ΔF	*B*	*SE*	95% CI	ΔR^2	ΔF
Step 1				.01	1.06				.01	0.72
Self-Esteem Threat	0.005	0.005	[-0.005, 0.010]			0.36	0.42	[-0.48, 1.19]		
SCvSE	0.07	0.24	[-0.40, 0.54]			3.66	21.16	[-38.45, 45.77]		
SCvFW	0.10	0.25	[-0.39, 0.59]			15.36	22.08	[-28.56, 59.28]		
FWvSE	-0.03	0.25	[-0.52, 0.46]			-11.70	21.90	[-59.29, 31.87]		
Step 2				.15	7.01**				.12	5.53**
Self-Esteem Threat	0.02	0.01	[0.01, 0.03]**			1.56	0.61	[0.35, 2.77]*		
SCvSE	0.09	0.22	[-0.36, 0.53]			5.18	20.14	[-34.91, 45.28]		
SCvFW	0.03	0.23	[-0.43, 0.50]			10.28	21.02	[-31.55, 52.11]		
SCvSE x Self-Esteem Threat	-0.01	0.01	[-0.03, 0.01]			-0.89	1.00	[-2.89, 1.11]		
SCvFW x Self-Esteem Threat	-0.04	0.01	[-0.06, -0.02]**			-3.05	0.93	[-4.89, -1.21]**		
FWvSE x Self-Esteem Threat	0.03	0.01	[0.004, 0.05]*			2.16	1.06	[0.05, 4.28]*		

Notes: SC = self-compassion condition, SE = self-esteem condition, FW = free writing condition. Results for contrasts were taken from two separate moderated regression analyses per dependent variable: the first using the self-compassion condition as the reference (for SCvSE and SCvFW) and the second using the free writing condition as the reference (for FWvSE). For parsimony, SE threat and dummy coded contrast effects for the second moderated regression analysis are not represented in the table.

*p < .05 **p < .01

Simple slope analyses revealed that in the self-compassion condition, there was a significant positive relationship between SE threat and both disclosure depth ($B = 0.02$, $SE = 0.01$, 95% CI [0.006, 0.03], $sr^2 = .09$) and length ($B = 1.56$, $SE = 0.61$, 95% CI [0.36, 2.77], $sr^2 = .07$). In the self-esteem condition, there was a non-significant positive relationship between SE threat and disclosure depth ($B = 0.01$, $SE = 0.01$, 95% CI [-0.008, 0.03], $sr^2 = .01$) and length ($B = 0.68$, $SE = 0.80$, 95% CI [-0.92, 2.27], $sr^2 = .01$). In the free writing condition, SE threat negatively predicted disclosure depth ($B = -0.02$, $SE = 0.01$, 95% CI [-0.03, -0.003], $sr^2 = .06$) and length ($B = -1.49$, $SE = 0.70$, 95% CI [-2.88, -0.10], $sr^2 = .05$).

Figure 4

Estimated Mean Disclosure Depth as a Function of Condition and SE Threat with 95%CI Bands.
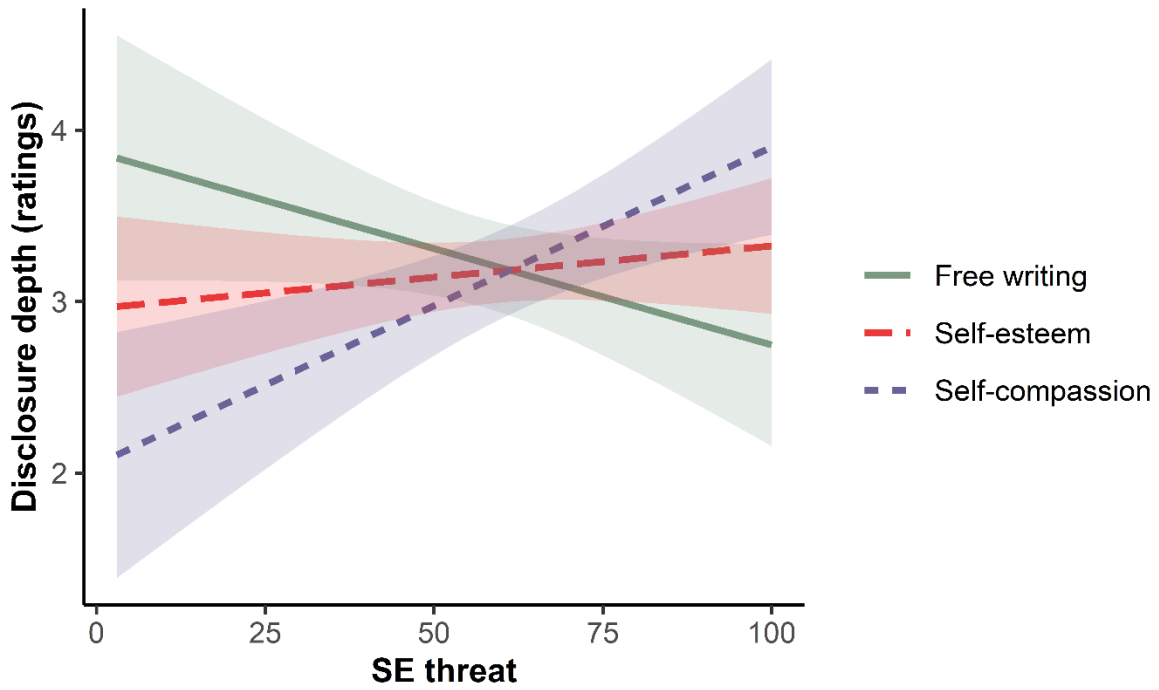
Figure 5

Estimated Mean Disclosure Length as a Function of Condition and SE Threat with 95%CI Bands
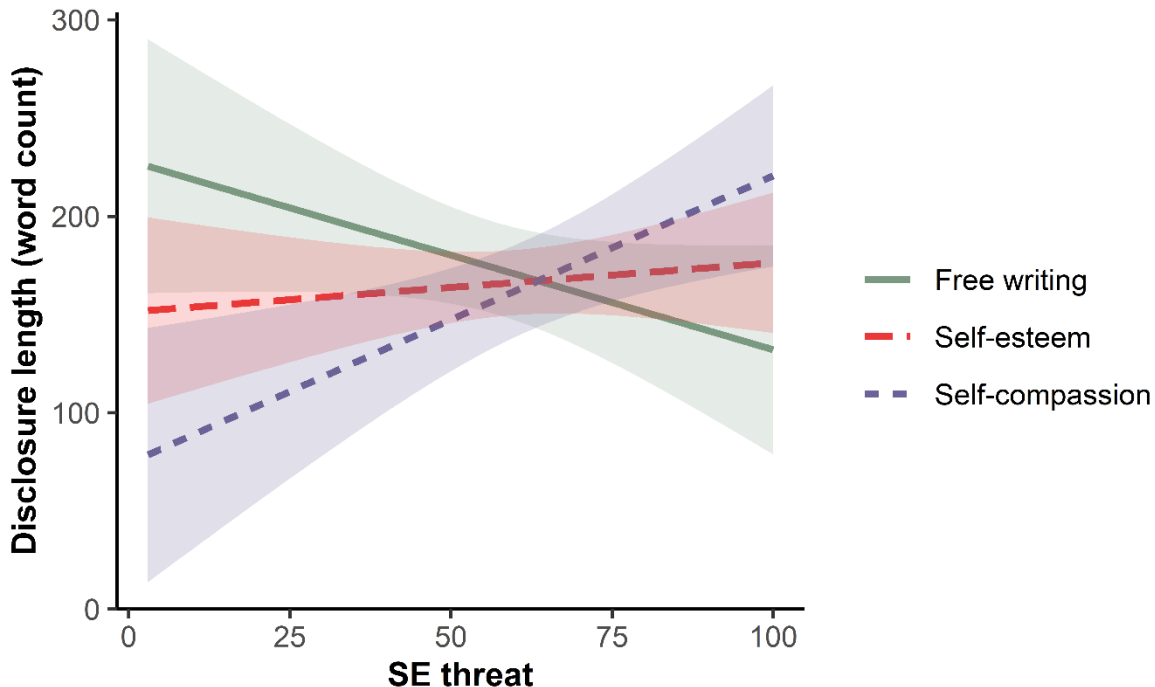
We next sought to determine at what levels of SE threat the self-compassion and self-esteem conditions would differ significantly from the free writing condition. Accordingly, we used the Johnson-Neyman technique, which derives the values along the continuum of the moderator where the effect of a categorical independent variable is just statistically significant ($p = .05$), identifying the regions of significance for the effect. The PROCESS macro allows researchers to use the Johnson-Neyman method in a pairwise fashion to determine the region(s) of significance for each desired contrast (i.e., self-compassion versus free writing, self-esteem versus free writing; for details on this approach, see Hayes & Montoya, 2017).

Results of the Johnson-Neyman analyses demonstrated that participants in the self-compassion condition would be predicted to disclose more than participants in the free writing

condition at SE threat scores greater than 76.30 (20.00% of the present data) for disclosure depth,

and scores greater than 83.74 (15.29% of the data) for disclosure length. In contrast, participants

in the self-compassion condition would be predicted to disclose less than participants in the free

writing condition at SE threat scores lower than 47.09 (23.53% of the data) for disclosure depth,

and scores lower than 48.17 (23.53% of the data) for disclosure length. Participants in the self-

esteem condition would be predicted to disclose more than those in the free writing condition at

SE threat scores greater than 85.76 (10.59% of the data) for disclosure depth, but would not be

predicted to provide lengthier disclosures than participants in the free writing condition at any

level of SE threat. Conversely, participants in the self-esteem condition would be predicted to

disclose less than those in the free writing conditions at SE threat lower than 24.43 (7.06% of the

data) for depth of disclosure, as well as scores lower than 14.51 (2.35% of the data) for

disclosure length. See Table 7 and Table 8 for additional results of the Johnson-Neyman

analyses.

Table 7

Results of Johnson-Neyman Analyses for Self-Compassion versus Free Writing

	Self-Esteem Threat	Point Estimate Difference (FW - SC)	Standard Error	*t*	*p*	95% CI	
						Lower	Upper
Disclosure depth (coder ratings)							
	38.50	0.84	0.31	2.73	.01	0.23	1.45
	47.09	0.51	0.26	1.99	.05	0.00	1.03
	59.80	0.03	0.23	0.15	.88	-0.43	0.50
	76.30	-0.59	0.30	-1.99	.05	-1.18	0.00
	81.10	-0.77	0.33	-2.34	.02	-1.42	-0.12
Disclosure length (word count)							
	38.50	75.25	27.87	2.70	.01	19.78	130.72
	48.17	45.75	22.98	1.99	.05	0.00	91.49
	59.80	10.28	21.02	0.49	.63	-31.55	52.11
	81.10	-54.69	29.74	-1.84	.07	-113.89	4.50
	83.74	-62.73	31.51	-1.99	.05	-125.46	0.00

Note. SC = self-compassion condition, FW = free writing condition. Estimates are provided for levels of Self-Esteem Threat corresponding to cut-offs for Johnson-Neyman regions of significance, the sample mean, as well as ±1SD from the mean.

Table 8

Results of Johnson-Neyman Analyses for Self-Esteem versus Free Writing

	Self-Esteem Threat	Point Estimate Difference (FW - SE)	Standard Error	t	p	95% CI	
						Lower	Upper
Disclosure depth (coder ratings)							
	24.43	0.93	0.47	1.99	.05	0.00	1.86
	38.50	0.54	0.33	1.62	.11	-0.12	1.20
	59.80	-0.05	0.23	-0.23	.82	-0.51	0.41
	81.10	-0.64	0.35	-1.86	.07	-1.33	0.05
	85.76	-0.77	0.39	-1.99	.05	-1.55	0.00
Disclosure length (word count)							
	14.51	103.08	51.79	1.99	.05	0.00	206.16
	38.50	51.18	30.24	1.69	.09	-9.01	111.37
	59.80	5.10	20.87	0.24	.81	-36.45	46.64
	81.10	-40.99	31.35	-1.31	.19	-103.39	21.42
	-	-	-	-	-	-	-

*Note.* SE = self-esteem condition, FW = free writing condition. Estimates are provided for levels of Self-Esteem Threat corresponding to cut-offs for Johnson-Neyman regions of significance, the sample mean, as well as ±1SD from the mean. In the case of Word Count, no cut-off could be identified in which the self-esteem condition would result in significantly greater disclosure than the free writing condition.

Mediated Moderation

Next, we examined whether the significant interaction terms – free writing versus self-compassion (FWvSC) and free writing versus self-esteem (FWvSE) by SE threat – would have a significant indirect effect on disclosure outcomes through reduced shame (Edwards & Lambert, 2007). Indirect effects were tested using bootstrapping with 10,000 samples and the bias-corrected percentile method for calculating confidence limits of the indirect effect (Mackinnon et al., 2004; Shrout & Bolger, 2002). The unstandardized residuals from pre-writing shame regressed on post-writing shame served as the mediator. No significant indirect effects emerged for either disclosure depth (FWvSC by SE threat: $B = 0.0002$, $SE = 0.002$, 95% CI [-0.003, 0.006]; FWvSE by SE threat: $B = 0.0003$, $SE = 0.002$, 95% CI [-0.004, 0.006]) or length (FWvSC by SE threat: $B = 0.18$, $SE = 0.23$, 95% CI [-0.07, 0.94]; FWvSE by SE threat: $B = 0.23$, $SE = 0.27$, 95% CI [-0.07, 1.04]). See Figure 6 and Figure 7 for path diagrams of the mediated moderation model.

Figure 6

Mediated Moderation Model for Disclosure Depth as Rated by Trained Research Assistants
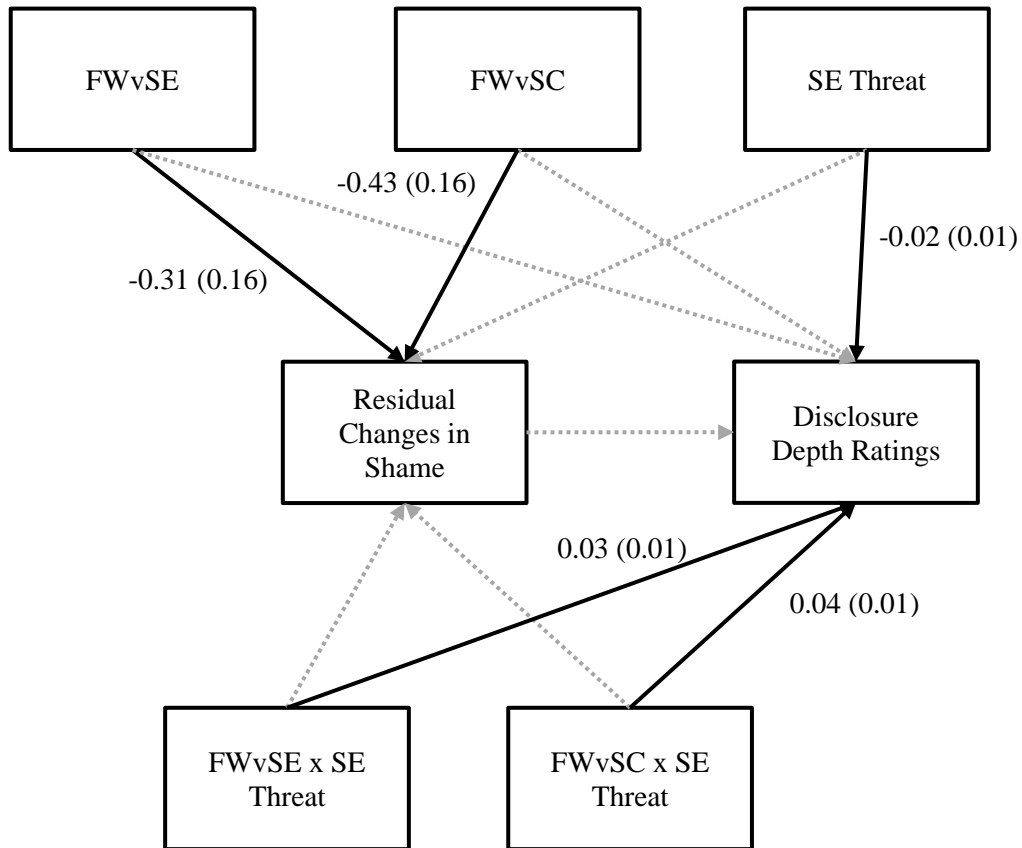
Notes: Significant unstandardized regression weights are depicted with standard errors, and non-significant regression paths are represented by dashed lines. Correlations between independent variables and between error terms for endogenous variables were included but are not depicted here for simplicity. Results for FWvSE and FWvSC contrasts were calculated using dummy-codes identifying free writing as the reference condition. Model fit statistics: $\chi^2(5) = 2.27$, $p = .81$, CFI $= 1.00$, RMSEA $= .00$.

Figure 7

Mediated Moderation Model for Disclosure Word Count
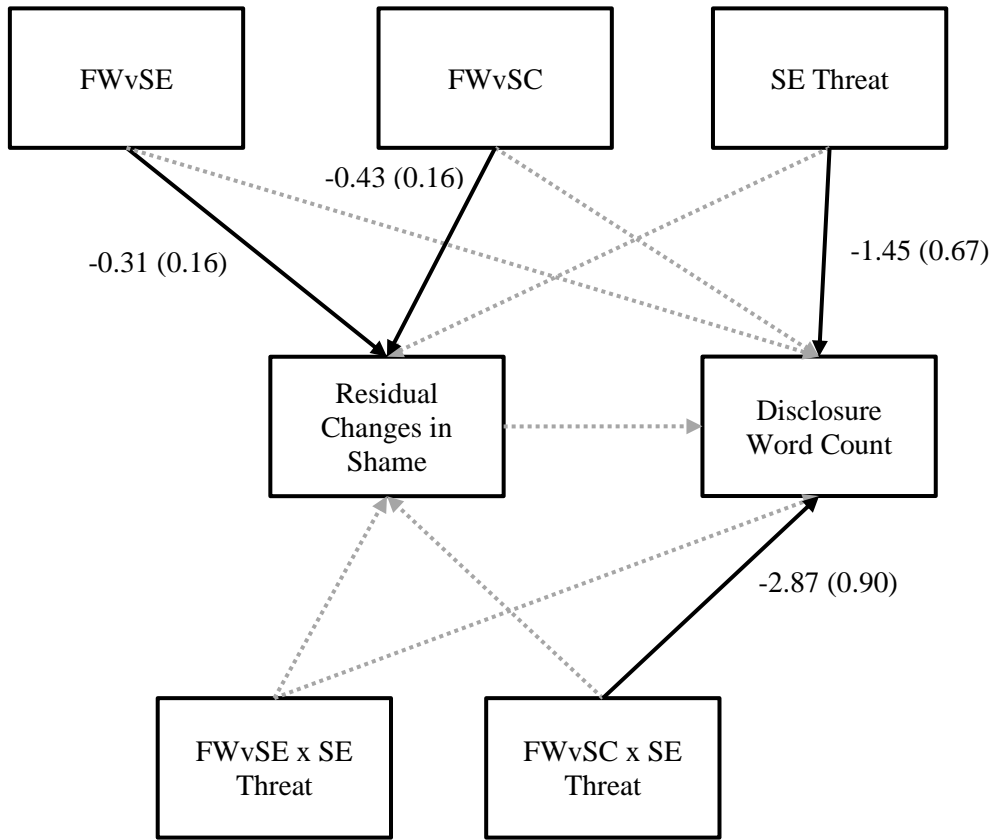
Notes: Significant unstandardized regression weights are depicted with standard errors, and non-significant regression paths are represented by dashed lines. Correlations between independent variables and between error terms for endogenous variables were included but are not depicted here for simplicity. Results for FWvSE and FWvSC contrasts were calculated using dummy-codes identifying free writing as the reference condition. Model fit statistics: $\chi2(5) = 2.27$, $p = .81$, CFI $= 1.00$, RMSEA $= .00$.

Discussion

Results of the present study advance our understanding of the strategies that may promote or inhibit disclosure of self-esteem threatening events. Although the hypothesized main effect of condition on self-disclosure was not supported in the primary analyses, a set of post hoc analyses showed that the impact of self-compassion on distress disclosure depended on the degree to which participants' self-worth was threatened by their recalled negative experience. For participants whose selected events were highly threatening to their self-esteem (scoring above the mid-70s on a 100-point scale), writing about the experience self-compassionately encouraged deeper and lengthier disclosures to a stranger than did writing about it in a nondirective way. Furthermore, participants who wrote about their experience in a self-esteem boosting way did not differ in disclosure depth or length from those who practiced self-compassion regardless of how self-esteem threatening their negative experience was, and both writing exercises resulted in similar reductions in shame. However, whereas participants in the self-compassion condition disclosed high SE threat experiences in greater depth and length than those in the free writing condition, participants in the self-esteem condition only tended to disclose high SE threat events (rated above the mid-80s) in more depth – and not length – than those in the free writing condition. Thus, self-compassionate writing appeared to promote deeper *and* longer disclosures for highly self-esteem threatening events and exerted significant effects at a lower threshold of SE threat as compared to the self-esteem enhancing exercise.

Our results suggest that adopting a self-compassionate mindset or repairing self-esteem may facilitate openness regarding events that pose a strong threat to self-worth. Given that these experiences are also likely to be most distressing (Barlow et al., 2017; Tangney & Tracy, 2012), they may be the very events for which distress disclosure is needed most. If an individual is

overwhelmed by the threat to such an extent that self-regulation does not suffice, practicing self-compassion or repairing self-esteem could allow people to garner the support they need to prevent such events from having a lasting impact on psychological health.

Interestingly, when SE threat was low, those who engaged either in the self-compassion exercise or the self-esteem boosting exercise tended to disclose in less depth and length than participants in the free writing condition. One possible explanation of these results is that for low SE threat events, participants who received either self-compassion or self-esteem boosting instructions were able to cope adequately through their writing exercise and therefore felt less need to disclose than those in the free writing condition. Any future studies aiming to replicate the present findings should investigate this and other possible explanations.

Post-manipulation changes in shame did not mediate the moderated effects of condition on distress disclosure. It is possible that participants' recall of their selected events elicited different self-conscious emotions, such as embarrassment, that may have been affected by the writing exercises and linked more closely to their disclosure behaviours. Methodological issues may have also contributed to these null findings. The present sample size was determined based on the planned main-effect and mediational analyses, and thus the more complicated post hoc moderation and mediated moderation analyses may have been underpowered. In addition, participants were asked to rate their *general feelings of shame* following the writing exercise, rather than their state shame in relation to their selected negative experience. These instructions could have resulted in shame ratings that were more loosely linked to participants' feelings about the event and the prospect of disclosing it to another person. Replications of the present research should correct for these issues before ruling out reductions in shame as a possible mechanism.

Correlational results examining the relationship between self-reported trait self-compassion and distress disclosure tendencies demonstrated a significant, small-to-medium sized positive correlation between these two measures. Similar associations were found between trait self-esteem and distress disclosure. Interestingly, self-reported distress disclosure tendencies did not correlate with the disclosure outcome variables in the present study. Although this may partially be explained by the impact of the experimental conditions, it may also point to the possibility that participants' written disclosures to a stranger within the context of the study might be unrelated or even inversely related (as suggested by the trending negative relationship between disclosure depth and scores on the measure of trait distress disclosure) to their disclosure tendencies in the real world. Though some participants might have inhibited their disclosures in the present context if they felt it would be less helpful to disclose to a new acquaintance over a close and trusted individual, other participants who do not usually confide in others may have decided to disclose more than usual if they perceived the present context to be a safe way to test out novel disclosure behaviours. Furthermore, trait self-compassion did not significantly predict disclosure length, and *negatively* predicted disclosure depth. Self-esteem was negatively associated with both distress disclosure outcomes. It is possible that higher trait self-compassion and self-esteem related negatively to disclosure depth because individuals higher in self-compassion and self-esteem were not experiencing a significant degree of distress after the manipulations and thus did not feel the need to seek additional support for it. It is also possible to interpret these negative correlations as showing that individuals with lower trait self-compassion and self-esteem experienced lingering distress after the manipulations and opted to seize an unusual opportunity to engage in a supportive conversation in which they could use self-disclosure to help them further regulate their negative emotions.

Limitations

The present study had several limitations. First, the moderation findings emerged from post hoc analyses and the SE threat variable consisted merely of a single item assessing the impact of participants' selected experience on their negative self-related feelings. While face-valid, the present findings require replication using an established measure validated through prior research. Second, the current study's relatively small sample was limited to female undergraduates. Future research should aim to replicate these findings with larger and more diverse samples whose self-esteem threatening experiences may be more variable. Third, the present study assessed the immediate effects of brief writing exercises without assessing longer-term outcomes, leaving open the question of whether such exercises would have a lasting impact on future disclosures after newly experienced distressing events. Fourth, despite the merits of the experimental methods that were used, participants were placed in a relatively contrived disclosure situation, thus limiting the external validity of the results. Although the debriefing procedure indicated that participants believed they would be disclosing to a peer, whether the present results would translate to face-to-face disclosures with close others or mental health professionals in the context of participants' daily lives remains to be tested. Fifth, the finding that the self-esteem enhancing exercise did not result in longer disclosures at higher levels of SE threat as compared to the free writing condition could be the result of type II error rather than a true difference in the effect of this intervention versus the self-compassion intervention. Adequately powered replications of the present findings could help to lend additional insight into this possibility.

In addition to the limitations presented above, it is unclear whether the self-compassion and self-esteem enhancing conditions uniquely targeted their respective constructs as intended.

One possible interpretation of the results is that there were spillover effects of the manipulation, where inducing self-compassion may have enhanced self-esteem or vice versa. For example, the self-esteem-enhancing prompt asking participants to focus on how the experience was "not their fault" was intended to elicit self-protective denial of responsibility but could have been interpreted in a self-compassionate manner depending on the participant. Relatedly, trait levels of self-compassion as measured by Neff's (2003) Self-Compassion Scale and self-esteem as measured by Rosenberg's (1965) Self-Esteem Scale were highly correlated ($r = .77$), reinforcing that these two constructs are highly intertwined and that their potential effects on distress disclosure may be difficult to disentangle. However, similar writing manipulations have been found to differentially target self-compassion and self-esteem (Breines & Chen, 2012; Seekis et al., 2017), suggesting an alternative possibility that self-compassion and self-esteem represent two distinct pathways to regulating self-esteem threat and disclosure. Furthermore, given the three-pronged nature of the writing exercise, it would be interesting to determine which components of self-compassion (i.e., self-kindness, mindfulness, or common humanity) might account for the effects of the self-compassion condition. Additional studies are necessary to replicate these findings, further investigate the mechanistic underpinnings of the writing interventions, and compare the self-compassion and self-esteem enhancing approaches.

Conclusions

Despite these limitations, this study is the first to my knowledge to suggest that both cultivating self-compassion and repairing self-esteem can increase the actual depth and amount of information shared during the act of distress disclosure for self-esteem threatening experiences. Further research is needed to improve upon the present methods, continue to

investigate causal mechanisms, and work toward clarifying whether and how the effects of self-compassion on self-disclosure may or may not differ from those of self-esteem enhancement.

Study 3: Self-Compassion Predicts Interpersonal Emotion Regulation Strategies in

Response to Being Ghosted

Study 2 had a number of notable strengths, including greater attention to internal validity, use of experimental methods, and behavioural outcome measures for distress disclosure. However, a drawback to pursuing this study design was reduced ecological validity. The contrived disclosure situation presented to participants (i.e., disclosing to a stranger with no information provided regarding the stranger's qualities as a support provider) made it difficult to estimate to what extent the findings would generalize to actual real-life disclosures. Furthermore, while the self-compassion induction resulted in increased disclosure for highly self-esteem threatening events, trait self-compassion was negatively related to the behavioural measure of disclosure depth. These conflicting results between the effects of the experimental manipulations and the trait measure of self-compassion also complicated the picture by suggesting that the contribution of trait self-compassion might differ from the effects of an experimentally induced self-compassionate mindset. These inconsistent findings may have been due to the study design, which relied on retrospective recall of a past negative event: whereas trait self-compassion likely would have exerted its impact at the time the event first occurred, the self-compassion intervention was implemented long after the event had passed.

Given these limitations, Study 3 sought to provide a closer, more detailed, and naturalistic examination of the relationships between trait self-compassion, distress, and interpersonal emotion regulation in a recently-experienced distressing event. This correlational study employed path analysis, providing the opportunity to investigate a variety of pathways between self-compassion, distress, perceptions of interpersonal emotion regulation, and multiple interpersonal emotion regulation behaviours (i.e., distress disclosure and support-seeking).

Several other limitations of Studies 1 and 2 were taken into consideration in the design of Study 3. For example, Study 3 sought to address the limited representativeness of samples used in Studies 1 and 2 by recruiting a larger, more diverse, mixed-gender sample from Amazon's Mechanical Turk. Furthermore, although the experimental results of Study 2 afforded some additional insight into the direction of the relationship between self-compassion and the interpersonal emotion regulation strategy of distress disclosure, they led to further questions regarding the exact nature of self-compassion's impact on interpersonal emotion regulation and the underlying mechanisms at play. As the focus of Study 2 was to examine shame's role in increasing the perceived risk of disclosure and reducing distress disclosure by extension, other potential mechanisms such as the perceived usefulness/efficacy of the disclosure were ignored. Furthermore, whereas Studies 1 and 2 examined different interpersonal emotion regulation strategies in isolation (social support in Study 1 and distress disclosure in Study 2), Study 3 expanded upon these investigations to explore both distress disclosure and support-seeking as dependent variables, and data were collected on both the perceived risks and utility of disclosure.

In Study 2, participants could select from a wide range of negative experiences that may have occurred in their lives in the preceding five years. This was done to ensure participants would be able to select an experience that felt highly important to them, no matter when it had occurred. However, variability in the types and timeline of events chosen might have obscured the results. For example, events that occurred long in the past might not have felt useful to disclose regardless of how much distress they continued to cause, as it might have seemed unlikely that a stranger would have been capable of providing effective support or helping to change such a longstanding issue. To circumvent these issues, Study 3 limited the negative event context to a single, standardized type of social experience across participants that would likely

89

elicit feelings of rejection, embarrassment, and/or humiliation. Study 3 examined the experience of being *ghosted*, defined as having a person suddenly and without explanation stop responding to all of one's communications. To further standardize the event, participants were only invited to participate in the study if they had been ghosted within the last 30 days by a person of romantic interest and with whom they had met in person at least once. We reasoned that these restrictions would improve the interpretability of the results despite the drawback of reduced generalizability to other negative events.

Finally, at the time Study 3 was being designed, Gilbert and colleagues (2017) had just released their new self-report measure of trait self-compassion (the Compassionate Engagement and Action Scales). This measure was developed based on their conceptualization of compassion as being comprised of two motivations: the desire to engage with suffering and the desire to alleviate and prevent suffering. The appeal of the Compassionate Engagement and Action Scales was twofold. First, the hypothesized associations between self-compassion and interpersonal emotion regulation that comprise the foundation of the present research were largely based on Gilbert's conceptualization of self-compassion within the context of his Social Mentality Theory (Liotti & Gilbert, 2011). Second, the increasing debate regarding the validity of Neff's (2003) measure of trait self-compassion and the strong overlap found between self-esteem and Neff's measure of self-compassion in Study 2 suggested the need for an alternative self-compassion measure. As such, Gilbert's newly developed scale was administered as the main predictor variable for Study 3.

Background

Self-compassion involves a willingness to mindfully engage with one's suffering from a stance of curiosity and openness, as well as a desire to respond to that suffering in helpful ways

(Neff, 2003; Gilbert et al., 2017). The proliferation of research on self-compassion suggests that self-compassionate individuals tend to report greater well-being than individuals low in self-compassion as evidenced by lower levels of psychological distress (MacBeth & Gumley, 2012) and higher levels of positive affect and life satisfaction (Zessin et al., 2015). Thus far, these benefits have largely been attributed to the effectiveness with which individuals who are higher in self-compassion respond to difficult experiences, and these responses are often assumed to be intrapersonal in nature. For example, trait levels of self-compassion have been linked to the use of more effective intrapersonal emotion regulation strategies such as reappraisal and acceptance (Allen & Leary, 2010; Inwood & Ferrari, 2018), resulting in lower levels of distress after negative events (Choi et al., 2014; Leary et al., 2007; Luo et al., 2018).

Very little research has examined to what extent self-compassion may be linked to effective *inter*personal coping or the use of interpersonal regulatory strategies in which a person attempts to manage difficult feelings through interactions with others (Zaki & Williams, 2013). Interpersonal emotion regulation strategies such as confiding in a trusted other and asking for support constitute key forms of emotion regulation that result in improved well-being and protect against various forms of psychological distress (Frattaroli, 2006; Kahn & Garrison, 2009; Hill, 2016; Ambriz et al., 2012; Kahn & Hessling, 2001; Kahn, Wei et al., 2017; Lepore et al., 2000; Saxena & Mehrotra, 2010; Ward, et al., 2007). Despite the potential benefits of disclosing distress to others and seeking support, individuals vary in the degree to which they use interpersonal regulatory strategies in response to distressing events (Williams et al., 2018). Investigating the relationship between self-compassion and interpersonal forms of coping could deepen our understanding of the various mechanisms through which self-compassion might exert its benefits and provide greater insight into how individuals higher in self-compassion manage

difficult experiences. This knowledge could also point to the possible benefits of compassion-focused interventions for highly self-critical individuals, who are known to rely less on their interpersonal supports (Dupasquier, Kelly, Waring, & Moscovitch, 2020; Mongrain, 1998).

Some prior studies examining the links between self-compassion and interpersonal emotion regulation have found that self-compassion positively predicts tendencies to seek social support (Choo & Marszalek, 2018; Hermanto & Zuroff, 2016) and disclose distress (Brion et al., 2014; Heath et al., 2017; Schellekens et al., 2017), while other research has suggested no such associations (Neff et al., 2005; Leary et al., 2007; Salazar, 2015). Unfortunately, the existing research on self-compassion and the use of interpersonal regulatory strategies has largely failed to account for the role of an important contextual factor that could significantly impact their relationship: distress. The level of distress experienced may have downstream effects on mechanisms that link self-compassion to interpersonal emotion regulation, such as their perceived risk and utility.

Perceived Risk and Utility as Potential Mechanisms in the Relationship between Self-Compassion and Interpersonal Emotion Regulation

One of the greatest barriers to disclosing distress and seeking support is the threat of rejection (Ignatius & Kokkonen, 2009; McCarthy et al., 2017); individuals who are prone to feelings of shame tend to be particularly fearful of this possible outcome (Greenland et al., 2009; Hook & Andrews, 2005; Pineles et al., 2006; Swan & Andrews, 2003). Those higher in self-compassion tend to be less shame-prone (Gilbert, 2005; Vazeou-Nieuwenhuis & Schumann, 2018), to believe that close others are more accepting of their flaws (Zhang et al., 2020), and to feel safer in social environments (Kelly & Dupasquier, 2016). Consequently, they may perceive reduced risk in disclosing negative experiences and be less fearful of rejection.

Another key predictor of distress disclosure and support-seeking is their perceived utility; interpersonal emotion regulation strategies may have a higher likelihood of being used if one believes that these strategies will effectively serve to regulate negative affect (Pierce & Lydon, 1998; Terry, 1991; Uchino, 2009; Vogel et al., 2005). Self-compassion is thought to be propelled by the activation of a care-seeking mindset focused on finding helpful responses to distress, which may motivate people not only to attend to their internal regulatory resources but also look to available social resources (Choo & Marszalek, 2018; Hermanto & Zuroff, 2016; Liotti & Gilbert, 2011). Given that more self-compassionate people tend to have more positive social expectations (Zhang et al., 2020) and more secure attachment styles (Neff & McGehee, 2010), those high in self-compassion might expect more supportive and helpful responses from others.

Interestingly, the perceived risks and utility of seeking support or disclosing distress to others may both be affected by the degree of distress experienced. Sharing highly emotional material related to negative affective experiences ranks among the most intimate forms of disclosure, as such experiences often relate to the individual's core views of the self (Laurenceau et al., 1998; Moscovitch, 2009). Thus, sharing negative affective experiences with others requires vulnerability and provides an opportunity for rejection. Likewise, the "fever model" of disclosure suggests that greater levels of distress increase the perceived utility of interpersonal regulatory strategies (Burchill & Stiles, 1988; Rimé et al., 1998; Stiles et al., 1992). In one study, the level of intrusive thoughts and feelings experienced due to a breakup – an indicator of distress – was found to predict increased use of social supports (Chung et al., 2003). Thus, individuals may rely on support from others when they experience a greater degree of distress. The fact that self-compassionate individuals are less reactive to stressors and more resilient in the face of self-esteem threatening experiences suggests that, due to their intrapersonal emotion

regulation skills, they may seldom feel distressed enough to feel the need to disclose or seek support after difficult experiences (Breines et al., 2014, 2015; Choi et al., 2014; Leary et al., 2007; Luo et al., 2018). Recent studies have shown that the relationship between self-compassion and interpersonal emotion regulation use may depend on the level of distress experienced by the individual. For example, one study demonstrated that female undergraduates with higher trait self-compassion consistently reported receiving more support than those low in self-compassion, but this difference was especially pronounced when they experienced more global distress than others and on days when they experienced more distress than usual (Dupasquier, Kelly, Waring, & Moscovitch, 2020). Furthermore, a self-compassionate writing intervention was found to result in greater distress disclosure about a negative experience in comparison to a free-writing control condition when that experience was highly threatening to participants' self-esteem, but resulted in less distress disclosure than the control condition when the experience did not feel as threatening (Dupasquier, Kelly, Moscovitch, & Vidovic, 2020). Thus, self-compassion may be more strongly associated with interpersonal emotion regulation when distress is high, though further research is needed to better understand this complex relationship.

In the present study, I sought to investigate the relationship between self-compassion and interpersonal emotion regulation in the context of a recent, standardized negative experience (i.e., being ghosted) in which potential "regulators" would be family and friends but not romantic partners. Choosing a recent, standardized event limited the potential confounding effects of extraneous variables that might obscure the association between self-compassion and interpersonal emotion regulation (i.e., time since the negative experience, type of experience endured). Furthermore, focusing on interpersonal emotion regulation processes in the context of

platonic relationships (e.g., family, friends) allowed for greater variability in support-seeking behaviours than that which typically occurs within romantic relationships.

Ghosting

Ghosting is defined as cutting off all contact with someone by no longer accepting or responding to attempts at communication such as phone calls or instant messages (Merriam-Webster, n.d.). Although the notion of terminating relationships indirectly through avoidance and withdrawal is not an entirely new concept (Baxter, 1979; Cody, 1982), the use of online communication and dating applications has highlighted ghosting as a viable and common strategy to terminate a relationship (Gershon, 2010). One study on 152 participants found that 47% had experienced a "closureless" breakup, a phenomenon like ghosting in which the person initiating the breakup provides no explanation for the termination of the relationship (Smith, 2014). Other studies have found rates of being ghosted ranging from 13% to 64.5% in polls of the general US adult population (Freedman et al., 2019; Koessler et al., 2019a; Moore, 2014).

One important and unique feature of ghosting is its ambiguous nature. Individuals who have been ghosted often express lingering feelings of uncertainty about the reason for their rejection (LeFebvre 2017; LeFebvre et al., 2019). Being on the receiving end of a breakup or getting rejected by a potential romantic partner is usually distressing, even when those rejections do not occur via ghosting (Cooper et al., 2014; Morris & Reiber, 2011). Romantic rejections in general can elicit a host of negative emotions, such as sadness, anger, longing, and anxiety (Morris & Reiber, 2011; Sbarra & Ferrer, 2006) and can cause heightened symptoms of anxiety, depression, and even posttraumatic stress (Chung et al., 2003; Monroe et al., 1999). The inherently ambiguous nature of being ghosted may amplify the already high distress that accompanies breakups and rejection, at least for emotionally vulnerable individuals (Freedman et

al., 2016). Indeed, ambiguous social situations provide greater opportunity for negative personalized interpretations and attributions of the rejection to impact individuals' emotional response (Jones et al., 2016).

Researchers have compared being ghosted to being ostracised, defined as being excluded from a social group in a manner where one is ignored and/or given the "silent treatment" (Freedman et al., 2019). Ostracism has been found to threaten fundamental psychological needs such as a sense of belonging and self-esteem, evoking distress and social pain that over the long term can contribute to feelings of helplessness and symptoms of depression (see Williams & Nida, 2011 for a review). Thus, ostracism is a particularly impactful type of rejection experience. Given that the experience of being ghosted closely resembles that of being ostracised, it is perhaps not surprising that ghosting is perceived as being one of the least compassionate methods of terminating relationships (Koessler et al., 2019b).

Coping with Ghosting through Self-Compassion and Interpersonal Emotion Regulation

After being ghosted, self-compassionate individuals may be more likely to cope effectively. For example, responding self-compassionately to a divorce has been found to predict positive psychological adjustment nine months later (Sbarra et al., 2012). Self-compassion can also promote motivations to be a better romantic partner in the future and more positive beliefs about one's romantic prospects after a breakup (Zhang & Chen, 2017). Since self-compassionate individuals are less reactive to interpersonal stressors (Breines et al., 2014, 2015) and tend to be more resilient in the face of self-esteem threatening experiences (Leary et al., 2007), they may experience less initial distress in relation to an ambiguous rejection such as ghosting.

Self-compassion could have further benefits after being ghosted insofar as it may encourage interpersonal emotion regulation, which may be one of the most useful coping

strategies in the face of a rejection. Disclosing one's distress and seeking support from others opens up the opportunity for others to assist in cognitive reframing by providing new perspectives (Nils & Rimé, 2012) and may restore a sense of belonging and connectedness when these psychological needs are threatened by rejection (Thoits, 2011; Zwolinski, 2014). Thus, understanding factors that lead to interpersonal emotion regulatory responses such as self-compassion may have important practical implications for people recuperating from ghosting and other forms of rejection.

Aims and Hypotheses

This correlational study sought to investigate the relationships between self-compassion, distress, and interpersonal emotion regulation in the wake of being ghosted. It was hypothesized that:

1. Trait self-compassion would positively predict self-reported distress disclosure and support-seeking after a ghosting experience.

2. These effects would be moderated by how distressing the ghosting experience was at the time it occurred, such that the relationship between self-compassion and interpersonal emotion regulation would be strongest for participants who were highly distressed.

3. The effect of self-compassion on interpersonal emotion regulation outcomes would be accounted for in part by indirect effects through perceived risk and utility of interpersonal emotion regulation.

A secondary goal of the present research was to examine how the Compassion for Self subscale of Gilbert and colleagues' Compassionate Action and Engagement Scales (2017) relates

to distress disclosure tendencies, given that this measure was not available at the time Studies 1 and 2 were conducted.

Methods

Procedure

A mixed-gender sample of US and Canadian residents were recruited through Amazon's Mechanical Turk (MTurk) platform. To take part in the study, participants had to: (a) be 18 years or older, (b) have a minimum 95% MTurk worker rating, (c) be fluent in English, (d) be ghosted within the last 30 days by an individual in whom they were romantically interested, and (e) have met this individual in person at least once. Once they confirmed that they met these criteria, participants were asked to complete a set of questionnaires that included trait measures, demographics, and a set of questions regarding their ghosting experience and its emotional impact as well as how they responded to this event through disclosure and support-seeking behaviours. Upon completion, participants were reimbursed 2.50 US dollars in exchange for their participation. On average, the study took approximately 36 minutes to complete.

Participants

A power analysis using G*Power (version 3.1; Faul et al., 2009) indicated that a minimum sample size of 101 would be required to have adequate power ($\beta = .80$) to detect a moderation effect similar in size to the observed Study 2 correlation between trait self-compassion and trait distress disclosure (Cohen's $f^2 = 0.08$). Previous research has demonstrated that a sample size of 148 participants is required to achieve adequate power in mediational analyses using bias-corrected bootstrap methods where coefficients for the paths that contribute to the indirect effect are small-to-medium sized (Fritz & MacKinnon, 2007). To account for

possible exclusions due to data quality issues inherent in collecting online data and to improve power, 300 participants were recruited.

Three hundred participants fully completed the survey and were reimbursed for their participation. Based on previous research examining data quality (Curran, 2016; Meade & Craig, 2012), participants' data were screened through multiple forms of data verification with the lowest recommended restrictions. This conservative approach is meant to screen for various forms of invalid responses while also minimizing the chances of excluding a valid participant, thereby erring on the side of increasing Type II over Type I error. Correspondingly, participants were excluded if: (a) they failed over half of three attention checks integrated throughout the survey (e.g., "Please respond to this item by selecting '3'"), (b) they spent insufficient time on the survey (i.e., under 2 seconds per question based on the total survey time), (c) they provided repeated identical responses for over half the length of the total key self-compassion measure (including reverse-coded items), (d) their open ended responses contained unintelligible or random material, and (e) their GPS location (as collected by Qualtrics) was repeated for multiple participants in the data set. Recent results from psychological research suggest that identifying repeated GPS locations is the most reliable way to identify the presence of robot workers who provide random responses in data collected through MTurk (Bai, 2018). To verify that repeating GPS locations indicated robot responses, the content of open-ended questions was checked for suspicious or random material, and participants whose responses met such criteria were excluded accordingly.

After exclusions, the final sample consisted of 220 participants (52.7% identified their gender as female, 46.8% identified as male, and one participant did not identify their gender; $M_{age} = 32.43$, $SD_{age} = 8.90$, range = 19 to 68). The sample consisted primarily of white

participants (n = 159; 72.3%). Twenty-seven participants (12.3%) identified as Black, eight

(3.6%) as east Asian, seven (3.2%) as south Asian, four (1.8%) as indigenous/First Nations, two

(1%) as Filipino, 1 (0.5%) as Arab, and nine (4.1%) identified as "other". Two (1%) participants

chose not to identify their ethnicity. The majority of participants identified as heterosexual (n =

185; 84.1%), twenty-three participants (10.5%) identified as bisexual, and nine participants

(4.1%) identified as gay/lesbian. Twelve participants (5.5%) reported completing high school as

their highest level of education, 65 (29.5%) had some college or university education, 118

(53.6%) had a college university degree, and 25 (11.4%) reported having a post-graduate degree.

To examine how exclusions might have biased the data, data from retained and excluded

participants who were not identified as bots were compared on demographic variables (age,

ethnicity, sexual orientation, highest level of educational achievement). Participants who were

excluded did not significantly differ in age (t(233) = 0.10, p = .92) or gender (χ^2(1) = 0.95, p =

.33) when compared to excluded participants. Though predicted cell counts were too small for

Chi-Square tests on ethnicity, sexual orientation, or education to be valid, observations of

descriptive frequency statistics indicated that excluded participants did not meaningfully differ

with regards to ethnic composition or sexual orientation. However, a disproportionate number of

participants with lower levels of educational achievement were excluded. Participants who

reported that completing high school was their highest level of educational achievement

consisted of 33.3% of excluded participants versus 5.5% of the final sample.

Measures

Trait Self-Compassion. Participants completed the Compassion for Self section of

Gilbert et al.'s (2017) Compassionate Engagement and Action Scales. As results from the initial

validation of the Compassion for Self subscales (engagement and action) suggested they could

be combined to create a total measure of self-compassion, an overall average score was computed by aggregating the self-compassionate engagement items (6 items; e.g., "I notice and am sensitive to my distressed feelings when they arise in me") with the action items (4 items; e.g., "I think about and come up with helpful ways to cope with my distress"). As Gilbert and colleagues (2017) suggested, three reverse-scored items were also administered to avoid response bias but were not included in the calculation of participants' scores. These items were rated on a scale from 1 (*never*) to 10 (*always*). The total measure demonstrated strong internal consistency ($\alpha = .88$).

Trait Distress Disclosure. The Distress Disclosure Index (Kahn & Hessling, 2001) was used to measure trait tendencies to conceal versus disclose psychological distress. On a scale from 1 (*strongly disagree*) to 5 (*strongly agree*), participants rated their agreement with 12 items regarding their typical level of disclosure to close others (e.g., "When I feel upset, I usually confide in my friends"). See the Measures section of Study 2 for further details. In the present study, the Distress Disclosure Index demonstrated excellent internal consistency ($\alpha = .94$).

Ghosting-Related Negative Affect. The distress participants experienced after their ghosting experience was measured by the 10-item negative affect (NA) subscale of the Positive and Negative Affect Schedule (Watson et al., 1988). Participants rated emotion adjectives (e.g., "Distressed", "Upset") on a scale from 1 (*very slightly or not at all*) to 5 (*extremely*) in relation to how they felt when they realized they had been ghosted. The 10 items demonstrated excellent internal consistency ($\alpha = .90$) and were aggregated into an average NA score.

Interpersonal Emotion Regulation with Others in General. Participants reported on their general disclosure to and support-seeking from others about their ghosting experience using the measures listed below.

Amount of Disclosure to Others in General. A single, face-valid item assessed general disclosure about the ghosting experience to others. Participants rated this item on a Likert-type scale from 1 (*not at all*) to 5 (*extremely*): "How much have you talked to others about this ghosting experience since it occurred (i.e., by talking with someone or directly messaging/texting someone)?"

Depth of Disclosure to Others in General. Participants rated the depth with which they had disclosed various aspects of their ghosting experience to others on seven items developed for the purposes of the present study. These items were based on elements of cognitive behavioural models (Beck, 1976; Greenberger & Padesky, 1995), and included: 1) details of what happened, 2) how they felt about the ghosting, 3) how they responded/behaved after the ghosting, 4) what they thought the ghosting meant about them, 5) what they thought the ghosting meant about their future, 6) what they thought the ghosting meant about the person that ghosted them, and 7) what they thought the ghosting meant about others/the world. These items were rated on a scale from 1 (*I told others nothing about this item*) to 5 (*I talked in full and complete detail about this with others*), consistent with Jourard's Self-Disclosure Questionnaire (Jourard & Lasakow, 1958). To verify that these items represented a unified construct of disclosure depth, an exploratory factor analysis was conducted (using maximum likelihood as the extraction method and varimax rotation). Two separate factors emerged, one representing the immediate circumstances and context surrounding the ghosting, accounting for 33.96% of the total variance (items 1, 2, 3, and 6), and one representing the meaning participants derived from the experience, accounting for 27.26% of the total variance (items 4, 5, and 7). Consequently, composite (average) scores were created for these two sets of items (referred to as "depth of disclosure about ghosting context" and "depth of disclosure about ghosting meaning"). The two composites were found to have

good internal consistency (ghosting context: $\alpha = .83$; ghosting meaning: $\alpha = .81$) and were analyzed separately.

Support-Seeking from Others in General. General support seeking (i.e., no target specified) in relation to the ghosting experience was measured using the Brief COPE Inventory (Carver et al., 1989) with items rephrased to refer to participants' past ghosting experience. The scales for both emotional support-seeking (4 items; e.g., "I sought out sympathy and understanding from someone") and instrumental support-seeking (4 items; e.g., "I tried to get advice from someone about what to do") were administered and demonstrated excellent internal consistency (emotional: $\alpha = .93$; instrumental: $\alpha = .90$). These items were rated on a scale from 1 (*not at all*) to 5 (*extremely*).

Disclosure About Ghosting to a Particular Supportive Other. Participants were asked to identify the individual from whom they sought support most regarding their ghosting experience. They then completed the following two measures about their experiences with this person.

Amount of Disclosure to Supportive Other. Participants rated the degree to which they disclosed about their ghosting experience to their selected other on a scale from 1 (*I told them very little about my experience*) to 5 (*I talked to them in full and complete detail about my experience*).

Perceived Risk and Utility of Disclosure to Supportive Other. To assess how expectations of their disclosure experience might mediate the relationship between self-compassion, ghosting-related NA, and disclosure, participants were asked to rate the degree to which they perceived it would be risky (4 items; e.g., "How difficult was it to disclose about the event/issue?") and useful (4 items; e.g., "How much did you think it would benefit you to

disclose about the event/issue?") to disclose to their selected other by completing the Disclosure

Experiences Scale (Vogel & Wester, 2003). These items were rated on a scale from 1 (*not at all*)

to 5 (*very*), and each scale was found to have a high degree of internal consistency (risk: $\alpha = .87$;

utility: $\alpha = .89$).

Data Analytic Strategy

Zero-order correlations and hierarchical linear regressions were conducted using IBM

SPSS Statistics 20 (2011) and mediation analyses were conducted through path analysis using

the *lavaan* package in R (Rosseel, 2012). Though Structural Equation Modelling (SEM) was a

viable alternative analytic strategy for mediation that tends to produce more accurate point

estimates, SEM sacrifices reliability, resulting in larger standard errors. Path analysis tends to

produce more reliable estimates of direct and indirect effects than SEM. The differences in point

estimates produced by each approach increase and may be of concern when the internal

consistency of the measures administered is low (Ledgerwood & Shrout, 2011). As the measures

administered in the present study demonstrated strong internal consistency and the goal was to

examine the presence or absence of relationships rather than the exact strength of such

associations, path analysis was selected to analyze the data.

Indirect effects were tested using bootstrapping with 5,000 samples and the bias-

corrected percentile method for calculating confidence limits (Mackinnon et al., 2004; Shrout &

Bolger, 2002). Of the 220 participants included in the final sample, 33 participants denied

disclosing to or seeking support from anyone, leaving 187 participants who could report on the

depth of their disclosures. Of these, one participant did not identify an individual from whom

they sought support the most after their ghosting experience, leaving 186 participants who

identified a specific supportive other. Thus, analyses investigating disclosure to a specific other

as well as perceived risk and utility of this disclosure were based on this subset of 186 participants.

Results

Data Integrity

In total, 1.59% of data were missing. Little's (1988) MCAR test across all measures was non-significant ($\chi^2(6897) = 6718.07$, $p = .94$), suggesting the data were missing completely at random. When data are missing completely at random and less than 5% of data is missing, single imputation methods using expectation-maximization provide unbiased parameter estimates while improving power of analyses (Enders, 2001; Scheffer, 2002). Thus, missing data for individual items were imputed using the expectation-maximization method for each measure separately (Enders, 2010). Missing data per scale ranged from 0.93% to 1.90%. Missing data were not imputed for participants who did not complete the majority of items on a particular scale, and participants were excluded pairwise for main analyses including that scale, resulting in a maximum of one participant being excluded from each analysis presented in the main results. Missing data (0.01%, $n = 2$) for the single-item variable measuring the amount of disclosure to others in general were imputed using total scores from the other variables included in the study as predictors, following published guidelines and recommendations (Dong & Peng, 2013; van Buuren et al., 1999). Across the entire data set, approximately 1% of the data were imputed.

No univariate (> 3 *SD*s above or below the mean) or multivariate outliers (beyond the cut-off identified by the adjusted quantile method for Mahalanobis' distance) were found for any predictor variables. Residuals of full regression models did not appear to deviate substantially from the normal distribution. Descriptive statistics for all study variables can be found in Table 9.

Table 9

Means and Standard Deviations

	n	*M*	*SD*	*Scale range*
Predictor Variables				
Trait self-compassion	219	6.61	1.58	1-10
Trait distress disclosure	219	3.11	1.05	1-5
Ghosting-related NA	219	2.34	0.95	1-5
Interpersonal Emotion Regulation with Others in General				
Amount of disclosure to others in general	220	2.84	1.20	1-5
Depth of disclosure about ghosting context	187	2.56	0.98	1-5
Depth of disclosure about ghosting meaning	187	1.92	1.14	1-5
Emotional support-seeking from others in general	219	3.02	1.27	1-5
Instrumental support-seeking from others in general	219	2.71	1.29	1-5
Disclosure About Ghosting to a Particular Supportive Other				
Amount of disclosure to supportive other	186	4.05	0.96	1-5
Perceived risk of disclosure to supportive other	186	2.30	1.11	1-5
Perceived utility of disclosure to supportive other	186	3.18	1.10	1-5

Zero-Order Correlations

The zero-order correlations between self-compassion, distress disclosure tendencies, ghosting-related NA, and interpersonal emotion regulation outcomes are shown in Table 10. In line with the first hypothesis, trait self-compassion demonstrated moderate, positive correlations with nearly all disclosure and support-seeking outcomes, excluding amount of disclosure to others in general. With regards to the secondary goal of the present study, Gilbert et al.'s (2017) trait measure of self-compassion also demonstrated a moderate, positive correlation with trait distress disclosure tendencies.

Table 10

Zero-Order Correlations

	1	2	3	4	5	6	7	8	9	10
Predictor Variables										
1. Trait self-compassion										
2. Trait distress disclosure	.41***									
3. Ghosting-related NA	-.23***	-.04								
Interpersonal Emotion Regulation										
with Others in General										
4. Amount of disclosure to others	.10	.41***	.25***							
5. Depth of disclosure about ghosting context	.25***	.40***	.04	.44***						
6. Depth of disclosure about ghosting meaning	.16*	.34***	.20**	.42***	.59***					
7. Emotional support-seeking	.30***	.61***	.21***	.64***	.57***	.47***				
8. Instrumental support-seeking	.22***	.45***	.32***	.57***	.33***	.54***	.75***			
Disclosure About Ghosting to a										
Particular Supportive Other										
9. Amount of disclosure	.24***	.33***	-.10	.40***	.58***	.36***	.46***	.32***		
10. Perceived risk of disclosure	-.21**	-.18*	.60***	-.07	-.09	.09	.06	.12†	-.24***	
11. Perceived utility of disclosure	.34***	.39***	.10	.26***	.33***	.32***	.49***	.38***	.25***	.17*

†*p* < .10, **p* < .05, ***p* < .01, ****p* < .001

Effects of Gender

Given previous literature suggesting that males tend to engage in less distress disclosure and seek less emotional support from others (Dindia & Allen, 1992; Duncan, 2015), gender differences in interpersonal emotion regulation strategies were examined using independent *t*-tests. Gender differences were found for seeking emotional support ($t(216) = -2.31$, $p = .02$) and at a trend level for depth of disclosure about ghosting context ($t(175) = -1.69$, $p = .09$), where self-identifying males tended to endorse less emotional support-seeking ($M_{male} = 2.81$, $SD_{male} = 1.26$; $M_{female} = 3.21$, $SD_{female} = 1.27$) and less context-related disclosure about being ghosted ($M_{male} = 2.48$, $SD_{male} = 0.87$; $M_{female} = 2.72$, $SD_{female} = 0.96$). No other significant differences were found (p's $= .19 - .90$). Consequently, gender was included in initial analyses as a covariate for these two outcome variables only and was retained in final models where it was a significant predictor.

Moderated Regression Analyses

For each outcome variable related to interpersonal emotion regulation with others in general as well as the amount of disclosure to a particular supportive other, a two-step hierarchical regression analysis was conducted where both self-compassion and ghosting-related NA were entered (mean centred) in step 1 along with gender for relevant outcomes; in step 2, the interaction between self-compassion and ghosting-related NA was entered. With respect to main effects, self-compassion predicted unique variability in all outcome variables (i.e., amount of disclosure to others in general, depth of disclosure about ghosting context and meaning to others in general, emotional and instrumental support-seeking from others in general, and amount of disclosure to a particular supportive other), where greater levels of trait self-compassion predicted greater reported use of interpersonal emotion regulation. When controlling for trait

self-compassion, greater levels of ghosting-related NA uniquely predicted greater disclosure to others in general, depth of disclosure about ghosting meaning, and support-seeking from others in general for both instrumental and emotional support. Contrary to hypotheses, the interaction between self-compassion and ghosting-related NA did not significantly predict disclosure or support seeking in any model. These results are detailed in Table 11 and Table 12.

Table 11

Moderated Linear Regression Analyses for Interpersonal Emotion Regulation with Others in General

	Amount of disclosure				Depth of disclosure about ghosting context				Depth of disclosure about ghosting meaning				Emotional support-seeking				Instrumental support-seeking			
	B	SE	β	ΔR^2	B	SE	β	ΔR^2	B	SE	β	ΔR^2	B	SE	β	ΔR^2	B	SE	β	ΔR^2
Step 1				.09***				.07**				.08***				.19***				.19***
Gender	-	-	-		-	-	-		-	-	-		0.38	0.16	0.15*		-	-	-	
NA	0.36	0.09	0.28***		0.10	0.08	0.10		.30	.09	0.25***		0.39	0.09	0.29***		0.53	0.09	0.39***	
SC	0.12	0.05	0.16*		0.17	0.05	0.27***		.15	.05	0.21**		0.29	0.05	0.36***		0.25	0.05	0.31***	
Step 2				.01				.00				.00				.00				.00
Gender	-	-	-		-	-	-		-	-	-		0.38	0.016	0.16*		-	-	-	
NA	0.37	0.09	0.30***		0.11	0.08	0.10		.31	.09	0.25**		0.40	0.09	0.30***		0.54	0.09	0.40***	
SC	0.14	0.05	0.18*		0.17	0.05	0.28***		.16	.05	0.22**		0.30	0.05	0.37***		0.26	0.05	0.32***	
NAxSC	0.06	0.05	0.07		0.02	.05	0.03		.04	.05	0.05		0.02	0.05	0.02		0.03	0.05	0.04	

Notes: NA = Ghosting-related negative affect, SC = Trait self-compassion

p < .05, ***p* < .01, ****p* < .001

Table 12

Moderated Linear Regression Analysis for Amount of Disclosure to Particular Supportive Other

|	B	SE	β	ΔR^2
Step 1				.06*
NA	-0.05	0.08	-0.05	
SC	0.14	0.05	0.23*	
Step 2				.00
NA	-0.05	0.08	-0.05	
SC	0.14	0.05	0.23*	
NAxSC	-0.01	0.05	-0.02	

*$p < .01$

Mediation Analyses

Given that ghosting-related NA did not moderate the relationship between trait self-compassion and interpersonal emotion regulation outcome variables, a different model was considered in which self-compassion might directly result in increased interpersonal emotion regulation, but indirectly result in *decreased* interpersonal emotion regulation through its relationship with ghosting-related NA. That is, self-compassion may be related to interpersonal emotion regulation through two separate pathways: (a) a positive direct pathway, and (b) a negative indirect pathway through NA. This would suggest a more complex relationship between self-compassion and interpersonal emotion regulation where the positive effect of self-compassion on interpersonal emotion regulation was partially suppressed because self-compassion also significantly predicted lower NA in relation to the ghosting experience, which in turn was linked to lower interpersonal regulation efforts. Consequently, for outcome variables that ghosting-related NA significantly predicted within the regression models described above (i.e., amount of disclosure to others in general, depth of disclosure about ghosting meaning to others in general, emotional and instrumental support-seeking from others in general), path analyses were conducted to determine the direct, indirect, and total effects of self-compassion on interpersonal emotion regulation outcomes, accounting for its relationship to ghosting-related NA, as illustrated in Figure 8.

Figure 8

Simple Mediation Model
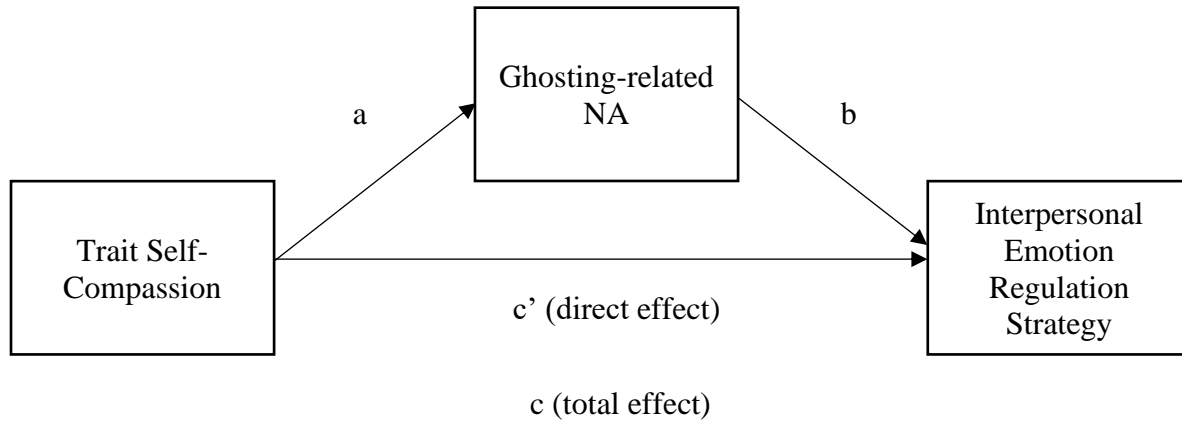
As shown in Table 13, trait self-compassion demonstrated indirect effects through ghosting-related NA on all four interpersonal emotion regulation outcomes examined. Thus, whereas self-compassion appeared to have positive direct effects on the amount of disclosure to others in general as well as depth of disclosure about event meaning to others in general and support-seeking from others in general, it also negatively predicted these forms of interpersonal emotion regulation through lower ghosting-related NA.

Table 13

Path Coefficients for Ghosting-Related NA Mediating the Relationships Between Self-

Compassion and Interpersonal Emotion Regulation Outcomes

| Outcome variable	Pathway	Unstandardized estimate	Unstandardized 95%CI	Standardized estimate	*p*
Amount of disclosure to others in general	a	-0.14	[-0.22, -0.06]	-0.23	<.001
	b	0.36	[0.19, 0.52]	0.28	<.001
	c'	0.12	[0.02, 0.22]	0.16	.017
	c	0.07	[-0.03, 0.17]	0.09	.148
	ab	-0.05	[-0.09, -0.01]	-0.07	.007
Depth of disclosure to others in general about event meaning	a	-0.14	[-0.22, -0.05]	-0.23	<.001
	b	0.30	[0.13, 0.47]	0.25	.001
	c'	0.15	[0.05, 0.25]	0.21	.004
	c	0.11	[0.01, 0.21]	0.15	.029
	ab	-0.04	[-0.08, -0.01]	-0.06	.018
Emotional support-seeking from others in general	a	-0.14	[-0.22, -0.06]	-0.23	<.001
	b	0.39	[0.23, 0.56]	0.29	<.001
	c'	0.29	[0.19, 0.39]	0.36	<.001
	c	0.24	[0.14, 0.34]	0.30	<.001
	gender	0.38	[0.08, 0.69]	0.15	.014
	ab	-0.05	[-0.09, -0.02]	-0.07	.005
Instrumental support-seeking from others in general	a	-0.14	[-0.22, -0.06]	-0.23	<.001
	b	0.53	[0.36, 0.70]	0.39	<.001
	c'	0.25	[0.15, 0.35]	0.31	<.001
	c	0.18	[0.07, 0.28]	0.22	.001
	ab	-0.07	[-0.12, -0.03]	-0.09	.002

Note: Gender was included as a covariate with a single regression path predicting emotional

support-seeking only. Pathway *ab* represents the indirect effect of trait self-compassion on each

interpersonal emotion regulation outcome.

Last, a multiple mediator model was tested to examine whether trait self-compassion and ghosting-related NA exerted indirect effects through perceived risk and utility of disclosing to participants' particular supportive other. Given that perceived risk and utility of disclosure were only measured in relation to the person from whom participants sought support most, this model examined the amount of disclosure to participants' particular supportive other as the outcome variable, where risk and utility were both entered as potential mediators of the effects of self-compassion and ghosting-related NA (see Figure 9).

Figure 9

Path Diagram of Multiple Mediators Between Self-Compassion, Ghosting-Related NA, and Amount of Disclosure to a Particular

Supportive Other
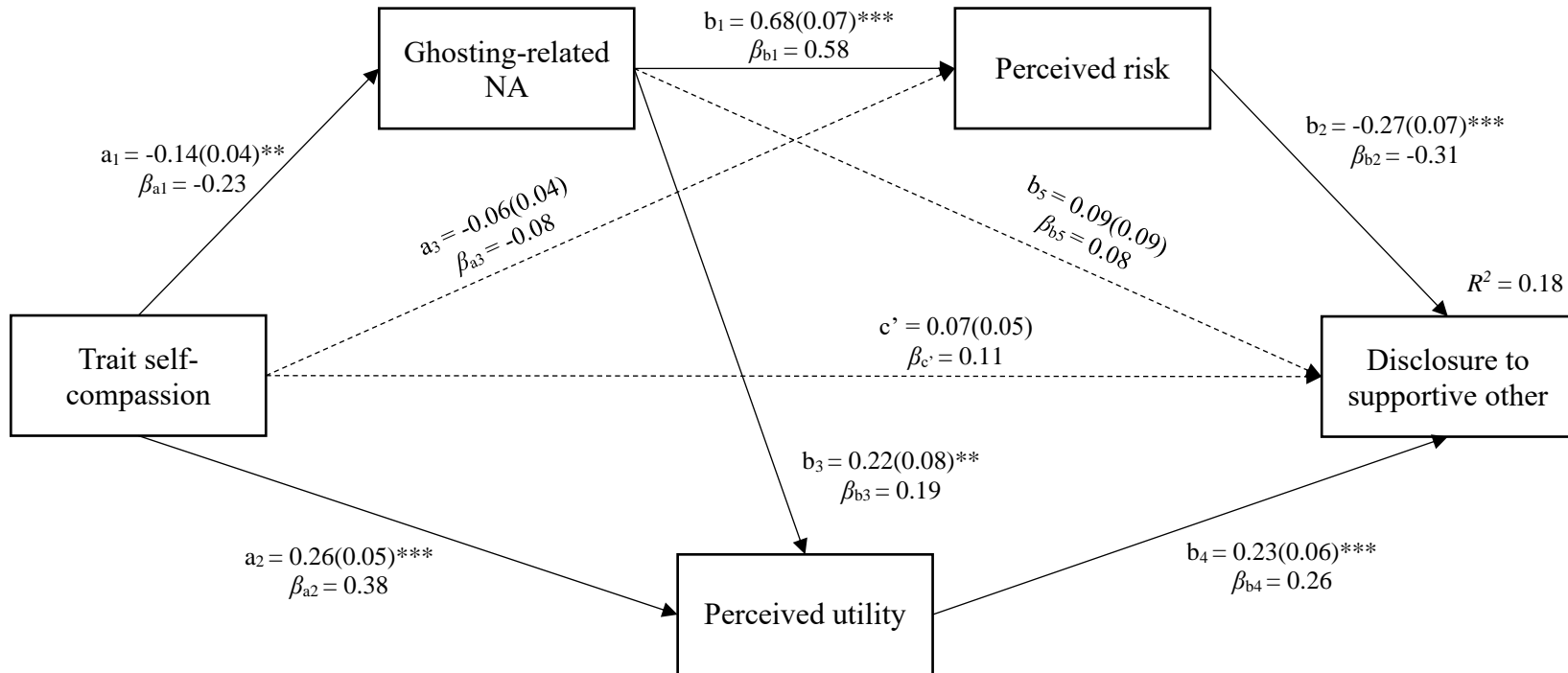
Notes: Unstandardized pathway coefficients are presented with standard errors in brackets. Standardized coefficients are presented

below. Non-significant pathways are marked by dashed lines. Model fit statistics: $\chi^2(1) = 6.52$, $p = .01$, CFI $= 0.96$, RMSEA $= 0.17$.

$**p < .01$, $p < .001$

The multiple mediator model revealed that self-compassion exerted indirect effects on disclosure to a supportive other through the following pathways: (a) ghosting-related NA through risk ($a_1b_1b_2 = 0.03$, $p = .02$, 95%CI [0.005, 0.05], standardized indirect effect = 0.04), and (b) perceived utility only ($a_2b_4 = 0.06$, $p = .003$, 95%CI [0.02, 0.10], standardized indirect effect = 0.10). The indirect pathway from self-compassion through NA and utility was marginally significant ($a_1b_3b_4 = -0.01$, $p = .07$, 95%CI [-0.01, 0.001], standardized indirect effect = -0.01). No other indirect pathways were significant. After controlling for these indirect effects, the direct effect of self-compassion on disclosure to participants' most sought-after support provider was not significant ($c' = 0.07$, $p = .14$, 95%CI [-0.02, 0.16], $\beta_c = 0.11$). This suggests that the positive relationship between self-compassion and distress disclosure to a supportive other was fully accounted for by (a) greater perceived utility of disclosure, (b) lower ghosting-related NA leading to lower perceived risk of disclosure. However, the overall positive relationship between self-compassion and disclosure to a particular supportive other may have been somewhat dampened by self-compassion's trending negative relationship with ghosting-related NA, as lower NA also predicted *lower* perceived utility of disclosure. Self-compassionate people reported feeling less NA related to the ghosting when it happened, and individuals who felt less NA saw fewer benefits in disclosing their experience to a potential support provider.[4]

Discussion

Results of the present study demonstrated that within the context of being ghosted, trait self-compassion and NA related to the ghosting each uniquely contributed to greater disclosure

---

[4] Though utility and risk of disclosure were only measured in relation to the person participants sought support from most, these variables could be used as a proxy for general perceptions of risk and utility of support-seeking. For interest, the same multiple mediator model was examined using the other outcome variables. Similar results were found with most indirect effects occurring through distress and utility of disclosure. Indirect effects through perceived risk of disclosure were more variable, and often non-significant.

to others in general, depth of disclosure to others in general about what the ghosting meant to them, and seeking emotional as well as instrumental support from others in general. Contrary to hypotheses, the effect of self-compassion on these outcomes was not moderated by ghosting-related NA. Exploratory mediation analyses found that trait self-compassion had a negative indirect effect on disclosure to others in general, depth of disclosure to others in general about what the ghosting meant, and support-seeking from others in general, through lower ghosting-related NA. The multiple mediation analysis with respect to participants' disclosure to a particular supportive other provided further insight into the potential nature of these relationships; it revealed that self-compassion's positive effect on disclosure occurred indirectly through greater perceived utility of disclosing as well as lower ghosting-related NA and correspondingly lower perceived risk of disclosure. Self-compassion's smaller, though non-significant negative effect through decreased ghosting-related NA was associated with decreased perceived utility.

The present findings paint a more nuanced picture of self-compassion's relationship with interpersonal emotion regulation than those provided by previous studies. For individuals higher in self-compassion, experiencing a romantic rejection may activate a desire to seek care and support. Self-compassion may promote perceptions that interpersonal emotion regulation will be beneficial and that others are unlikely to offer critical or rejecting responses. Furthermore, although individuals who are highly self-compassionate may be more motivated to alleviate their distress and thus seek others' care due to its expected benefits, their tendency to regulate through interpersonal means (represented by the total effect of self-compassion on interpersonal emotion regulation outcomes) may be somewhat suppressed because they tend to experience lower levels of initial NA (represented by the negative indirect effect of self-compassion through ghosting-

related NA). The lower levels of NA experienced by highly self-compassionate individuals can presumably be attributed to their effective *intra*personal emotion regulation capabilities, though this was not directly examined in the present study.

Only self-compassion (and not ghosting-related NA) positively predicted depth of disclosure about the context surrounding their ghosting experience as well as the amount of disclosure to their main support-provider. These associations may partially be explained by mechanisms unrelated to the immediate experience of distress and emotion regulation goals. For example, research supports that sharing autobiographical information and instances of negative affectivity with others increases feelings of liking, closeness, and intimacy (Beike et al., 2016; Collins & Miller, 1994; Graham et al., 2008; Laurenceau et al., 1998). A qualitative study of friendship demonstrated that disclosure processes are at the core of relationship formation and friendship closeness (Christensen, 2011). It is plausible that individuals higher in self-compassion may partially be motivated by such relational outcomes, as previous research has found a positive link between self-compassion and relationship maintenance goals (Baker & McNulty, 2011). Given participants' goals in disclosing to others were not explicitly clarified beyond the administration of the Disclosure Experiences Scale (Vogel & Wester, 2003), future research is required to determine whether the specific motivations underlying disclosures differ between individuals high and low in self-compassion.

The present study also failed to find support for the moderating effect of NA on self-compassion, as the interaction between the two was not significant in any model examined. Given evidence from previous studies suggesting that the effects of self-compassion on interpersonal emotion regulation may depend on the level of distress experienced (Dupasquier, Kelly, Waring, & Moscovitch, 2020; Dupasquier, Kelly, Moscovitch, & Vidovic, 2020), the

120

present results may best be understood in the context of the existing literature and their methodological differences. First, the present study utilized cross-sectional, correlational methods that relied on retrospective accounts of distress, interpersonal emotion regulation-related attitudes, and interpersonal emotion regulation behaviours. This type of design poses a challenge to finding moderation effects as compared to the daily diary and experimental methods used in previous research. Moderation depends on an accurate reporting of the variables as they were at the time the effect occurred. Whereas providing an accurate, retrospective account of moderator variables that are more objective and/or relatively stable may be easy (e.g., gender, age), reports of past distress can be affected by present levels of distress or other factors which have the potential to obscure moderation effects. Second, the specific measure of self-compassion used in the present study also differed from previous research, presenting the possibility that various conceptualizations of self-compassion may be differentially associated with distress and interpersonal emotion regulation. Third, the type of target event selected for the present study might have affected the findings. The present study focused on ghosting due to its ubiquity among single individuals, its ambiguity, and its potential to undermine self-esteem and sense of belonging, suggesting that individuals who are ghosted may benefit specifically from the use of interpersonal emotion regulation strategies (Holmstrom, 2012; Nils & Rimé, 2012; Zwolinski, 2014). Selecting ghosting as a standard negative event across participants allowed for the examination of interpersonal emotion regulation as it was naturally experienced in the course of participants' lives, resulting in improved ecological validity compared to the experimental approach in Study 2. However, this type of experience might have presented less opportunity for variability in distress, particularly for individuals high in self-compassion who have been found to cope more effectively with social evaluative experiences (Breines et al., 2014, 2015; Leary et

al., 2007). Thus, the potential to find a moderating effect may have been limited. These possibilities should be examined in further research to better understand contexts under which the interaction between distress and self-compassion may or may not be present when predicting interpersonal emotion regulation behaviours.

Limitations

The conclusions that can be drawn from the present research were limited in a number of additional ways. As noted above, the data are cross-sectional. Although the study targeted recent experiences (within the last 30 days) for the purposes of improving the accuracy of participants' recall, participants provided retrospective self-reports on their ghosting experience as well as interpersonal emotion regulation strategy use, which could be affected by memory or response biases. The mediation analyses must also be interpreted with caution. Though the events participants were asked to report on would have been temporally sequenced in the direction implied by mediation analyses (i.e., the ghosting occurred, they experienced distress, and they did or did not engage in interpersonal emotion regulation strategies related to it), the measures themselves were not temporally sequenced in a manner that allows for causal inferences. Thus, alternative interpretations of the data cannot be ruled out (e.g., individuals who experienced greater levels of distress in response to rejection viewed themselves as less self-compassionate and less open with others). Furthermore, the results of the present study could be attributable to extraneous variables that were not included in the statistical models presented here. For example, individuals who are surrounded by more compassionate others could learn to be more self-compassionate based on how they are treated and could feel more worthy of support. Others being more supportive could similarly increase perceptions that distress disclosure and support-seeking would be useful and lead to increased interpersonal emotion regulation use. Such

plausible alternative explanations and the possibility of reciprocal relationships between perceived and received support, interpersonal emotion regulation, and self-compassion must be examined through further research. Last, the actual impact of interpersonal emotion regulation behaviours was not examined in the present study making it unclear whether these behaviours improved emotional outcomes for those higher in self-compassion or not. Thus, further research must be done to examine the effects of interpersonal emotion regulation responses to being ghosted.

Conclusions

Despite these limitations, the present research offers new insights into the links between self-compassion, distress, and interpersonal emotion regulation use in the face of a common romantic rejection experience. From a methodological perspective, the evidence that the association between self-compassion and interpersonal emotion regulation may be somewhat dampened by decreased distress and reduced need for additional regulatory resources may partially explain why some previous studies failed to find a significant relationship between self-compassion and interpersonal coping. This highlights the need for future research to attend to subjective distress when investigating such relationships.

The present results also offer further evidence that self-compassion is positively related to interpersonal regulation strategies and suggest that increased interpersonal emotion regulation use by highly self-compassionate individuals may be propelled by perceptions that interpersonal emotion regulation strategies are low risk and will be helpful. If these relationships are supported by further research, self-compassion may offer a useful clinical target for encouraging use of interpersonal emotion regulation strategies, as many individuals suffer from a sense of isolation as a result of their distress and are hesitant to discuss it with others (Sherry et al., 2008; Tesh et

al., 2015). The factors that influence interpersonal emotion regulation are often related to relational histories or relatively stable characteristics that may be difficult to alter (Carver & Connor-Smith, 2010; Collins & Read, 1990; Connor-Smith & Flachsbart, 2007; Feldman, 2015; Hazan & Shaver, 1987). In contrast, self-compassion can be trained, and people can benefit from learning to be more self-compassionate (Ferrari et al., 2019; Frostadottir & Dorjee, 2019; Kirby et al., 2017). Self-compassion could therefore offer a doorway for distressed individuals to consider the possible benefits of seeking support from trusted others and test out new social behaviours that could facilitate the restoration of important fundamental needs, such as belonging or self-esteem, after painful rejections.

General Discussion

Summary of Results

Using diverse methodologies, the three studies presented here shed new light on the links between self-compassion and the use of interpersonal emotion regulation strategies while suggesting important avenues for future research. Study 1 used ecologically valid daily-diary methods to assess the links between participants' average levels of self-compassion over the span of a week and self-reported levels of received social support while accounting for the degree of distress (NA) experienced during that time. The results demonstrated that self-compassion positively predicted participants' perceptions of received social support. Moreover, highly self-compassionate individuals' abilities to capitalize on support from others as compared to those low in self-compassion was greatest under circumstances in which they were experiencing greater NA both relative to others over the week, as well as relative to their own usual levels. Thus, whereas individuals who were highly self-compassionate tended to report receiving more support when they were more distressed than usual, individuals low in self-compassion tended to receive *less* support during highly distressing times.

Study 2 addressed many of the limitations of Study 1. Specifically, a behavioural outcome measure was used to examine the active interpersonal regulatory strategy of distress disclosure rather than self-reported levels of support, experimental methods were used to isolate the causal effects of self-compassion, and interpersonal emotion regulation was examined in relation to a specific negative event rather than daily experiences of NA. Furthermore, reflecting on the results from Study 1, it was hypothesized that the association between self-compassion and perceptions of received support could be explained by shame-proneness, where individuals lower in self-compassion might experience increased shame in relation to their negative

emotional experiences, leading them to withdraw and hide their emotions rather than be

vulnerable and engage with others when distressed. Therefore, Study 2 aimed to: (a) investigate

relations between trait self-compassion and behavioural indicators of distress disclosure

tendencies; (b) experimentally examine whether practicing self-compassion might encourage

participants to reveal more about self-esteem threatening experiences to others as a means of

regulating their own affect relative to two comparison conditions; and (c) examine whether any

such effects of practicing self-compassion could be explained by reductions in shame from pre-

to post-intervention. First, a positive relationship was observed between trait self-compassion

and self-reported distress disclosure tendencies. Second, although the self-compassion exercise

led to increased depth and length of disclosure for highly self-esteem threatening events in

comparison to a free writing condition, the effects of the self-compassion condition did not differ

from those of a self-esteem enhancing condition. Interestingly, when the event selected by

participants was less threatening to their self-esteem, those in the free writing condition tended to

disclose even more than participants in the other two conditions. Third, it was observed that the

effects of condition (moderated by self-esteem threat) were not mediated by changes in shame,

and that trait self-compassion as measured by Neff's (2003) Self-Compassion Scale was

inversely related to the behavioural measure of disclosure depth. A careful examination of the

results from Study 2 and its research design pointed to three key issues that appeared important

to consider when designing Study 3: (a) the characteristics of and variability in participants'

selected negative events might affect interpersonal emotion regulation behaviours; (b) self-

compassion might exert different effects in the context of a self-esteem threatening experience

with known support-providers in daily life versus strangers in a contrived context; and (c) the

126

perceived utility of interpersonal emotion regulation behaviours within one's present context might be more important than feelings of shame or the risk of being vulnerable with others.

Study 3 was conducted to address some of these issues and to gain a clearer and more nuanced understanding of the links between self-compassion, distress (NA), and both distress disclosure and support-seeking as forms of interpersonal emotion regulation within the context of being ghosted – a specific type of negative experience with the same well-defined characteristics across participants. Study 3 also offered the opportunity to use a novel measure of self-compassion based specifically on the theoretical framework implemented in the current research. Participants completed the Compassion for Self section of Gilbert and colleagues' Compassionate Engagement and Action Scales (2017) and were asked to report on their emotional reaction to being ghosted by a person of romantic interest as well as their use of various interpersonal emotion regulation strategies (i.e., distress disclosure and support-seeking) since that experience had occurred. In contrast to Studies 1 and 2, no significant interaction was found between self-compassion and how distressing participants' ghosting experience was, but self-compassion *directly* predicted increased interpersonal emotion regulation and *indirectly* predicted decreased interpersonal emotion regulation through decreased distress. Finally, the effects of self-compassion on disclosure to the person participants' sought support from most was fully accounted for by lower perceived risk and higher perceived utility of distress disclosure.

The Role of Perceived Utility

Despite the variability in methods, these three studies provided consensus on one important finding: there appears to be a significant positive relationship between trait self-compassion and the use of interpersonal emotion regulation strategies with trusted, close others

in daily life. In Studies 1 and 3, these correlations were clear and straightforward. In Study 2, trait self-compassion was positively related to self-reported distress disclosure tendencies, despite its negative relationship to one of the behavioural measures of distress disclosure in an experimental context.

What might account for this latter, unexpected finding? Study 2 was the only study in which interpersonal emotion regulation outcomes were measured when a stranger was the target of disclosure. Thus, it is possible that highly self-compassionate individuals found it unlikely that a stranger would be able to help resolve their feelings without first knowing whether the other person would be supportive. Relatedly, trait self-compassion demonstrated a marginally significant negative relationship with the degree of self-esteem threat presented by their chosen negative experience, suggesting that highly self-compassionate individuals might not have felt as much of a need to disclose given that they were not as negatively affected by their distressing experiences. The reduced emotional impact of their selected negative experiences could have been due to previous successful intra- and interpersonal regulatory efforts. Thus, those with higher levels of self-compassion may be less prone to providing intimate details indiscriminately to others, consistent with the idea that they may focus on regulatory strategies that they would imagine would be *most useful,* as supported by the results of Study 3. Future research would benefit from teasing apart how characteristics of potential regulators (e.g., therapist versus layperson) and their level of familiarity (e.g., known versus unknown) might affect highly self-compassionate individuals' interpersonal regulatory expectations and behaviours. It would also be fruitful to examine interpersonal emotion regulation in the context of a newly experienced negative event without the potentially obscuring effects of prior emotion regulation efforts.

Together, these results suggest the interesting possibility that relative to individuals with lower self-compassion, those higher in self-compassion may show more flexibility with regards to their interpersonal emotion regulation use. That is, they may utilize a balance of intra- and interpersonal strategies that seem most helpful under their present circumstances, given their motivation to offer themselves effective care (Gilbert et al., 2017; Hermanto & Zuroff, 2016). For circumstances in which there is no objective information about whether they have an appropriate target for disclosure, or they are experiencing less distress, they may select more intrapersonal rather than interpersonal regulatory strategies. In addition, highly self-compassionate individuals' ability to mindfully engage with their emotions may facilitate a better understanding of what the most useful response would be. Future research could explore how self-compassion may be related to variability in emotion regulatory approaches and coping flexibility and whether such flexible use is mediated by the perceived helpfulness of regulatory strategies.

As having more varied individuals from whom to seek support can help ensure one has access to the type of support desired (Cheung et al., 2015; Lu & Hampton, 2017), flexible use of interpersonal regulatory resources may be promoted by having a larger regulatory network. Any research examining self-compassion and emotion regulation flexibility should investigate the possible role of increased network size and variety. It remains an empirical question whether highly self-compassionate individuals have a more varied network of regulatory resources as compared to those lower in self-compassion and whether they might be more effective at selecting the most appropriate regulatory partners for their present level and type of affect (Cheung et al., 2015). The size of their regulatory network and use of interpersonal emotion regulation strategies might depend on aspects of their personality, such as extraversion. It is

possible that extraversion could serve as a moderator of self-compassion's observed effect on interpersonal emotion regulation use. Highly self-compassionate individuals who are also high in extraversion and who have a larger support network may find interpersonal emotion regulation strategies to be more useful, whereas individuals lower in extraversion and with a smaller network may have fewer options with regards to effective extrinsic regulators and may therefore rely more on intrapersonal strategies. Such hypotheses could serve as the basis for future research.

Evidence from Study 3 suggested that the extent to which participants expected their interpersonal emotion regulation behaviours to be beneficial accounted for unique variability in the relationship between self-compassion and disclosure to the person they sought support from most. Thus, self-compassionate individuals might perceive interpersonal emotion regulation with close others to be more efficacious than those low in self-compassion. Why might this be the case? According to Social Mentality Theory (Liotti & Gilbert, 2011), self-compassion is related to the activation of care-seeking goals that could increase awareness of the possible benefits of disclosure after negative experiences (Hermanto & Zuroff, 2016). Self-compassionate individuals are also more likely to feel safer within their social worlds (Kelly & Dupasquier, 2016) and present with more secure attachment styles (Arambasic et al., 2019; Mackintosh et al., 2018; Neff & McGehee, 2010; Øverup et al., 2017). Thus, they may perceive and expect those around them to be more supportive and compassionate than people lower in self-compassion. Indeed, those higher in self-compassion feel that close others are more accepting above and beyond what others' self-reported levels of acceptance towards them would predict (Zhang et al., 2020).

It is also possible that self-compassionate individuals might approach others in a way that tends to elicit more useful support, such as being more open about their feelings (supported by the findings of Study 3), providing more informative insights to their listener, or by framing their experiences in a more balanced or hopeful way (Wong & Yeung, 2017). Such approaches to distress disclosure may allow support providers to better determine what kind of support might be most helpful, and to respond more effectively. If it was found that highly self-compassionate individuals also tended to seek support in a more flexible manner rather than in a persistent, chronic way, it is possible that their requests for care may appear more diagnostic to potential support-providers (Forest et al., 2014). That is, rather than others becoming desensitized to repeated expressions of distress and disregarding their need for support, more flexible support-seeking may help requests for care stand out, allowing others to better identify that support is needed. Research has found that more persistent or excessive forms of support-seeking can have a negative impact on emotional recovery (Curci & Rimé, 2012) and result in decreased quality of support (Forest & Wood, 2012; Forest et al., 2014). In line with Social Mentality Theory (Liotti & Gilbert, 2011), highly self-compassionate individuals may additionally approach discussions about their distress with a more adaptive, care-based mindset, which may allow them to be more receptive to others' support or to derive more use from it, regardless of its quality (Bastin et al., 2014; Horn & Maercker, 2016). Future research could attempt to disentangle perceived support from actual support received by utilizing both subjective and objective measures of support. Qualitative studies of support interactions could also lend important insights into the specific interpersonal emotion regulation processes at play for individuals high versus low in self-compassion.

An alternative perspective would be that highly self-compassionate individuals are simply surrounded by more compassionate people or those with better regulatory skills, motivating them to reach out to others when in need. Though the present set of studies was focused on the tendency to engage in intrinsic (self-directed) interpersonal emotion regulatory strategies rather than the effectiveness of those strategies per se, the observed role of perceived utility of interpersonal emotion regulation suggests that understanding the outcomes of such regulatory efforts may be key to understanding the relationship between self-compassion and interpersonal emotion regulation. For individuals who do not have access to supportive others or people with the emotional and/or instrumental resources to offer support, disclosing could objectively lead to rejecting, critical responses, or may overwhelm the other person's capacity to provide an effective response. In such cases, disclosure and support-seeking would be maladaptive. Thus, the effectiveness of interpersonal emotion regulation strategies depends at least in part on having access to supportive others.

There is good reason to suspect that self-compassion and compassion from others may be reciprocally related. Individuals who receive more sensitive care from others when needed early in their lives create internal working models of themselves as being worthy of care and others as sources of support (Collins & Read, 1990; Feldman, 2015; Hazan & Shaver, 1987). Through warm, synchronous interactions with caregivers and close others over the course of their lives, people learn how to effectively regulate their own emotions and may naturally treat themselves with care and kindness (Kelly & Dupasquier, 2016). In the context of Gilbert's Social Mentality Theory (Liotti & Gilbert, 2011), individuals who have these synchronous experiences can more readily access their soothing system and take on a care-oriented mentality. Conversely, this ability to shift into a care-seeking mentality in the face of distress could, in turn, encourage

distress disclosure and support-seeking. It could therefore be fruitful to examine the transactional nature of interpersonal emotion regulation processes in relation to self-compassion, investigating strategies that individuals high versus low in self-compassion might use to elicit support, and how responses from support-providers might in turn affect these relational tactics.

Observed Effects of Distress

Interestingly, the moderating effect of distress in Studies 1 and 2 was not replicated in Study 3. Whereas in Studies 1 and 2, self-compassion (at a trait level in Study 1 and experimentally induced in Study 2) was associated with greater interpersonal emotion regulation at higher levels of distress/self-esteem threat, in Study 3, distress was found to be a significant *mediator* of the relationship between self-compassion and certain interpersonal emotion regulation outcomes. These discrepancies could be attributed to the difference in target event types. Whereas Study 1 examined the use of social support in the context of daily distress rather than in relation to any event in particular, and Study 2 investigated distress disclosure in relation to any past experience that was distressing, Study 3 focused on the same specific type of rejection experience across participants. This standardization of events in Study 3 may have resulted in more similar emotional experiences, particularly for participants higher in self-compassion, leaving less potential for distress to play a moderating role. As noted in the discussion section for Study 3, another plausible explanation for the absence of moderation may be that participants were required to report retrospectively on the distress they experienced when they first realized they had been ghosted, which may have introduced reporting biases and inflated covariation between reports of self-compassion and negative affect. Without an accurate observation of participants' distress at the time of the ghosting when self-compassion would have exerted its effects, a moderation effect is unlikely. Replicating these results in a design

where participants experience an in-vivo failure, rejection, or other self-esteem threatening experience could allow for more confidence in the findings.

Another consideration in comparing the results of the three studies is the use of varying measures of "distress." Whereas Studies 1 and 3 used validated measures of general negative affect, Study 2 used an unvalidated, single-item measure of self-esteem threat as a moderator. Interestingly, Study 3 focused on a specific event that might be expected to be more self-esteem threatening, though self-esteem threat was not a focus of the analyses. Whereas general measures of negative affect make no assumptions about attributions for negative experiences, self-esteem threats involve an internal attribution for the negative experience and often implicate feelings of shame (Gruenewald et al., 2004; Johnson & O'Brien, 2013). Though self-compassion may be useful in dealing with any kind of distressing affect, it is thought to be particularly beneficial in managing self-esteem threat and shame as compared to other forms of negative affect that are less self-conscious or can be attributed to external factors (Gilbert, 2005). Different forms of distress could also have distinct effects on interpersonal emotion regulation use. For example, self-esteem threat might be linked to greater general negative affect which would be expected to have a positive association with distress disclosure (Burchill & Stiles, 1988; Rimé et al., 1998; Stiles et al., 1992), but also greater shame which would be expected to have a negative association with distress disclosure (Greenland et al., 2009; Hook & Andrews, 2005; Macdonald & Morley, 2001; Pineles et al., 2006; Swan & Andrews, 2003). Interestingly, Study 2 found no association between shame and distress disclosure, nor were any systematic differences found between the results of the studies that focused specifically on self-esteem threatening events (Studies 2 and 3) versus the study that did not (Study 1). However, methods used in the three studies varied in several ways, making direct comparisons difficult. Future research should

directly examine how self-conscious emotions versus other forms of negative affect could affect the relationship between self-compassion and interpersonal emotion regulation, and under which conditions distress might moderate or mediate the link between these two constructs.

Last, Study 3 indicated that certain disclosure outcomes were unrelated to distress (i.e., depth of disclosure about ghosting context, amount of disclosure to a particular supportive other), suggesting that these forms of disclosure might have been driven by alternative motivations, such as promoting closeness or intimacy and relational development/maintenance. Nonetheless, self-compassion significantly predicted these outcomes. Study 1 also showed that self-compassion predicted increased perceptions of received support when controlling for levels of NA, raising the question of whether self-compassion encourages disclosures for relational rather than regulatory purposes. Increasing intimacy could have a regulatory purpose downstream, as close associations with others may ensure support is available in the future. However, given the observed relations between self-compassion and increased perceptions of acceptance from others (Zhang et al., 2020) and social safeness (Kelly & Dupasquier, 2016), the association between self-compassion and disclosure outcomes that are unassociated with distress may partially be accounted for by an increased sense of interpersonal trust, a subfacet of trait agreeableness (Soto & John, 2017). This propensity for increased disclosure on the part of individuals high in self-compassion may also indicate an underlying association with extraversion and the subfacet of sociability (Neff et al., 2007). Thus, self-compassion could serve as an artifactual predictor of more relational forms of disclosure due to its relationships with other personality traits.

Self-Compassion, Self-Esteem and Agreeableness

In Study 2, trait self-compassion and self-esteem were highly correlated and each showed similar relationships with both behavioural and trait measures of distress disclosure. Furthermore, the self-compassion and self-esteem writing conditions each exerted similar effects on state shame as well as distress disclosure behaviours. The results of Study 2 suggest that boosting self-compassion as conceptualized by Neff (2003) may have very similar effects on distress disclosure as boosting self-esteem.

Interestingly, the present results are partially inconsistent with findings from other research suggesting that self-esteem only predicts disclosure of negative emotional experiences for individuals who are also high in agreeableness (McCarthy et al., 2017). McCarthy and colleagues suggested that whereas self-esteem may help individuals feel worthy of receiving care, agreeableness is associated with a general sense that others are caring, and that both types of beliefs may be necessary conditions for distress disclosure to take place. Individuals who are high in self-compassion are also likely to exhibit beliefs that care is available to them and that they are worthy of care, perhaps in part because self-compassion may serve to protect global feelings of self-esteem in the face of difficult experiences.

In an early study on self-compassion and the Big Five personality traits (Neff et al., 2007), self-compassion and agreeableness were moderately correlated ($r = .35$). Furthermore, according to Social Mentality Theory (Liotti & Gilbert, 2011), the flows of compassion (compassion to oneself, to others, and receiving compassion from others) are likely to be highly correlated, as all three rely on similar mentalities (Gilbert et al., 2017), and compassion is a common sub-facet of many measures of agreeableness (DeYoung et al., 2007; Soto & John, 2017). Trait levels of self-compassion, agreeableness, and self-esteem may also share

developmental origins in secure attachment histories (Both & Best, 2017), promoting more adaptive internal working models of the self and others. At the trait level, the effects of self-compassion versus self-esteem and agreeableness may therefore be extremely difficult to disentangle, though future research is needed to determine whether self-compassion may be more easily distinguishable from self-esteem when it is measured using Gilbert and colleagues' (2017) Compassionate Engagement Scales rather than Neff's (2003) Self-Compassion Scale.

Regarding the self-compassion intervention used in Study 2, there are several possible reasons that the effects of the self-compassion and self-esteem writing exercises were indiscernible from one another. These include spillover effects between conditions or the possibility that both self-compassion and self-esteem represent separate routes to encouraging disclosure, highlighting a challenge for researchers to further investigate and validate interventions that target self-compassion to ensure they are discriminant from self-esteem boosting approaches. Though this differentiation may be more difficult and involve more nuance with writing interventions such as those used in Study 2, other interventions such as compassion-focused meditations and imagery exercises may be more effective at specifically engaging the soothing system and inhabiting a self-compassionate mentality by targeting underlying physiology and a felt-sense of compassion. Future experimental research could benefit from implementing these types of interventions when studying the effects of self-compassion on interpersonal emotion regulation. According to Social Mentality Theory (Liotti & Gilbert, 2011), effective self-compassion-enhancing interventions should engage a different affective system and mindset from attempts at boosting self-esteem, which theoretically should target the drive system and elicit a more competitive mentality. One possible self-esteem boosting comparison condition might be to have participants visualize a success, an achievement, or receiving praise

137

from others (Kirschner et al., 2019). Though each approach may have the immediate effect of quelling the shame response and thereby encouraging increased interpersonal emotion regulation use (at least in the face of highly self-esteem threatening experiences), the benefits of compassion-focused interventions like meditation may become more perceptible when they are measured over the long-term. Repeated self-esteem practices could encourage one to continue taking on a competitive mentality and attend more to signals of social rank (e.g., successes and failures), possibly increasing sensitivity to the risks of having one's flaws scrutinized by others. In contrast, repeated self-compassion practices may train one's ability to access the soothing system and take on a care-seeking and -giving mindset, thus helping one attend more to the benefits of distress disclosure and support-seeking in the face of perceived personal failure or rejection. It is vital for future research to utilize longitudinal models in testing the differential effects of self-compassion and self-esteem-focused interventions.

Sample Characteristics

The results presented in all three studies relied on samples of convenience. Participants from Studies 1 and 2 were comprised of undergraduate students who self-identified as female and were thus relatively homogenous with respect to age, gender, and level of education. In Study 1, this female-only sample was recruited for the purposes of a separate study on body image, while in Study 2 a female-only sample was collected to control for gender effects on distress disclosure, as previous research has demonstrated that traditionally feminine gender identities and social roles are correlated with increased distress disclosure and support-seeking (Dindia & Allen, 1992; Duncan, 2015; Reevy & Maslach, 2001). This raises the question of whether self-compassion would play the same role in interpersonal emotion regulation for people who identify as male, given they tend to have slightly higher levels of self-compassion than self-

identified females but use interpersonal emotion regulation strategies less (Yarnell et al., 2015).

Some research suggests that individuals who identify with traditionally "masculine" gender roles

may be able to benefit more from the effects of self-compassion on self-stigma and help-seeking,

as it may effectively help them focus on the utility rather than the risks of seeking support (Booth

et al., 2019). Thus, expanding research on self-compassion and interpersonal emotion regulation

to individuals who identify with traditionally masculine gender roles appears to be an important

research goal.

Seeking a more representative sample, participants from Study 3 were recruited from

Amazon's Mechanical Turk (MTurk) and no gender restrictions were implemented during

recruitment. This resulted in a relatively even split between individuals who self-identified as

male and female, permitting an examination of the effects of gender in the main analyses.

Although a main effect of gender was found for seeking emotional support from others in

general, self-compassion positively predicted emotional support-seeking when controlling for

gender. Furthermore, the positive relationship between trait self-compassion and interpersonal

emotion regulation with others in general and with a particular supportive other were present

even with a mixed-gender sample.

Recruiting through MTurk also resulted in more age diversity, as both the mean and

standard deviation for participant ages was increased in Study 3 as compared to Studies 1 and 2.

Though gender and age representativeness was improved in Study 3, the sample may still have

been biased in various ways. For example, MTurk samples tend to be younger, lower income,

more highly educated, and less racially and ethnically diverse than representative samples from

the general US population (Levay et al., 2016). Furthermore, an examination of sample

characteristics for participants included and excluded from analyses in Study 3 indicated that the

criteria used for data screening may have further biased the sample towards more highly

educated participants (i.e., those who attained further education after graduating from high

school). Thus, in addition to replicating and clarifying the associations found in the present

research, future studies would benefit from recruiting more representative samples to examine

generalizability of the present results to the broader North American population and more

diverse samples to examine generalizability to other populations of interest.

Treatment Implications and Conclusions

Although many questions remain, taken together these three studies significantly advance

our understanding of the links between self-compassion, distress, and interpersonal emotion

regulation. They provide evidence that trait self-compassion predicts increased interpersonal

emotion regulation tendencies, and that it may do so largely by enhancing the perceived utility of

disclosure and to a lesser extent by decreasing its perceived risks. Results also suggest that

facilitating self-compassion could lead to increased use of adaptive interpersonal emotion

regulation strategies for experiences where *intra*personal emotion regulation may be insufficient

(i.e., those that remain highly distressing or self-esteem threatening).

Though a greater evidence base is required to confirm the value of self-compassion

interventions for promoting interpersonal emotion regulation use, the three studies outlined here

provide an excellent foundation for further inquiry. If present findings are supported in future

studies, the research that follows could have important clinical implications. For example, if it

were the case that encouraging self-compassion led to increased perceived utility of interpersonal

emotion regulation, public outreach efforts or online micro-interventions aimed at increasing

self-compassion could help to encourage further help-seeking for psychological difficulties

among treatment-avoidant groups (Heath et al., 2017). Among treatment-seeking individuals,

implementing self-compassion-enhancing strategies early in treatment could help facilitate increased distress disclosure in therapy, resulting in improved outcomes for more reticent clients (Kahn et al., 2001). Furthermore, targeting self-compassion in the later stages of treatment could increase clients' willingness to seek out supportive others to help maintain their gains upon termination.

Introducing compassion-focused strategies could also help to promote an increased emotion-regulation repertoire for individuals who tend to use more maladaptive regulatory strategies. For example, though the literature has been mixed on the links between interpersonal emotion regulation and attachment, there is some evidence to support the idea that anxious forms of attachment are associated with persistent, excessive use of interpersonal emotion regulation such as reassurance seeking, and avoidant attachment may better predict the use of social withdrawal strategies (Evraire & Dozois, 2014; Levi-Belz et al., 2013; Mikulincer & Nachshon, 1991). Introducing evidence-based self-compassion interventions into treatment for individuals with insecure attachment may help to balance usual tendencies to either persistently avoid or seek support and to be more flexible with their interpersonal emotion regulation use. Anxiously attached individuals across the diagnostic spectrum may benefit from learning how to engage with their soothing system and utilize intrapersonal forms of regulation, reducing overreliance on interpersonal emotion regulation strategies that may result in depleted interpersonal emotion regulation resources from extrinsic regulators. By relying less on others for reassurance, when social support is needed, it may help others be more responsive to their needs (Forest et al., 2014). For avoidantly attached individuals, helping them to develop self-regulatory resources through self-compassion may facilitate their capacity to try new experiences by disclosing more or in more effective ways, asking for support when needed, and providing the opportunity to

have their negative expectations about others' availability and support disconfirmed. Research suggests that such relational experiences may help individuals with attachment difficulties to revise maladaptive working models/interpersonal schema over time (Arriaga et al., 2018; Stanton et al., 2017).

Similarly, individuals high in self-criticism who may take a more competitive mentality towards themselves and fear having their flaws exposed to others after perceived failures or rejections could experience amplified benefits from self-compassion interventions. Not only could they learn the value of treating themselves with greater kindness and caring, but they may also become more open to the possible benefits afforded by opening up to others about their flaws, presenting the opportunity for two separate "flows" of compassion to stimulate their soothing system and reduce threat-focused reactions to negative experiences (Kirby et al., 2019; Liotti & Gilbert, 2011).

References

Albertson, E.R., Neff, K.D., & Dill-Shackleford, K.E. (2015). Self-compassion and body dissatisfaction in women: A randomized controlled trial of a brief meditation intervention. *Mindfulness, 6,* 444-454. https://doi.org/10.1007/s12671-014-0277-3

Allen, A. B., & Leary, M. R. (2010). Self-Compassion, stress, and coping. *Social and Personality Psychology Compass*, *2*, 107–118. https://doi.org/10.1111/j.1751-9004.2009.00246.x.Self-Compassion

Altan-Atalay, A., & Saritas-Atalar, D. (2019). Interpersonal emotion regulation strategies: How do they interact with negative mood regulation expectancies in explaining anxiety and depression? *Current Psychology.* https://doi.org/10.1007/s12144-019-00586-2

Altman, J. K., Linfield, K., Salmon, P. G., & Beacham, A. O. (2017). The body compassion scale: Development and initial validation. *Journal of Health Psychology*. https://doi.org/10.1177/1359105317718924

Ambriz, M.G.J., Izal, M., & Montorio, I. (2012). Psychological and social factors that promote positive adaptation to stress and adversity in the adult life cycle. *Journal of Happiness Studies*, *13*, 833–848. https://doi.org/10.1007/s10902-011-9294-2

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders : DSM-5.* Arlington, VA: American Psychiatric Association.

Appelhans, B.M., & Luecken, L.J. (2006). Heart rate variability as an index of regulated emotional responding. *Review of General Psychology, 10,* 229-240. https://doi.org/10.1037/1089-2680.10.3.229

Arambasic, J., Sherman, K.A., & Elder, E. (2019). Attachment styles, self-compassion, and psychological adjustment in long-term breast cancer survivors. *Psycho-Oncology, 28*, 1134-

1141. https://doi.org/10.1002/pon.5068

Arbuckle, J. L. (2013). *Amos (Version 22.0)*. Chicago, IL: IBM Corporation.

Arch, J.J., Brown, K.W., Dean, D.J., Landy, L.N., Brown, K.D., & Laudenslager, M.L. (2014). Self-compassion training modulates alpha-amylase, heart rate variability, and subjective responses to social evaluative threat in women. *Psychoneuroendocrinology, 42,* 49-58. https://doi.org/10.1016/j.psyneuen.2013.12.018

Arch, J.J., Landy, L.N., Schneider, R.L., Koban, L., & Andrews-Hanna, J.R. (2018). Self-compassion induction enhances recovery from social stressors: Comparing adults with social anxiety disorder and healthy controls. *Anxiety, Stress, & Coping, 31*(5), 594-609. https://doi.org/10.1080/10615806.2018.1504033

Arimitsu, K. (2014). Development and validation of the Japanese version of the Self-Compassion Scale. *Shinrigaku Kenkyu*, *85*, 50–59. https://doi.org/10.4992/jjpsy.85.50

Arimitsu, K., & Hofmann, S. G. (2015a). Cognitions as mediators in the relationship between self-compassion and affect. *Personality and Individual Differences, 74,* 41-48. https://doi.org/10.1016/j.paid.2014.10.008

Arimitsu, K., & Hofmann, S. G. (2017). Effects of compassionate thinking on negative emotions. *Cognition and Emotion*, *31*, 160–167. https://doi.org/10.1080/02699931.2015.1078292

Armstrong, B. F., & Kammrath, L. K. (2015). Depth and breadth tactics in support seeking. *Social Psychological and Personality Science*, *6*, 39–46. https://doi.org/10.1177/1948550614546049

Arriaga, X.B., Kumashiro, M., Simpson, J.A., & Overall, N.C. (2018). Revising working models across time: relationship situations that enhance attachment security. *Personality and Social Psychology Review, 22*(1), 71-96. https://doi.org/10.1177/1088868317705257

Bai, H. (2018). *Evidence that A Large Amount of Low Quality Responses on MTurk Can Be Detected with Repeated GPS Coordinates.* https://www.maxhuibai.com/blog/evidence-that-responses-from-repeating-gps-are-random

Baker, L.R., & McNulty, J.K. (2011). Self-compassion and relationship maintenance: The moderating roles of conscientiousness and gender. *Journal of Personality and Social Psychology, 100*(5), 853-873. https://doi.org/10.1037/a0021884

Barak, A., & Gluck-Ofri, O. (2007). Degree and reciprocity of self-disclosure in online forums. *Cyberpsychology & Behavior: The Impact of the Internet, Multimedia and Virtual Reality on Behavior and Society*, *10*, 407–417. https://doi.org/10.1089/cpb.2006.9938

Barlow, M.R., Goldsmith Turow, R.E., & Gerhart, J. (2017). Trauma appraisals, emotion regulation difficulties, and self-compassion predict posttraumatic stress symptoms following childhood abuse. *Child Abuse and Neglect*, *65*, 37–47. https://doi.org/10.1016/j.chiabu.2017.01.006

Barnard, L. K., & Curry, J. F. (2011). Self-compassion: Conceptualizations, correlates, & interventions. *Review of General Psychology*, *15*, 289–303. https://doi.org/10.1037/a0025754

Bastin, M., Bijttebier, P., Raes, F., & Vasey, M.W. (2014). Brooding and reflecting in an interpersonal context. *Personality and Individual Differences, 63,* 100-105. http://doi.org/10.1016/j.paid.2014.01.062

Bauer, D. J., & Curran, P. J. (2005). Probing interactions in fixed and multilevel regression: Inferential and graphical techniques. *Multivariate Behavioral Research*, *40*, 373–400.

Baxter, L. A. (1979). Self-disclosure as a relationship disengagement strategy: An exploratory investigation. *Human Communication Research, 5,* 215–222.

http://doi.org/10.1111/j.14682958.1979.tb00635.x

Beck, A. T. (1976). *Cognitive therapy and the emotional disorders*. Penguin.

Beckes, L., & Coan, J.A. (2011). Social baseline theory: The role of social proximity in emotion

and economy of action. *Social and Personality Psychology Compass, 5*(12), 976-988.

https://doi.org/10.1111/j.1751-9004.2011.00400.x

Beike, D.R., Brandon, N.R., & Cole, H.E. (2016). Is sharing specific autobiographical memories

a distinct form of self-disclosure? *Journal of Experimental Psychology: General, 145*(4),

434-450. https://doi.org/10.1037/xge0000143

Blacki, R.A., & Kocovski, N.L. (2018). Examining the relationships among self-compassion,

social anxiety, and post-event processing. *Psychological Reports, 121*(4), 669-689.

https://doi.org/10.1177/0033294117740138

Blackie, R.A., & Kocovski, N.L. (2019). Trait self-compassion as a buffer against post-event

processing following performance feedback. *Mindfulness, 10,* 923-932.

https://doi.org/10.1007/s12671-018-1052-7

Booth, N.R., McDermott, R.C, Cheng, H.L., & Borgogna, N.C. (2019). Masculine gender role

stress and self-stigma of seeking help: The moderating roles of self-compassion and self-

coldness. *Journal of Counseling Psychology, 66*(6), 755-762.

http://doi.org/10.1037/cou0000350

Both, L.E., & Best, L.A. (2017). A comparison of two attachment measures in relation to

personality factors and facets. *Personality and Individual Differences, 112,* 1-5.

http://doi.org/10.1016/j.paid.2017.02.040

Bowlby, J. (1969). *Attachment and loss*. New York: Basic Books.

Breines, J. G., & Chen, S. (2012). Self-compassion increases self-improvement motivation.

Personality and Social Psychology Bulletin, *38*, 1133–1143.

https://doi.org/10.1177/0146167212445599

Breines, J. G., & Chen, S. (2013). Activating the inner caregiver: The role of support-giving

schemas in increasing state self-compassion. *Journal of Experimental Social Psychology*,

49, 58–64. https://doi.org/10.1016/j.jesp.2012.07.015

Breines, J.G., McInnis, C.M., Kuras, Y.I., Thoma, M.V., Gianferante, D., Hanlin, L., Chen, X.,

& Rohleder, N. (2015). Self-compassionate young adults show lower salivary alpha-

amylase responses to repeated psychosocial stress. *Self and Identity, 14*(4), 390-402.

https://doi.org/10.1080/15298868.2015.1005659

Breines, J.G., Thoma, M.V., Gianferante, D., Hanlin, L., Chen, X., & Rohleder, N. (2014). Self-

compassion as a predictor of interleukin-6 response to acute psychosocial stress. *Brain,

Behavior, and Immunity, 37*, 109-114. https://doi.org/10.1016/j.bbi.2013.11.006

Breines, J.G., Toole, A., Tu, C., & Chen, S. (2014). Self-compassion, body image, and self-

reported disordered eating. *Self and Identity, 13*(4), 432-448.

http://doi.org/10.1080/15298868.2013.838992

Brenner, R. E., Heath, P. J., Vogel, D. L., & Credé, M. (2017). Two is more valid than one:

Examining the factor structure of the Self-Compassion Scale (SCS). *Journal of Counseling

Psychology*. https://doi.org/10.1037/cou0000211

Brion, J.M., Leary, M.R., & Drabkin, A.S. (2014). Self-compassion and reactions to serious

illness: The case of HIV. *Journal of Health Psychology, 19*(2), 218-229.

https://doi.org/10.1177/1359105312467391

Burchill, S. A. L., & Stiles, W. B. (1988). Interactions of depressed college students with their

roommates: Not necessarily negative. *Journal of Personality and Social Psychology*, *55*,

410–419. https://doi.org/10.1037/0022-3514.55.3.410

Butler, E.A., Hollenstein, T., Shoham, V., & Rohrbaugh, M.J. (2014). A dynamic state-space
analysis of interpersonal emotion regulation in couples who smoke. *Journal of Social and
Personal Relationships, 31*(7), 907-927. https://doi.org/10.1177/0265407513508732

Cândea, D.M., & Szentágotai-Tătar, A. (2018). The impact of self-compassion on shame-
proneness in social anxiety. *Mindfulness*. https://doi.org/10.1007/s12671-018-0924-1

Carver, C.S., & Connor-Smith, J. (2010). Personality and coping. *Annual Review of Psychology,
61,* 679-704. https://doi.org/10.1146/annurev.psych.093008.100352

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A
theoretically based approach. *Journal of Personality and Social Psychology*. US: American
Psychological Association. https://doi.org/10.1037/0022-3514.56.2.267

Castilho, P., Pinto-Gouveia, J., & Duarte, J. (2015). Evaluating the multifactor structure of the
long and short versions of the self-compassion scale in a clinical sample. *Journal of Clinical
Psychology*, *00*, 1–15. https://doi.org/10.1002/jclp.22187

Ceccarelli, L.A., Giuliano, R.J., Glazebrook, C.M., & Strachan, S.M. (2019). Self-compassion
and psycho-physiological recovery from recalled sport failure. *Frontiers in Psychology, 10,*
1564. https://doi.org/10.3389/fpsyg.2019.01564

Cheung, E. O., Gardner, W. L., & Anderson, J. F. (2015). Emotionships: Examining people's
emotion-regulation relationships and their consequences for well-being. *Social
Psychological and Personality Science*, *6*, 407–414.
https://doi.org/10.1177/1948550614564223

Chishima, Y., Mizuno, M., Sugawara, D., & Miyagawa, Y. (2018). The influence of self-
compassion on cognitive appraisals and coping with stressful events. *Mindfulness, 9,* 1907-

1915. https://doi.org/10.1007/s12671-018-0933-0

Choi, Y.M., Lee, D., & Lee, H-K. (2014). The effect of self-compassion on emotions when experiencing a sense of inferiority across comparison situations. *Procedia – Social and Behavioural Sciences, 114,* 949-953. https://doi.org/10.1016/j.sbspro.2013.12.813

Choo, P.Y., & Marszalek, J.M. (2019). Self-compassion: A potential shield against extreme self-reliance? *Journal of Happiness Studies, 20,* 971-994. https://doi.org/10.1007/s10902-018-9978-y

Christensen, K. (2011). "You're the only person I can talk to": The role of self-disclosure in the social construction of friendship. *UW-L Journal of Undergradual Research XIV.*

Chung, M.C., Farmer, S., Grant, K., Newton, R., Payne, S., Perry, M., Saunders, J., Smith, C., & Stone, N. (2003). Coping with post-traumatic stress symptoms following relationship dissolution. *Stress and Health, 19*(1)*,* 27-36. https://doi.org/10.1002/smi.956

Cline, R.J., Orom, H., Child, J.T., Hernandez, T., & Black, B. (2015). Social support functions during a slowly-evolving environmental disaster: The case of amphibole asbestos exposure in Libby, Montana. *Health Communication, 30,* 1135-1148. https://doi.org/10.1080/10410236.2014.922456

Coan, J. A. (2011). The social regulation of emotion. In J. Decety & J. T. Cacioppo (Eds.), *The Oxford Handbook of Social Neuroscience* (pp. 614–623). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780195342161.013.0041

Coan J.A., & Maresh E.L. (2013). Social baseline theory and the social regulation of emotion. In J.J. Gross (Ed.), *The science of the couple* (pp. 231–236). New York, NY: Psychology Press.

Cody, M. (1982). A typology of disengagement strategies and an examination of the role

intimacy, reactions to inequity, and relational problems play in strategy selection. *Communication Monographs, 49*(3), 148–170. https://doi.org/10.1080/03637758209376079

Cohen, S., Sherrod, D. R., & Clark, M. S. (1986). Social skills and the stress-protective role of social support. *Journal of Personality and Social Psychology*, *50*, 963–973. https://doi.org/10.1037/0022-3514.50.5.963

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, *98*, 310–357. https://doi.org/10.1037/0033-2909.98.2.310

Collins, N. L., & Miller, L. C. (1994). Self-disclosure and liking : A meta-analytic review, *Psychological Bulletin, 116*, 457–475. https://doi.org/10.1037//0033-2909.116.3.457

Collins, N. L., & Read, S. J. (1990). Adult attachment, working models, and relationship quality in dating couples. *Journal of Personality and Social Psychology*, *58*(4), 644–663. https://doi.org/10.1037/0022-3514.58.4.644

Connor-Smith, J., & Flachsbart, C. (2007). Relations between personality and coping: A meta-analysis. *Journal of Personality and Social Psychology, 93*(6), 1080-1107. https://doi.org/10.1037/0022-3514.93.6.1080

Cooper, J.C., Dunne, S., Furey, T., & O'Doherty, J.P. (2014). The role of the posterior temporal and medial prefrontal cortices in mediating learning from romantic interest and rejection. *Cerebral Cortex, 24,* 2502-2511. https://doi.org/10.1093/cercor/bht102

Coroiu, A., Kwakkenbos, L., Moran, C., Thombs, B., Albani, C., Bourkas, S., … Körner, A. (2018). Structural validation of the Self-Compassion Scale with a German general population sample. *Plos One*, *13*(2), e0190771. https://doi.org/10.1371/journal.pone.0190771

Costa, J., & Pinto-Gouveia, J. (2013). Experiential avoidance and self-compassion in chronic

pain. *Journal of Applied Social Psychology*, *43*, 1578–1591.

https://doi.org/10.1111/jasp.12107

Crocker, J. (2002). The costs of seeking self-esteem. *Journal of Social Issues, 58*, 597–615.

https://doi.org/10.1111/1540-4560.00279

Crocker, J., & Canevello, A. (2008). Creating and undermining social support in communal

relationships: The role of compassionate and self-image goals. *Interpersonal Relations and*

Group Processes, 95(3), 555-575. https://doi.org/10.1037/0022-3514.95.3.555

Crocker, J., & Park, L.E. (2004). The costly pursuit of self-esteem. *Psychological Bulletin,*

130(3), 392-414. https://doi.org/10.1037/0033-2909.130.3.392

Crocker, J., Sommers, S. R., & Luhtanen, R. K. (2002). Hopes dashed and dreams fulfilled:

Contingencies of self-worth and graduate school admissions. *Personality and Social*

Psychology Bulletin, *28*, 1275–1286. https://doi.org/10.1177/01461672022812012

Curci, A., & Rimé, B. (2012). The temporal evolution of social sharing of emotions and its

consequences on emotional recovery: A longitudinal study. *Emotion, 12*(6), 1404-1414.

https://doi.org/10.1037/a0028651

Curran, P. (2016). Methods for the detection of carelessly invalid responses in survey data.

Journal of Experimental Social Psychology, 66, 4-19.

https://doi.org/10.1016/j.jesp.2015.07.006

Cutrona, C. E., & Russell, D. W. (1987). The provisions of social relationships and adaptation to

stress. In W. H. Joles & D. Perlman (Eds.), *Advances in Personal Relationships* (pp. 37–

67). Greenwich, Conneticut: JAI Press.

Davis, L., & Brekke, J. (2014). Social support and functional outcome in severe mental illness: The mediating role of proactive coping. *Psychiatry Research, 215,* 39-45. https://doi.org/10.1016/j.psychres.2013.09.010

Debrot, A., Schoebi, D., Perrez, M., & Horn, A.B. (2013). Touch as an interpersonal emotion regulation process in couples' daily lives: The mediating role of psychological intimacy. *Personality and Social Psychology Bulletin, 39*(10), 1373-1385. https://doi.org/10.1177/0146167213497592

DeLong, L. B., & Kahn, J. H. (2014). Shameful secrets and shame-prone dispositions: How outcome expectations mediate the relation between shame and disclosure. *Counselling Psychology Quarterly*, *27*, 290–307. https://doi.org/10.1080/09515070.2014.908272

Depue, R.A., & Morrone-Strupinsky, J.V. (2005). A neurobiological model of affiliative bonding: Implications for conceptualizing a human trait of affiliation. *Behavioural and Brain Sciences, 28,* 313-395. https://doi.org/10.1017/S0140525X05000063

DeYoung, C. G., Quilty, L. C., & Peterson, J. B. (2007). Between facets and domains: 10 aspects of the Big Five. *Journal of Personality and Social Psychology, 93,* 880-896. https://doi.org/10.1037/0022-3514.93.5.880

Diedrich, A., Grant, M., Hofmann, S. G., Hiller, W., & Berking, M. (2014). Self-compassion as an emotion regulation strategy in major depressive disorder. *Behaviour Research and Therapy*, *58*, 43–51. https://doi.org/10.1016/j.brat.2014.05.006

Diedrich, A., Hofmann, S. G., Cuijpers, P., & Berking, M. (2016). Self-compassion enhances the efficacy of explicit cognitive reappraisal as an emotion regulation strategy in individuals with major depressive disorder. *Behaviour Research and Therapy*, *82*, 1–10. https://doi.org/10.1016/j.brat.2016.04.003

Dindia, K. (2002). Self-disclosure research: Knowledge through meta-analysis. In M. Allen, R.W. Preiss, B.M. Gayle & N.A. Burrell (Eds.), *Interpersonal communication research: Advances through meta-analysis* (pp. 169-185). Mahwah, N.J.: Lawrence Erlbaum Associates.

Dindia, K., & Allen, M. (1992). Sex differences in self-disclosure : A meta-analysis, *Psychological Bulletin, 112*, 106–124.

Don, B.P., Girme, Y.U., & Hammond, M.D. (2019). Low self-esteem predicts indirect support seeking and its relationship consequences in intimate relationships. *Personality and Social Psychology Bulletin, 45*(7), 1028-1041. https://doi.org/10.1177/0146167218802837

Donald, J.N., Ciarrochi, J., Parker, P.D., Sahdra, B.K., Marshall, S.L., & Guo, J. (2018). A worthy self is a caring self: Examining the developmental relations between self-esteem and self-compassion in adolescents. *Journal of Personality, 86,* 619-630. https://doi.org/10.1111/jopy.12340

Dong, Y., & Peng, C.Y.J. (2013). Principled missing data methods for researchers. *SpringerPlus, 2,* 222. https://doi.org/10.1186/2193-1801-2-222

Duncan, C. (2015). Gender differences in social support among undergraduate students during transition to university life. *Journal of Social & Psychological Sciences, 8*(1), 43-53.

Dupasquier, J.R., Kelly, A.C., Moscovitch, D.A., & Vidovic, V. (2018). Practicing self-compassion weakens the relationship between fear of receiving compassion and the desire to conceal negative experiences from others. *Minduflness, 9,* 500-511. https://doi.org/10.1007/s12671-017-0792-0

Dupasquier, J.R., Kelly, A.C., Moscovitch, D.A., & Vidovic, V. (2020). Cultivating self-compassion promotes disclosure of experiences that threaten self-esteem. *Cognitive

Therapy and Research, 44, 108-119. https://doi.org/10.1007/s10608-019-10050-x

Dupasquier, J.R., Kelly, A.C., Waring, S.V., & Moscovitch, D.A. (2020). Self-compassionate
college women report receiving more social support in the face of distress: Evidence from a
daily diary study. *Personality and Individual Differences, 154*.
https://doi.org/10.1016/j.paid.2019.109680

Eckenrode, J., & Wethington, E. (1990). The process and outcome of mobilizing social support.
In S. Duck & R. C. Silver (Eds.), *Personal Relationships and Social Support* (pp. 83–103).
London, England: Sage.

Edwards, J.R., & Lambert, L.S. (2007). Methods for integrating moderation and mediation: A
general analytical framework using moderated path analysis. *Psychological Methods, 12,*
1-22. https://doi.org/10.1037/1082-989X.12.1.1

Ehret, A. M., Joormann, J., & Berking, M. (2018). Self-compassion is more effective than
acceptance and reappraisal in decreasing depressed mood in currently and formerly
depressed individuals. *Journal of Affective Disorders*, *226*, 220–226.
https://doi.org/10.1016/j.jad.2017.10.006

Enders, C.K. (2010*). Applied missing data analysis*. New York, NY: Guilford Press.

Evraire, L.E., & Dozois, D.J.A. (2014). If it be love indeed tell me how much: Early core beliefs
associated with excessive reassurance seeking in depression. *Canadian Journal of
Behavioural Science, 46*(1), 1-8. https://doi.org/10.1037/a0033486

Farber, B.A., Berano, K.C., & Capobianco, J.A. (2004). Clients' perceptions of the process and
consequences of self-disclosure in psychotherapy. *Journal of Counseling Psychology,
51*(3), 340-346. https://doi.org/10.1037/0022-0167.51.3.340

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using

G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, *41*, 1149-1160.

Feldman, R. (2015). Sensitive periods in human social development: New insights from research on oxytocin, synchrony, and high-risk parenting. *Development and Psychopathology, 27*(2), 369-395. https://doi.org/10.1017/S0954579415000048

Ferguson, L.J., Kowalski, K.C., Mack, D.E., & Sabiston, C.M. (2015). Self-compassion and eudaimonic well-being during emotionally difficult times in sport. *Journal of Happiness Studies, 16*(5)*, 1263-1280. https://doi.org/10.1007/s10902-014-9558-8

Ferrari, M., Hunt, C., Harrysunker, A., Abbott, M.J., Beath, A.P., & Einstein, D.A. (2019). Self-compassion interventions and psychosocial outcomes: A meta-analysis of RCTs. *Mindfulness, 10,* 1455-1473. https://doi.org/10.1007/s12671-019-01134-6

Flores, L.E., & Berenbaum, H. (2017). The social regulation of emotion and updating negative contents of working memory. *Emotion, 17*(4), 577-588. https://doi.org/10.1037/emo0000265

Forest, A.L., Kille, D.R., Wood, J.V., & Holmes, J.G. (2014). Discount and disengage: How chronic negative expressivity undermines partner responsibeness to negative disclosures. *Interpersonal Relations and Group Processes, 107*(6), 1013-1032. https://doi.org/10.1037/a0038163

Forest, A.L., & Wood, J.V. (2012). When social networking is not working: Individuals with low self-esteem recognize but do not reap the benefits of self-disclosure on Facebook. *Psychological Science, 23*(3), 295-302. https://doi.org/10.1177/0956797611429709

Francis, M. K. (2017). *Seeking the support that we want: Goal matching in social support outcomes and supporter selection* [Unpublished master's thesis]. Wake Forest University.

Frattaroli, J. (2006). Experimental disclosure and its moderators: A meta-analysis. *Psychological Bulletin, 132*(6), 823-865. https://doi.org/10.1037/0033-2909.132.6.823

Freedman, G., Powell, D.N., Le, B., & Williams, K.D. (2019). Ghosting and destiny: Implicit theories of relationships predict beliefs about ghosting. *Journal of Social and Personal Relationships, 36*(3), 905-924. https://doi.org/10.1177/0265407517748791

Freedman, G., Williams, K.D., & Beer, J.S. (2016). Softening the blow of social exclusion: The responsive theory of social exclusion. *Frontiers in Psychology, 7,* 1570. https://doi.org/10.3389/fpsyg.2016.01570

Frewen, P., Thornley, E., Rabellino, D., & Lanius, R. (2017). Neuroimaging the traumatized self: FMRI reveals altered response in cortical midline structures and occipital cortex during visual and verbal self- and other-referential processing in women with PTSD. *European Journal of Psychotraumatology, 8*(1), 1314164. https://doi.org/10.1080/20008198.2017.1314164

Fritz, M.S., & MacKinnon, D.P. (2007). Required sample size to detect the mediated effect. *Psychological Science, 18*(3), 233-239. https://doi.org/10.1111/j.1467-9280.2007.01882.x

Frostadottir, A., & Dorjee, D. (2019). Effects of mindfulness based cognitive therapy (MBCT) and compassion focused therapy (CFT) on symptom change, mindfulness, self-compassion, and rumination in clients with depression, anxiety, and stress. *Frontiers in Psychology, 10,* 1099. https://doi.org/10.3389/fpsyg.2019.01099

Gariépy, G., Honkaniemi, H., & Quesnel-Vallée, A. (2016). Social support and protection from depression: Systematic review of current findings in western countries. *British Journal of Psychiatry*, *209*, 284–293. https://doi.org/10.1192/bjp.bp.115.169094

Garrison, A.M., Kahn, J.H., Sauer, E.M., & Florczak, M.A. (2012). Disentangling the effects of

depression symptoms and adult attachment on emotional disclosure. *Journal of Counseling Psychology*, *59*, 230–239. https://doi.org/10.1037/a0026132

Gaucher, D., Wood, J.V., Stinson, D.A., Forest, A.L., Holmes, J.G., & Logel, C. (2012). Perceived regard explains self-esteem differences in expressivity. *Personality and Social Psychology Bulletin, 38*(9), 1144-1156. https://doi.org/10.1177/0146167212445790

Geldhof, G. J., Preacher, K. J., & Zyphur, M. J. (2014). Reliability estimation in a multilevel confirmatory factor analysis framework. *Psychological Methods, 19*, 72-91. https://doi.org/10.1037/a0032138

Gershon, I. (2010). *The breakup 2.0: Disconnecting over new media.* Ithaca, NY: Cornell University Press.

Gibson, B. (2007). The role of individual differences in sandbagging on selective avoidance of self-evaluative information. *Journal of Research in Personality, 41*(2), 481-487. https://doi.org/10.1016/j.jrp.2006.04.006

Gilbert, P. (2005). *Compassion: Conceptualization, Research, and Use in Psychotherapy*. (P. Gilbert, Ed.). London: Routledge.

Gilbert, P. (2009). Introducing compassion-focused therapy. *Advances in Psychiatric Treatment*, *15*, 199–208. https://doi.org/10.1192/apt.bp.107.005264

Gilbert, P., McEwan, K., Mitra, R., Richter, A., Franks, L., Mills, A., Bellew, R., & Gale, C. (2009). An exploration of different types of positive affect in students and patients with a bipolar disorder. *Clinical Neuropsychiatry, 6*(4), 135-143.

Gilbert, P. (2014). The origins and nature of compassion focused therapy. *British Journal of Clinical Psychology, 53,* 6-41. https://doi.org/10.1111/bjc.12043

Gilbert, P. (2015). The evolution and social dynamics of compassion. *Social and Personality*

Psychology Compass, 6, 239–254.

Gilbert, P., Catarino, F., Duarte, C., Matos, M., Kolts, R., Stubbs, J., Ceresatto, L., Duarte, J., Pinto-Gouveia, J., & Basran, J. (2017). The development of compassionate engagement and action scales for self and others. *Journal of Compassionate Health Care*, *4*(4). https://doi.org/10.1186/s40639-017-0033-3

Graham, S. M., Huang, J. Y., Clark, M. S., & Helgeson, V. S. (2008). The positives of negative emotions: Willingness to express negative emotions promotes relationships. *Personality and Social Psychology Bulletin, 34, 394–406.* http://dx.doi.org/10.1177/0146167207311281

Greenberg, J., Solomon, S., Pyszczynski, T., Rosenblatt, A., Burling, J., Lyon, D., Simon, L., & Pinel, E. (1992). Why do people need self-esteem? Converging evidence that self-esteem serves an anxiety-buffering function. *Journal of Personality and Social Psychology*, *63*, 913–922.

Greenberger, D., & Padesky, C. (1995). *Mind over mood: A cognitive therapy treatment manual for clients.* Guilford Press.

Greenland, K., Scourfield, J., Maxwell, N., Prior, L., & Scourfield, J. (2009). Theoretical antecedents of distress disclosure in a community sample of young people. *Journal of Applied Social Psychology*, *39*, 2045–2068. https://doi.org/10.1111/j.1559-1816.2009.00515.x

Gruenewald, T.L., Kemeny, M.E., Aziz, N., & Fahey, J.L. (2004). Acute threat to the social self: Shame, social self-esteem, and cortisol activity. *Psychosomatic Medicine, 66*, 915–924. https://doi.org/10.1097/01.psy.0000143639.61693.ef

Hamrick, L.A., & Owens, G.P. (2019). Exploring the mediating role of self-blame and coping in the relationships between self-compassion and distress in females following sexual assault.

Journal of Clinical Psychology, 75, 766-779. https://doi.org/10.1002/jclp.22730

Hayes, A. F. (2013). *Introduction to Mediation, Moderation, and Conditional Process Analysis : A Regression-Based Approach*. New York: The Guilford Press.

Hayes, A. F., & Montoya, A. K. (2017). A tutorial on testing, visualizing, and probing an interaction involving a multicategorical variable in linear regression analysis. *Communication Methods and Measures*, *11*, 1–30. https://doi.org/10.1080/19312458.2016.1271116

Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Interpersonal Relations and Group Processes, 52*(3), 511-524. https://doi.org/10.1037/0022-3514.52.3.511

Heath, P.J., Brenner, R.E., Vogel, D.L., Lannin, D.G., & Strass, H.A. (2017). Masculinity and barriers to seeking counseling: The buffering role of self-compassion. *Journal of Counseling Psychology*, *64*, 94–103. https://doi.org/10.1037/cou0000185

Hermanto, N., & Zuroff, D.C. (2016). The Social Mentality Theory of self-compassion and self-reassurance: The interactive effect of care-seeking and caregiving. *The Journal of Social Psychology*. https://doi.org/10.1080/00224545.2015.1135779

Hermanto, N., Zuroff, D.C., Kelly, A.C., & Leybman, M.J. (2017). Receiving support, giving support, and self-reassurance: A daily diary test of Social Mentality Theory. *Personality and Individual Differences, 107,* 37-42. http://doi.org/10.1016/j.paid.2016.11.013

Hewitt, P.L., Flett, G.L., Sherry, S.B., Habke, M., Parkin, M., Lam, R.W., McMurtry, B., Ediger, E., Fairlie, P., & Stein, M.B. (2003). The interpersonal expression of perfection: Perfectionistic self-presentation and psychological distress. *Journal of Personality and Social Psychology, 84*(6), 1303-1325. https://doi.org/10.1037/0022-3514.84.6.1303

Hill, C. A. (1991). Seeking emotional support: The influence of affiliative need and partner warmth. *Journal of Personality and Social Psychology*, *60*, 112–121. https://doi.org/10.1037/0022-3514.60.1.112

Hill, E. M. (2016). Quality of life and mental health among women with ovarian cancer: examining the role of emotional and instrumental social support seeking. *Psychology, Health and Medicine*, *21*, 551–561. https://doi.org/10.1080/13548506.2015.1109674

Hofmann, S. G., Carpenter, J. K., & Curtiss, J. (2016). Interpersonal Emotion Regulation Questionnaire (interpersonal emotion regulationQ): Scale development and psychometric characteristics. *Cognitive Therapy and Research*, *40*, 341–356. https://doi.org/10.1007/s10608-016-9756-2

Hofmann, S.G., Grossman, P., & Hinton, D.E. (2011). Loving-kindness and compassion meditation: Potential for psychological interventions. *Clinical Psychology Review, 31*(7), 1126-1132. https://doi.org/10.1016/j.cpr.2011.07.003

Holahan, C. K., Moerkbak, M., & Suzuki, R. (2006). Social support, coping, and depressive symptoms in cardiac illness among Hispanic and non-Hispanic White cardiac patients. *Psychology and Health*, *21*, 615–631. https://doi.org/10.1080/14768320500457168

Holmstrom, A.J. What helps – and what doesn't – when self-esteem is threatened? Retrospective reports of esteem support. *Communication Studies, 63*(1), 77-98. https://doi.org/10.1080/10510974.2011.586399

Hook, A., & Andrews, B. (2005). The relationship of non-disclosure in therapy to shame and depression. *The British Journal of Clinical Psychology*, *44*, 425–438. https://doi.org/10.1348/014466505X34165

Horn, A.B., & Maercker, A. (2016). Intra- and interpersonal emotion regulation and adjustment

symptoms in couples: The role of co-brooding and co-reappraisal. *BMC Psychology, 4,* 51. http://doi.org/10.1186/s40359-016-0159-7

Horowitz, L. M., Krasnoperova, E. N., Tatar, D. G., Hansen, M. B., Person, E. A., Galvin, K. L., & Nelson, K. L. (2001). The way to console may depend on the goal: Experimental studies of social support. *Journal of Experimental Social Psychology*, *37*, 49–61. https://doi.org/10.1006/jesp.2000.1435

Houghton, D. J., & Joinson, A. N. (2012). Linguistic Markers of Secrets and Sensitive Self-Disclosure in Twitter. *45th Hawaii International Conference on System Sciences*, 3480–3489. https://doi.org/10.1109/HICSS.2012.415

Hyman, S. M., Gold, S. N., & Cott, M. A. (2003). Forms of social support that moderate PTSD in childhood sexual abuse survivors. *Journal of Family Violence*, *18*, 295–300. https://doi.org/10.1023/A:1025117311660

IBM Corporation. (2011). *IBM SPSS Statistics for Windows, Version 20.0*. Armonk, NY: IBM Corporation.

Ignatius, E., & Kokkonen, M. (2009). Factors contributing to verbal self-disclosure. *Nordic Psychology*, *59*, 362–391. https://doi.org/10.1027/1901-2276.59.4.362

Inwood, E., & Ferrari, M. (2018). Mechanisms of change in the relationship between self-compassion, emotion regulation, and mental health: A systematic review. *Applied Psychology: Health and Well-being, 10*(2), 215-235. https://doi.org/10.1111/aphw.12127

Johnson, E. A., & O'Brien, K. A. (2013). Self-compassion soothes the savage ego-threat system: Effects on negative affect, shame, rumination, and depressive symptoms. *Journal of Social and Clinical Psychology*, *32*(9), 939–963. https://doi.org/10.1521/jscp.2013.32.9.939

Jones, T.L., Barnett, M.A., Wadian, T.W., & Sonnentag, T.L. (2016). individual differences

associated with emotional and behavioral responses to ambiguous social situations in which rejection *might* be inferred. *Journal of General Psychology, 143*(4), 298-310. http://doi.org/10.1080/00221309.2016.1214102

Jourard, S. M., & Lasakow, P. (1958). Some factors in self–disclosure. *Journal of Abnormal and Social Psychology, 56,* 91–98.

Kahn, J. H., Achter, J. A., & Shambaugh, E. J. (2001). Client distress disclosure, characteristics at intake, and outcome in brief counseling. *Journal of Counseling Psychology*, *48*, 203–211. https://doi.org/10.1037/0022-0167.48.2.203

Kahn, J. H., Cox, D. W., Bakker, A. M., O'Loughlin, J. I., & Kotlarczyk, A. M. (2017). The role of distress disclosure tendencies in the experience and expression of laboratory-induced sadness. *Journal of Individual Differences*, *38*, 55–62. https://doi.org/10.1027/1614-0001/a000222

Kahn, J.H., & Garrison, A.M. (2009). Emotional self-disclosure and emotional avoidance: Relations with symptoms of depression and anxiety. *Journal of Counselling Psychology, 56*(4), 573-584. https://doi.org/10.1037/a0016574

Kahn, J.H., & Hessling, R.M. (2001). Measuring the tendency to conceal versus disclose psychological distress. *Journal of Social and Clinical Psychology*, *20*(1), 41–65. https://doi.org/10.1521/jscp.20.1.41.22254

Kahn, J.H., Hucke, B.E., Bradley, A. M., Glinski, A. J., & Malak, B. L. (2012). The Distress Disclosure Index: A research review and multitrait–multimethod examination. *Journal of Counseling Psychology*, *59*, 134–149. https://doi.org/10.1037/a0025716

Kahn, J.H., Lamb, D.H., Champion, C. D., Eberle, J. A., & Schoen, K. A. (2002). Disclosing versus concealing distressing information: Linking self-reported tendencies to situational

behavior. *Journal of Research in Personality*, *36*, 531–538. https://doi.org/10.1016/S0092-6566(02)00008-9

Kahn, J.H., Wei, M., Su, J.C., Han, S., & Strojewska, A. (2017). Distress disclosure and psychological functioning among Taiwanese nationals and European Americans: The moderating roles of mindfulness and nationality. *Journal of Counselling Psychology, 64*(3), 292-301. https://doi.org/10.1037/cou0000202

Kammeyer-Mueller, J.D., Judge, T.A., & Piccolo, R.F. (2008). Self-esteem and extrinsic career success: Test of a dynamic model. *Applied Psychology, 57*(2), 204-224. https://doi.org/10.1111/j.1464-0597.2007.00300.x

Kashdan, T.B., Ferssizidis, P., Farmer, A.S., Adams, L.M., & McKnight, P.E. (2013). Failure to capitalize on sharing good news with romantic partners: Exploring positivity deficits of socially anxious people with self-reports, partner-reports, and behavioral observations. *Behaviour Research and Therapy, 51*, 656-668. https://doi.org/10.1016/j.brat.2013.04.006

Kelly, A., & McKillop, K. (1996). Consequences of revealing personal secrets. *Psychological Bulletin, 120*(3), 450-465. https://doi.org/10.1037/0033-2909.120.3.450

Kelly, A.C., Carter, J.C., & Borairi, S. (2014). Are improvements in shame and self-compassion early in eating disorders treatment associated with better patient outcomes? *The International Journal of Eating Disorders*, *47*, 54–64. https://doi.org/10.1002/eat.22196

Kelly, A.C., & Dupasquier, J. (2016). Social safeness mediates the relationship between recalled parental warmth and the capacity for self-compassion and receiving compassion. *Personality and Individual Differences*, *89*, 157–161. https://doi.org/10.1016/j.paid.2015.10.017

Kelly, A.C., & Stephen, E. (2016). A daily diary study of self-compassion, body image, and

eating behavior in female college students. *Body Image, 17,* 152-160.

http://doi.org/10.1016/j.bodyim.2016.03.006

Kelly, A.C., & Waring, S.V. (2018). A feasibility study of a 2-week self-compassionate letter-writing intervention for nontreatment seeking individuals with typical and atypical anorexia nervosa. *International Journal of Eating Disorders, 51*(8), 1005-1009.

https://doi.org/10.1002/eat.22930

Kelly, A.C., Zuroff, D.C., & Shapira, L.B. (2009). Soothing oneself and resisting self-attacks: the treatment of two intrapersonal deficits in depression vulnerability. *Cognitive Therapy and Research*, *33*, 301–313. https://doi.org/10.1007/s10608-008-9202-1

Kemeny, M.E., Gruenewald, T.L., & Dickerson, S.S. (2004). Shame as the emotional response to threat to the social self: Implications for behavior, physiology, and health. *Psychological Inquiry, 15,* 153-160.

Kennedy-Moore, E., & Watson, J. D. (2001). How and when does emotional expression help? *Review of General Psychology, 5,* 187–212. http://doi.org/10.1037/1089-2680.5.3.187

Kirby, J.N., Day, J., & Sagar, V. The 'Flow' of compassion: A meta-analysis of the fears of compassion scales and psychological functioning. *Clinical Psychology Review, 70,* 26-39. http://doi.org/10.1037/pspi0000098

Kirby, J.N., Tellegen, C.L., & Steindl, S.R. (2017). A meta-analysis of compassion-based interventions: Current state of knowledge and future directions. *Behavior Therapy, 48,* 778-792. http://dx.doi.org/10.1016/j.beth.2017.06.003

Kircanski, K., Lieberman, M. D., & Craske, M. G. (2012). Feelings into words: Contributions of language to exposure therapy. *Psychological Science*, *23*, 1086–1091. https://doi.org/10.1177/0956797612443830

Kirschner, H., Kuyken, W., Wright, K., Roberts, H., Brejcha, C., & Karl, Anke. (2019). Soothing your heart and feeling connected: A new experimental paradigm to study the benefits of self-compassion. *Clinical Psychological Science, 7*(3), 545-565. https://doi.org/10.1177/2167702618812438

Klimecki, O., Leiberg, S., Ricard, M., & Singer, T. (2014). Differential pattern of functional brain plasticity after compassion and empathy training. *Social Cognitive and Affective Neuroscience, 9*(6), 873-879. https://doi.org/10.1093/scan/nst060

Koessler, R. B., Kohut, T., & Campbell, L. (2019a, January 16). *Data and Analyses.* Retrieved from https://osf.io/ gfdzs/

Koessler, R. B., Kohut, T., & Campbell, L. (2019b). When your boo becomes a ghost: The association between breakup strategy and breakup role in experiences of relationship dissolution. *Collabra:Psychology, 5*(1), 29. https://doi.org/10.1525/collabra.230

Kok, B.E., Coffey, K.A., Cohn, M.A., Catalino, L.I., Vacharkulksemsuk, T., Algoe, S.B., & Frederickson, B.L. (2013). How positive emotions build physical health: Perceived positive social connections account for the upward spiral between positive emotions and vagal tone. *Psychological Science, 24,* 1123-1132. https://doi.org/10.1177/0956797612470827

Kotsou, I., Leys, C., Neff, K., Rude, S., Kirkpatrick, K., Neff, K., … Heagerty, P. (2016). Self-Compassion Scale (SCS): Psychometric properties of the french translation and its relations with psychological well-being, affect and depression. *Plos One*, *11*, e0152880. https://doi.org/10.1371/journal.pone.0152880

Kreibig, S.D., Gendolla, G.H.E., & Scherer, K.R. (2010). Psychophysiological effects of emotional responding to goal attainment. *Biological Psychology, 84*(3), 474-487. https://doi.org/10.1016/j.biopsycho.2009.11.004

Krieger, T., Hermann, H., Zimmermann, J., & Holtforth, M.G. (2015). Associations of self-compassion and global self-esteem with positive and negative affect and stress reactivity in daily life: Findings from a smart phone study. *Personality and Individual Differences, 87,* 288-292. https://doi.org/10.1016/j.paid.2015.08.009

Kross, E., Ayduk, O., & Mischel, W. (2005). When asking "why" does not hurt. *Psychological Science*, *16*, 709–715. https://doi.org/10.1111/j.1467-9280.2005.01600.x

Lakey, B., & Orehek, E. (2011). Relational regulation theory: a new approach to explain the link between perceived social support and mental health. *Psychological Review*, *118*(3), 482–495. https://doi.org/10.1037/a0023477

Larson, D.G., Chastain, R.L., Hoyt, W.T., & Ayzenberg, R. (2015). Self-concealment: Integrative review and working model. *Journal of Social and Clinical Psychology, 34*(8), 705-e774. https://doi.org/10.1521/jscp.2015.34.8.705

Larzelere, R.E., & Huston, T.L. (1980). The Dyadic Trust Scale: Toward understanding interpersonal trust in close relationships. *Journal of Marriage and Family*, *42*, 595–604. https://doi.org/10.2307/351903

Laurenceau, J.P., Barret, L.F., & Pietromonaco, P.R. (1998). Intimacy as an interpersonal process: the importance of self-disclosure, partner disclosure, and perceived partner responsiveness in interpersonal exchanges. *Journal of Personality and Social Psychology, 74*(5), 1238-1251. https://doi.org/10.1037/0022-3514.74.5.1238

Leary, M.R., Tambor, E.S., Terdal, S.K., & Downs, D.L. (1995). Self-esteem as an interpersonal monitor: The sociometer hypothesis. *Journal of Personality and Social Psychology, 68*(3), 518-530. https://doi.org/10.1037/0022-3514.68.3.518

Leary, M.R., Tate, E.B., Adams, C.E., Allen, A.B., & Hancock, J. (2007). Self-compassion and

reactions to unpleasant self-relevant events: the implications of treating oneself kindly. *Journal of Personality and Social Psychology*, *92*, 887–904. https://doi.org/10.1037/0022-3514.92.5.887

Leary, M.R., Terry, M.L., Allen, A.B., & Tate, E.B. (2009). The concept of ego threat in social and personality psychology: Is ego threat a viable scientific construct? *Personality and Social Psychology Review, 13,* 151-164. https://doi.org/10.1177/1088868309342595

Ledgerwood, A., & Shrout, P. (2011). The trade-off between accuracy and precision in latent variable models of mediation processes. *Journal of Personality and Social Psychology, 101*(6), 1174-1188. https://doi.org/10.1037/a0024776

LeFebvre, L.E. (2017). Swipe me off my feet: Explicating relationship initiation on Tinder. *Journal of Social and Personal Relationships, 35,* 1205–1229. https://doi.org/10.1177/0265407517706419

LeFebvre, L.E., Allen, M., Rasner, R.D., Garstad, S., Wilms, A., & Parrish, C. (2019). Ghosting in emerging adults ' romantic relationships: The digital dissolution disappearance strategy. *Imagination, Cognition, and Personality: Consciousness in Theory, Research, and Clinical Practice, 39*(2), 125-150. https://doi.org/10.1177/0276236618820519

Lepore, S.J., Ragan, J.D., & Jones, S. (2000). Talking facilitates cognitive-emotional processes of adaptation to an acute stressor. *Journal of Personality and Social Psychology, 78*(3), 499–508. https://doi.org/10.1037/0022-3514.78.3.499

Leung, M.K., Chan, C.C.H., Yin, J., Lee, C.F., So, K.F., & Lee, T.M.C. (2013). Increased gray matter volume in the right angular and posterior parahippocampal gyri in loving-kindness meditators. *Social Cognitive and Affective Neuroscience, 8*(1), 34–39. https://doi.org/10.1093/scan/nss076

Levay, K.E., Freese, J., & Druckman, J.N. (2016). The demographic and political composition of Mechanical Turk samples. *SAGE Open, 6*(1), 1-17. https://doi.org/10.1177/2158244016636433

Levi-Belz, Y., Gvion, Y., Horesh, N., & Apter, A. (2013). Attachment patterns in medically serious suicide attempts: The mediating role of self-disclosure and loneliness. *Suicide and Life-Threatening Behavior, 43*(5), 511-522. https://doi.org/10.1111/sltb.12035

Levy-Gigi, E., & Shamay-Tsoory, S.G. (2017). Help me if you can: Evaluating the effectiveness of interpersonal compared to intrapersonal emotion regulation in reducing distress. *Journal of Behavior Therapy and Experimental Psychiatry, 55,* 33-40. https://doi.org/10.1016/j.jbtep.2016.11.008

Lieberman, M. D., Inagaki, T. K., Tabibnia, G., & Crockett, M. J. (2011). Subjective responses to emotional stimuli during labeling, reappraisal, and distraction. *Emotion*, *11*, 468–480. https://doi.org/10.1037/a0023503

Liotti, G., & Gilbert, P. (2011). Mentalizing, motivation, and social mentalities: Theoretical considerations and implications for psychotherapy. *Psychology and Psychotherapy*, *84*, 9-25. https://doi.org/10.1348/147608310X520094

Litman, J. A. (2006). The COPE inventory: Dimensionality and relationships with approach- and avoidance-motives and positive and negative traits. *Personality and Individual Differences*, *41*, 273–284. https://doi.org/10.1016/j.paid.2005.11.032

Little, R.J.A. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association, 83*(404), 1198-1202. https://doi.org/10.1080/01621459.1988.10478722

Lougheed, J.P., Koval, P., & Hollenstein, T. (2016). Sharing the burden: The interpersonal

regulation of emotional arousal in mother daughter dyads. *Emotion, 16*(1), 83-93.

https://doi.org/10.1037/emo0000105

Longe, O., Maratos, F.A., Gilbert, P., Evans, G., Volker, F., Rockliff, H., & Rippon, G. (2010).

Having a word with yourself: Neural correlates of self-criticism and self-reassurance.

NeuroImage, 49, 1849-1856. http://doi.org/10.1016/j.neuroimage.2009.09.019

Lu, W. & Hampton, K. (2017). Beyond the power of networks: Differentiating network structure

from social media affordances for perceived social support. *New Media & Society, 19*(6),

861-879. http://doi.org/10.1177/1461444815621514

Luo, X., Qiao, L., & Che, X. (2018). Self-compassion modulates heart rate variability and

negative affect to experimentally induced stress. *Mindfulness, 9*(5), 1522-1528.

https://doi.org/10.1007/s12671-018-0900-9

Lupien, S.P., Seery, M.D., & Almonte, J.L. (2010). Discrepant and congruent high self-esteem:

Behavioral self-handicapping as a preemptive defensive strategy. *Journal of Experimental*

Social Psychology, 46(6), 1105-1108. https://doi.org/10.1016/j.jesp.2010.05.022

Maas, C. J. M., & Hox, J. J. (2005). Sufficient sample sizes for multilevel modeling.

Methodology: European Journal of Research Methods for the Behavioral and Social

Sciences, *1*, 86–92. https://doi.org/10.1027/1614-2241.1.3.86

MacBeth, A. & Gumley, A. (2012). Exploring compassion: a meta-analysis of the association

between self-compassion and psychopathology. *Clinical Psychology Review, 32*(6), 545-

552. https://doi.org/10.1016/j.cpr.2012.06.003

Macdonald, J., & Morley, I. (2001). Shame and non-disclosure: A study of the emotional

isolation of people referred for psychotherapy. *The British Journal of Medical Psychology*,

74, 1–21. https://doi.org/10.1348/000711201160731

Macedonia, M.F. (2018). *Self-care and self-compassion of disaster responders: Predictors of resilience* (Publication No. 431) [Doctoral dissertation, Antioch University]. Antioch University Repository and Archive.

Mackinnon, D. P., Lockwood, C. M., & Williams, J. (2004). Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research*, *39*, 99. https://doi.org/10.1207/s15327906mbr3901_4

Mackintosh, K., Power, K., Schwannauer, M., & Chan, S.W.Y. (2018). The relationships between self-compassion, attachment and interpersonal problems in clinical patients with mixed anxiety and depression and emotional distress. *Mindfulness, 9*, 961-971. https://doi.org/10.1007/s12671-017-0835-6

Maheux, A., & Price, M. (2016). The indirect effect of social support on post-trauma psychopathology via self-compassion. *Personality and Individual Differences*, *88*, 102–107. https://doi.org/10.1016/j.paid.2015.08.051

Mantzios, M., & Wilson, J. C. (2013). Psychometric properties of the greek versions of the Self-Compassion and Mindful Attention and Awareness Scales. *Mindfulness*, *6*, 123–132. https://doi.org/10.1007/s12671-013-0237-3

Mar, R.A., DeYoung, C.G., Higgins, D.M., & Peterson, J.B. (2006). Self-liking and self-competence separate self-evaluation from self-deception: Associations with personality, ability, and achievement. *Journal of Personality, 74*(4), 1047-1078. https://doi.org/10.1111/j.1467-6494.2006.00402.x

Marigold, D. C., Cavallo, J. V., Holmes, J. G., & Wood, J. V. (2014). You can't always give what you want: The challenge of providing social support to low self-esteem individuals. *Journal of Personality and Social Psychology*, *107*, 56–80.

https://doi.org/10.1037/a0036554

Marroquín, B. (2011). Interpersonal emotion regulation as a mechanism of social support in depression. *Clinical Psychology Review*, *31*, 1276–1290. https://doi.org/10.1016/j.cpr.2011.09.005

Marroquín, B., & Nolen-Hoeksema, S. (2015). Emotion regulation and depressive symptoms: Close relationships as social context and influence. *Journal of Personality and Social Psychology, 109*(5), 836-855. https://doi.org/10.1016/10.1037/pspi0000034

Marschall, D., Sanftner, J., & Tangney, J. P. (1994). *The State Shame and Guilt Scale*. Fairfax, VA: George Mason University.

Masuda, A., Anderson, P.L., Wendell, J.W., Chou, Y., Price, M., & Feinstein, A.B. (2011). Psychological flexibility mediates the relations between self-concealment and negative psychological outcomes. *Personality and Individual Differences, 50*(2), 243-247. https://doi.org/10.1016/j.paid.2010.09.037

Mathieu, J.E., Herman, A., Culpepper, S.A., & Gilad, C. (2012). Understanding and estimating the power to detect cross-level interaction effects in multilevel modeling. *Journal of Applied Psychology, 97*(5), 951-966. https://doi.org/10.1037/a0028380

McCarthy, M.H., Wood, J.V., & Holmes, J.G. (2017). Dispositional pathways to trust: Self-esteem and agreeableness interact to predict trust and negative emotional disclosure. *Journal of Personality and Social Psychology, 113*(1), 95-116. https://doi.org/10.1037/pspi0000093

McEwan, K., Gilbert, P., & Duarte, Joana. (2012). An exploration of competitiveness and caring in relation to psychopathology. *British Journal of Clinical Psychology, 51,* 19-36. https://doi.org/10.1111/j.2044-8260.2011.02010.x

Meade, A.W., & Craig, S.B. (2012). Identifying careless responses in survey data. *Psychological Methods, 17*(3), 437-455. https://doi.org/10.1037/a0028085

Melrose, K. L., Brown, G. D. A., & Wood, A. M. (2015). When is received social support related to perceived support and well-being? When it is needed. *Personality and Individual Differences*, *77*, 97–105. https://doi.org/10.1016/j.paid.2014.12.047

Meltzer, A. L., McNulty, J. K., & Karney, B. R. (2012). Social support and weight maintenance in marriage: The interactive effects of support seeking, support provision, and gender. *Journal of Family Psychology*, *26*, 678–687. https://doi.org/10.1037/a0029364

Merriam-Webster. (n.d.). Ghosting. In *Merriam-Webster.com dictionary.* Retrieved July 21, 2020, from https://www.merriam-webster.com/dictionary/ghosting

Merz, E.L., & Roesch, S.C. (2011). Modeling trait and state variation using multilevel factor analysis with PANAS daily diary data. *Journal of Research in Personality, 35,* 2-9. https://doi.org/10.1016/j.jrp.2010.11.003

Mikulincer, M., & Nachshon, O. (1991). Attachment styles and patterns of self-disclosure. *Journal of Personality and Social Psychology, 61*(2), 321-331. https://doi.org/10.1037/0022-3514.61.2.321

Miyagawa, Y., Niiya, Y., & Taniguchi, J. (2019). When life gives you lemons, make lemonade: Self-compassion increases adaptive beliefs about failure. *Journal of Happiness Studies.* https://doi.org/10.1007/s10902-019-00172-0

Miyagawa, Y., Taniguchi, J., & Niiya, Y. (2018). Can self-compassion help people regulate unattained goals and emotional reactions toward setbacks? *Personality and Individual Differences, 134,* 239-244. https://doi.org/10.1016/j.paid.2018.06.029

Moffit, R.L., Neumann, D.L., & Williamson, S.P. (2018). Comparing the efficacy of a brief self-

esteem and self-compassion intervention for state body dissatisfaction and self-improvement motivation. *Body Image, 27,* 67-76. https://doi.org/10.1016/j.bodyim.2018.08.008

Mongrain, M. (1998). Parental representations and support-seeking behaviors related to dependency and self-criticism. *Journal of Personality, 66*(2), 151-173. https://doi.org/10.1111/1467-6494.00007

Monroe, S. M., Rohde, P., Seeley, J. R., & Lewinsohn, P. M. (1999). Life events and depression in adolescence: Relationship loss as a prospective risk factor for first onset of major depressive disorder. *Journal of Abnormal Psychology, 108,* 606–614. https://doi.org/10.1037/0021-843X.108.4.606

Montero-Marín, J., Gaete, J., Demarzo, M., Rodero, B., Serrano Lopez, L. C., & García-Campayo, J. (2016). Self-criticism: A measure of uncompassionate behaviors toward the self, based on the negative components of the self-compassion scale. *Frontiers in Psychology*, *7*, 1–15. https://doi.org/10.3389/fpsyg.2016.01281

Moore, P. (2014, October 28). *Poll results: Ghosting.* YouGov. https://today.yougov.com/news/2014/10/28/poll-results-ghosting/

Morelli, S. A., Lee, I. A., Arnn, M. E., & Zaki, J. (2015). Emotional and instrumental support provision interact to predict well-being. *Emotion*, *15*, 484–493. https://doi.org/10.1037/emo0000084

Morris, C.E., & Reiber, C. (2011). Frequency, intensity and expression of post-relationship grief. *EvoS Journal, 3*(1), 1-11.

Moscovitch, D.A. (2009). What is the core fear in social phobia? A new model to facilitate individualized case conceptualization and treatment. *Cognitive and Behavioral Practice,*

16, 123–134. https://doi.org/10.1016/j.cbpra.2008.12.001

Mosewich, A.D., Kowalski, K.C., Sabiston, C.M., Sedgwick, W.A., & Tracy, J.L. (2011). Self-compassion: A potential resource for young women athletes. *Journal of Sport & Exercise Psychology, 33,* 103-123. https://doi.org/10.1123/jsep.33.1.103

Muris, P., Otgaar, H., & Petrocchi, N. (2016). Protection as the mirror image of psychopathology: Further critical notes on the Self-Compassion Scale. *Mindfulness*, 787–790. https://doi.org/10.1007/s12671-016-0509-9

Muris, P., & Petrocchi, N. (2016). Protection or vulnerability? A meta-analysis of the relations between the positive and negative components of self-compassion and psychopathology. *Clinical Psychology and Psychotherapy*, *383*, 373–383. https://doi.org/10.1002/cpp.2005

Naismith, I., Ferro, C.D., Ingram, G., & Leal, W.J. (2019). Compassion-focused imagery reduces shame and is moderated by shame, self-reassurance and multisensory imagery vividness. *Research in Psychotherapy: Psychopathology, Process and Outcome, 22,* 113-122. https://doi.org/10.4081/ripppo.2019.329

Neff, K. D. (2003). The Development and Validation of a Scale to Measure Self-Compassion. *Self and Identity, 2,* 223–250. https://doi.org/10.1080/15298860390209035

Neff, K. D. (2016). The Self-Compassion Scale is a valid and theoretically coherent measure of self-compassion. *Mindfulness*, *7*, 264–274. https://doi.org/10.1007/s12671-015-0479-3

Neff, K. D., Hsieh, Y.-P., & Dejitterat, K. (2005). Self-compassion, achievement goals, and coping with academic failure. *Self and Identity*, *4*, 263–287. https://doi.org/10.1080/13576500444000317

Neff, K.D., Kirkpatrick, K.L., & Rude, S.S. (2007). Self-compassion and adaptive psychological functioning. *Journal of Research in Personality, 41,* 139-154.

https://doi.org/10.1016/j.jrp.2006.03.004

Neff, K. D., Long, P., Knox, M. C., Davidson, O., Kuchar, A., Costigan, A., & Williamson, Z. (2018). The forest and the trees: Examining the association of self-compassion and its positive and negative components with psychological functioning. *Self and Identity*, *17*(6), 1–19. https://doi.org/10.1080/15298868.2018.1436587

Neff, K. D., & McGehee, P. (2010). Self-compassion and psychological resilience among adolescents and young adults. *Self and Identity*, *9*(3), 225–240. https://doi.org/10.1080/15298860902979307

Neff, K. D., Tóth-Király, I., & Colosimo, K. (2018). Self-compassion is best measured as a global construct and is overlapping with but distinct from neuroticism: A response to Pfattheicher, Geiger, Hartung, Weiss, and Schindler (2017). *European Journal of Personality*, *32*, 371–392. https://doi.org/10.1002/per.2148

Neff, K. D., Tóth-Király, I., Yarnell, L. M., Arimitsu, K., Castilho, P., Ghorbani, N., … Mantzios, M. (2018). Examining the factor structure of the Self-Compassion Scale in 20 diverse samples: Support for use of a total score and six subscale scores. *Psychological Assessment*. https://doi.org/10.1037/pas0000629

Neff, K. D., & Vonk, R. (2009). Self-compassion versus global self-esteem: Two different ways of relating to oneself. *Journal of Personality*, *77*, 23–50. https://doi.org/10.1111/j.1467-6494.2008.00537.x

Netzer, L., Van Kleef, G.A., & Tamir, M. (2015). Interpersonal instrumental emotion regulation. *Journal of Experimental Social Psychology, 58,* 124-135. http://doi.org/10.1016/j.jesp.2015.01.006

Nils, F., & Rimé, B. (2012). Beyond the myth of venting: Social sharing modes determine the

benefits of emotional disclosure. *European Journal of Social Psychology*, *42*, 672–681.

https://doi.org/10.1002/ejsp.1880

Niven, K., Henkel, A.P., & Hanratty, J. (2019). Prosocial versus instrumental motives for

interpersonal emotion regulation. *Journal of Theoretical Social Psychology, 3*(2), 85-96.

https://doi.org/10.1002/jts5.36

Niven, K., Troth, A.C., & Holman, D. (2019). Do the effects of interpersonal emotion regulation

depend on people's underlying motives? *Journal of Occupational and Organizational*

Psychology, 92, 1020-1026. https://doi.org/10.1111/joop.12257

Nozaki, Y., & Mikolajczak, M. (2020). Extrinsic emotion regulation. *Emotion, 20*(1), 10-15.

https://doi.org/10.1037/emo0000636

Odou, N., & Brinker, J. (2015). Self-compassion, a better alternative to rumination than

distraction as a response to negative mood. *The Journal of Positive Psychology*, *10*(5), 447–

457. https://doi.org/10.1080/17439760.2014.967800

Omarzu, J. (2000). A Disclosure Decision Model: Determining how and when individuals will

self-disclose. *Personality and Social Psychology Review*, *4*, 174–185.

https://doi.org/10.1207/S15327957PSPR0402_05

Orth, U., & Luciano, E.C. (2015). Self-esteem, narcissism, and stressful life events: Testing for

selection and socialization. *Journal of Personality and Social Psychology, 109*(4), 707-721.

https://doi.org/10.1037/pspp0000049

Øverup, C.S., Mclean, E.A., Brunson, J.A., & Coffman, A.D. (2017). Belonging,

burdensomeness, and self-compassion as mediators of the association between attachment

and depression. *Journal of Social and Clinical Psychology, 36*(8), 675-703.

https://doi.org/10.1521/jscp.2017.36.8.675

Ozbay, F., Fitterling, H., Charney, D., & Soutwitck, S. (2008). Social support and resilience to stress across the life span: A neurobiologic framework. *Current Psychiatry Reports, 10,* 304-310. https://doi.org/10.1007/s11920-008-0049-7

Ozbay, F., Johnson, D. C., Dimoulas, E., Morgan, C. A., Charney, D., & Southwick, S. (2007). Social support and resilience to stress: From neurobiology to clinical practice. *Psychiatry*, *4*, 35–40.

Pace, T.W., Negi, L.T., Adame, D.D., Cole, S.P., Sivilli, T.I., Brown, T.D., & Raison, C.L. (2009). Effect of compassion meditation on neuroendocrine, innate immune and behavioral responses to psychosocial stress. *Psychoneuroendocrinology, 34*(1), 87-98. https://doi.org/10.1016/j.psyneuen.2008.08.011

Panagopoulou, E., Maes, S., Rimé, B., & Montgomery, A. (2006). Social sharing of emotion in anticipation of cardiac surgery: Effects on preoperative distress. *Journal of Health Psychology*, *11*, 809–820. https://doi.org/10.1177/1359105306066644

Panskepp, J. (2010). Affective neuroscience of the emotionalBrainMind: evolutionary perspectives and implications for understanding depression. *Dialogues in Clinical Neuroscience, 12,* 533-545.

Pauw, L.S., Sauter, D.A., van Kleef, G.A., & Fischer, A.H. (2019). Stop crying! The impact of situational demands on interpersonal emotion regulation. *Cognition and Emotion, 33*(8), 1587-1598. https://doi.org/10.1080/02699931.2019.1585330

Pennebaker, J. W. (1997). Writing about emotional experiences as a therapeutic process. *Psychological Science*, *8*, 162–166. https://doi.org/10.1111/j.1467-9280.1997.tb00403.x

Pennebaker, J. W., Boyd, R. L., Jordan, K., & Blackburn, K. (2015). *The development and psychometric properties of LIWC2015*. Austin, TX: University of Texas at Austin.

Petersen, L-E. (2014). Self-compassion and self-protection strategies: The impact of self-

compassion on the use of self-handicapping and sandbagging. *Personality and Individual*

Differences, 56, 133-138. https://doi.org/10.1016/j.paid.2013.08.036

Pfattheicher, S., Geiger, M., Hartung, J., Weiss, S., & Schindler, S. (2017). Old wine in new

bottles? The case of self-compassion and neuroticism. *European Journal of Personality*, *31*,

160–169. https://doi.org/10.1002/per.2097

Phillips, W.J., Hine, D.W., & Marks, A.D.G. (2017). Self-compassion moderates the predictive

effects of implicit cognitions on subjective well-being. *Stress and Health, 34*(1), 143-151.

https://doi.org/10.1002/smi.2773

Pierce, T., & Lydon, J. (1998). Priming relational schemas: Effects of contextually activated and

chronically accessible interpersonal expectations on responses to a stressful event. *Journal*

of Personality and Social Psychology, *75*, 1441–1448. https://doi.org/10.1037/0022-

3514.75.6.1441

Pineles, S. L., Street, A. E., & Koenen, K. C. (2006). The differential relationships of shame–

proneness and guilt–proneness to psychological and somatization symptoms. *Journal of*

Social and Clinical Psychology, *25*, 688–704. https://doi.org/10.1521/jscp.2006.25.6.688

Porges, S.W. (2007). The polyvagal perspective. *Biological Psychology, 74,* 116-143.

https://doi.org/10.1016/j.biopsycho.2006.06.009

Preacher, K.J., Curran, P.J., & Bauer, D.J. (2006). Computational tools for probing interactions

in multiple linear regression, multilevel modeling, and latent curve analysis. *Journal of*

Educational and Behavioral Statistics, 31, 437-448.

https://doi.org/10.3102/10769986031004437

Raes, F., Pommier, E., Neff, K. D., & Van Gucht, D. (2011). Construction and factorial

validation of a short form of the Self-Compassion Scale. *Clinical Psychology and Psychotherapy*, *18*, 250–255. https://doi.org/10.1002/cpp.702

Reevy, G.M., & Maslach, C. (2001). Use of social support: Gender and personality differences. *Sex Roles, 44*(7-8), 437-459. https://doi.org/10.1023/A:1011930128829

Reis, N.A., Kowalski, K.C., Ferguson, L.J., Sabiston, C.M., Sedgwick, W.A., & Crocker, P.R.E. (2015). Self-compassion and women athletes' responses to emotionally difficult sport situations: An evaluation of a brief induction. *Psychology of Sport and Exercise, 16*(3), 18-25. https://doi.org/10.1016/j.psychsport.2014.08.011

Rife, S. C., Kerns, K. A., & Updegraff, J. A. (2016). Seeking support in response to social and achievement stressors: A multivenue analysis. *Personal Relationships*, *23*, 364–379. https://doi.org/10.1111/pere.12130

Rimé, B. (2009). Emotion elicits the social sharing of emotion: Theory and empirical review. *Emotion Review*, *1*(1), 60–85. https://doi.org/10.1177/1754073908097189

Rimé, B., Finkenauer, C., Luminet, O., Zech, E., & Philippot, P. (1998). Social sharing of emotion: New evidence and new questions. *European Review of Social Psychology*, *9*, 145–189. https://doi.org/10.1080/14792779843000072

Roberts, B.W. (2018). A revised sociogenomic model of personality traits. *Journal of Personality, 86,* 23-35. https://doi.org/10.1111/jopy.12323

Rockliff, H., Karl, A., McEwan, K., Gilbert, J., Matos, M., & Gilbert, P. (2011). Effects of intranasal oxytocin on 'compassion focused imagery'. *Emotion, 11*(6), 1388–1396. https://doi.org/10.1037/a0023861

Rose, A.L., & Kocovski, N.L. (2020). The Social Self-Compassion Scale (SSCS): Development, validity, and associations with indices of well-being, distress, and social anxiety.

International Journal of Mental Health and Addiction. https://doi.org/10.1007/s11469-020-00302-3

Rosenberg, M. (1965). *Society and the Adolescent Self-Image. Social Forces*. Princeton University Press. https://doi.org/10.2307/2575639

Rosnow, R.L., & Rosenthal, R. (1996). Computing contrasts, effect sizes, and counternulls on other people's published data: General procedures for research consumers. *Psychological Methods, 1,* 331-340. https://doi.org/10.1037/1082-989X.1.4.331

Rosseel, Y. (2012). lavaan: An R package for structural equation modeling. *Journal of Statistical Software*, *48*, 1–36. http://www.jstatsoft.org/v48/i02/

Salazar, L.R. (2015). Exploring the relationship between compassion, closeness, trust, and social support in same-sex friendships. *The Journal of Happiness & Well-Being, 3*(1), 15-29.

Samaie, G., & Farahani, H.A. (2011). Self-compassion as a moderator of the relationship between rumination, self-reflection and stress. *Procedia – Social and Behavioral Sciences, 30,* 978-982. https://doi.org/10.1016/j.sbspro.2011.10.190

Sameroff, A. (2010). A unified theory of development: A dialectic integration of nature and nurture. *Child Development, 81*(1), 6-22. https://doi.org/10.1111/j.1467-8624.2009.01378.x

SAS Institute. (2012). *The SAS system for Windows (Release 9.4)*. Cary, N.C.: SAS Institute.

Saxena, P., & Mehrotra, S. (2010). Emotional disclosure in day-to-day living and subjective well being. *Psychological Studies, 55*(3), 208-218. https://doi.org/10.1007/s12646-010-0034-1

Sbarra, D.A., & Ferrer, E. (2006). The structure and process of emotional experience following nonmarital relationship dissolution: Dynamic factor analyses of love, anger, and sadness. *Emotion, 6*(2), 224-238. https://doi.org/10.1037/1528-3542.6.2.224

Sbarra, D. A., Smith, H. L., & Mehl, M. R. (2012). When leaving your ex, love yourself:

Observational ratings of self-compassion predict the course of emotional recovery following marital separation. *Psychological Science*, *23*, 261–269. https://doi.org/10.1177/0956797611429466

Schachter, S. (1959). *The psychology of affiliation: Experimental studies of the sources of gregariousness.* Palo Alto, CA: Stanford University Press.

Scheffer, J. (2002). Dealing with missing data. *Research Letters in the Information and Mathematical Sciences, 3*, 153-160.

Schellekens, M.P.J., Karremans, J.C., van der Drift, M.A., Molema, J., van den Hurk, D.G.M., Prins, J.B., & Speckens, A.E.M. (2017). Are mindfulness and self-compassion related to psychological distress and communication in couples facing lung cancer? a dyadic approach. *Mindfulness*, *8*, 325–336. https://doi.org/10.1007/s12671-016-0602-0

Scherbaum, C.A., & Ferreter, J.M. (2009). Estimating statistical power and required sample sizes for organizational research using multilevel modeling. *Organizational Research Methods, 12*(2), 347-367. https://doi.org/10.1177/1094428107308906

Seeds, P.M., & Dozois, D.J. (2010). Prospective evaluation of a cognitive vulnerability-stress model for depression: The interaction of schema self-structures and negative life events. *Journal of Clinical Psychology, 66,* 1307-1323. https://doi.org/10.1002/jclp.20723

Seekis, V., Bradley, G.L., & Duffy, A. (2017). The effectiveness of self-compassion and self-esteem writing tasks in reducing body image concerns. *Body Image, 23,* 206-213. https://doi.org/10.1016/j.bodyim.2017.09.003

Sherry, S.B., Law, A., Hewitt, P.L., Flett, G.L., & Besser, A. (2008). Social support as a mediator of the relationship between perfectionism and depression: A preliminary test of the social disconnection model. *Personality and Individual Differences, 45,* 339-344.

https://doi.org/10.1016/j.paid.2008.05.001

Shimizu, M., Niiya, Y., & Shigemasu, E. (2016). Achievement goals and improvement following failure: moderating roles of self-compassion and contingency of self-worth. *Self and Identity, 15*(1), 107-115. https://doi.org/10.1080/15298868.2015.1084371

Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, *7*, 422-445. https://doi.org/10.1037/1082-989X.7.4.422

Siegel, A.N., & Kocovski, N.L. (2020). Effectiveness of self-compassion inductions among individuals with elevated social anxiety. *Mindfulness.* https://doi.org/10.1007/s12671-020-01470-y

Simon-Thomas, E.R., Godzik, J., Castle, E., Antonenko, O., Ponz, A., Kogan, A., & Keltner, D.J. (2012). An fMRI study of caring vs self-focus during induced compassion and pride. *Social Cognitive and Affective Neuroscience, 7*(6)*,* 635-648. https://doi.org/10.1093/scan/nsr045

Sirois, F. M., Molnar, D. S., & Hirsch, J. K. (2015). Self-compassion, stress, and coping in the context of chronic illness. *Self and Identity*, *14*, 334–347. https://doi.org/10.1080/15298868.2014.996249

Sloan, A. E., & Kahn, J. H. (2005). Client self-disclosure as a predictor of short-term outcome in brief psychotherapy. *Journal of College Student Psychotherapy*, *19*, 25–39. https://doi.org/10.1300/J035v19n03_04

Smith, C. (2014). *Closureless breakups* [Unpublished undergraduate thesis]. University of Waterloo.

Snijders, T. A. B., & Bosker, R. J. (2012). *Multilevel Analysis : An Introduction to Basic and*

Advanced Multilevel Modeling. London: Sage Publishers.

Soto, C. J., & John, O. P. (2017). The next Big Five Inventory (BFI-2): Developing and assessing a hierarchical model with 15 facets to enhance bandwidth, fidelity, and predictive power. *Journal of Personality and Social Psychology, 113*(1), 117-143. https://doi.org/1037/pspp0000096

Souza, L. K., & Hutz, C. S. (2016). Adaptation of the Self-Compassion Scale for use in Brazil: Evidences of construct validity. *Temas Em Psicologia*, *24*, 159–172. https://doi.org/10.9788/TP2016.1-11

Stanton, S.C.E., Campbell, L., & Pink, J.C. (2017). Benefits of positive relationship experiences for avoidantly attached individuals. *Journal of Personality and Social Psychology, 113*(4), 568-588. https://doi.org/10.1037/pspi0000098

Steiger, J.H. (1980). Tests for comparing elements of a correlation matrix. *Psychological Bulletin, 87,* 245-251.

Stiles, W.B., Shuster, P.L., & Harrigan, J.A. (1992). Disclosure and anxiety: A test of the fever model. *Journal of Personality and Social Psychology*, *63*, 980–988. https://doi.org/10.1037/0022-3514.63.6.980

Svendsen, J.L., Kvernenes, K.V., Wiker, A.S., & Dundas, I. (2017). Mechanisms of mindfulness: Rumination and self-compassion. *Nordic Psychology, 62*(2), 71-82. http://doi.org/10.1080/19012276.2016.1171730

Svendsen, J.L., Osnes, B., Binder, P-E., Dundas, I., Visted, E., Norby, H., Schanche, E., & Sørensen, L. (2016). Trait self-compassion reflects emotional flexibility through an association with high vagally mediated heart rate variability. *Mindfulness, 7,* 1103-1113. https://doi.org/10.1007/s12671-016-0549-1

Swan, S., & Andrews, B. (2003). The relationship between shame, eating disorders and disclosure in treatment. *The British Journal of Clinical Psychology*, *42*, 367–378. https://doi.org/10.1348/014466503322528919

Tafarodi, R. W., & Milne, A. B. (2002). Decomposing global self-esteem. *Journal of Personality*, *70*, 443–483. https://doi.org/10.1111/1467-6494.05017

Tamres, L.K., Janicki, D., & Helgeson, V.S. (2002). Sex differences in coping behavior: A meta-analytic review and an examination of relative coping. *Personality and Social Psychology Review, 6*(1), 2-30. https://doi.org/10.1207/S15327957PSPR0601_1

Tangney, J. P., & Tracy, J. L. (2012). Self-conscious emotions. In M. Leary, & J. P. Tangney (Eds.), *Handbook of self and identity* (2nd Edition, pp. 446-478). New York: Guilford Press.

Tangney, J.P., Wagner, P., & Gramzow, R. (1992). Proneness to shame, proneness to guilt, and psychopathology. *Journal of Abnormal Psychology, 101*(3), 469-478. https://doi.org/10.1037/0021-843X.101.4.738

Terry, J. (1991). Coping resources and situational appraisals as predictors of coping behavior, *Personality and Individual Differences, 12*, 1031–1047. https://doi.org/10.1016/0191-8869(91)90033-8

Terry, M.L., Leary, M.R., & Mehta, S. (2013). Self-compassion as a buffer against homesickness, depression, and dissatisfaction in the transition to college. *Self and Identity, 12*(3), 278-290. https://doi.org/10.1080/15298868.2012.667913

Tesh, M., Learman, M., & Pulliam, R.M. (2015). Mindful self-compassion strategies for survivors of intimate partner abuse. *Mindfulness, 6*(2), 192-201. https://doi.org/10.1007/s12671-013-0244-4

Thayer, J.F., & Lane, R.D. (2000). A model of neurovisceral integration in emotion regulation and dysregulation. *Journal of Affective Disorders, 61,* 201-216. https://doi.org/10.1016/S0165-0327%2800% 2900338-4

Thoits, P.A., 2011. Mechanisms linking social ties and support to physical and mental health. *Journal of Health and Social Behavior, 52*(2), 145-161. https://doi.org/10.1177/0022146510395592

Thompson, B.L., & Waltz, J. (2008). Self-compassion and PTSD symptom severity. *Journal of Traumatic Stress, 21*(6), 556-558. https://doi.org/10.1002/jts.20374

Toplu-Demirtaş, E., Kemer, G., Pope, A.L., & Moe, J.L. (2018). Self-compassion matters: The relationships between perceived social support, self-compassion, and subjective well-being among LGB Individuals in Turkey. *Journal of Counseling Psychology, 65*(3), 372-382. https://doi.org/10.1037/cou0000261

Tóth-Király, I., Bőthe, B., & Orosz, G. (2017). Exploratory structural equation modeling analysis of the Self-Compassion Scale. *Mindfulness*. https://doi.org/10.1007/s12671-017-0754-6

Trompetter, H.R., de Kleine, E., & Bohlmeijer, E.T. (2017). Why does positive mental health buffer against psychopathology? An exploratory study on self-compassion as a resilience mechanism and adaptive emotion regulation strategy. *Cognitive Therapy and Research, 41,* 459-468. https://doi.org/10.1007/s10608-016-9774-0

Uchino, B.N. (2009). Understanding the links between social support and physical health: A lifespan perspective with emphasis on the separability of perceived and received support. *Perspectives in Psychological Science, 4*(3)*,* 236–255. https://doi.org/10.1111/j.1745-6924.2009.01122.x

Valdez, C. E., & Lilly, M. M. (2016). Self-compassion and trauma processing outcomes among

victims of violence. *Mindfulness*, *7,* 329–339. https://doi.org/10.1007/s12671-015-0442-3

van Buuren, S., Boshuizen, H.C., & Knook, D.L. (1999). Multiple imputation of missing blood

pressure covariates in survival analysis. *Statistics in Medicine, 18*(6), 681-684.

https://doi.org/10.1002/(SICI)1097-0258(19990330)18:6<681::AID-SIM71>3.0.CO;2-R

vanDellen, M.R., Campbell, W.K., Hoyle, R.H., & Bradfield, E.K. (2011). Compensating,

resisting, and breaking: A meta-analytic examination of reactions to self-esteem threat.

Personality and Social Psychology Review, 15, 51-74.

https://doi.org/10.1177/1088868310372950

Vanderlind, W.M., Millgram, Y., Baskin-Sommers, A.R., Clark, M.S., & Joorman, J. (2020).

Understanding positive emotion deficits in depression: From emotion preferences to

emotion regulation. *Clinical Psychology Review, 76,* 101826.

https://doi.org/10.1016/j.cpr.2020.101826

Vazeou-Nieuwenhuis, A., & Schumann, K. (2018). Self-compassionate and apologetic? How

and why having compassion toward the self relates to a willingness to apologize.

Personality and Individual Differences, 124, 71-76.

https://doi.org/10.1016/j.paid.2017.12.002

Velotti, P., Garofalo, C., Bottazzi, F., & Caretti, V. (2017). Faces of shame: Implications for self-

esteem, emotion regulation, aggression, and well-being. *The Journal of Psychology,

151*(2), 171-184. https://doi.org/10.1080/00223980.2016.1248809

Vogel, D. L., & Wester, S. R. (2003). To seek help or not to seek help: The risks of self-

disclosure. *Journal of Counseling Psychology*, *50*, 351–361. https://doi.org/10.1037/0022-

0167.50.3.351

Vogel, D. L., Wester, S. R., Wei, M., & Boysen, G. A. (2005). The role of outcome expectations

and attitudes on decisions to seek professional help. *Journal of Counseling Psychology*, *52*, 459–470. https://doi.org/10.1037/0022-0167.52.4.459

Wang, Y., Fan, L., Zhu, Y., Yang, J., Wang, C., Gu, L., Zhong, S., Huang, Y., Xie, X., Zhou, H., Luo, S., & Wu, X. (2019). Neurogenetic mechanisms of self-compassionate mindfulness: The role of oxytocin-receptor genes. *Mindfulness, 10,* 1792-1800. https://doi.org/10.1007/s12671-019-01141-7

Ward, M., Tedstone Doherty, D., & Moran, R. (2007). *It's Good To Talk: Distress Disclosure and Psychological Wellbeing.* Dublin: Health Research Board.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*, 1063-1070. https://doi.org/10.1037/0022-3514.54.6.1063

Wenzel, M., Rowland, Z., Weber, H., & Kubiak, T. (2019). A round peg in a square hole: strategy-situation fit of intra- and interpersonal emotion regulation strategies and controllability. *Cognition and Emotion*. https://doi.org/10.1080/02699931.2019.1697209.

Williams, K.D., & Nida, S.A. (2011). Ostracism: Consequences and coping. *Current Directions in Psychological Science, 20*(2), 71-75. https://doi.org/10.1177/0963721411402480

Williams, W.C., Morelli, S.A., Ong, D.C., & Zaki, J. (2018). Interpersonal emotion regulation: Implications for affiliation, perceived support, relationships, and well-being. *Journal of Personality and Social Psychology*, *115*, 224–254. http://doi.org/10.1037/pspi0000132

Wong, C.C.Y., & Yeung, N.C.Y. (2017). Self-compassion and posttraumatic growth: Cognitive processes as mediators. *Mindfulness, 8,* 1078-1087. https://doi.org/10.1111/10.1007/s12671-017-0683-4

Wood, J.V., Perunovic, W.Q.E., & Lee, J.W. (2009). Positive self-statements: Power for some,

peril for others. *Psychological Science, 20*(7) 860-866. https://doi.org/10.1111/j.1467-9280.2009.02370.x

Woods, K. M., & McNamara, J. R. (1980). Confidentiality: Its effect on interviewee behavior. *Professional Psychology*, *11*, 714–721. https://doi.org/10.1037/0735-7028.11.5.714

Yarnell, L.M., Stafford, R.E., Neff, K.D., Reilly, E.D., Knox, M.C., & Mullarkey, M. (2015). Meta-analysis of gender differences in self-compassion. *Self and Identity, 14*(5), 499-520. http://doi.org/10.1080/15298868.2015.1029966

Zaki, J. (2020). Integrating empathy and interpersonal emotion regulation. *Annual Review of Psychology, 71,* 517-540. . https://doi.org/10.1146/annurev-psych-010419-050830

Zaki, J., & Williams, W. C. (2013). Interpersonal emotion regulation. *Emotion*, *13*(5), 803–810. https://doi.org/10.1037/a0033839

Zeller, M., Yuval, K., Nitzan-Assayag, Y., & Bernstein, A. (2015). Self-compassion in recovery following potentially traumatic stress: Longitudinal study of at-risk youth. *Journal of Abnormal Child Psychology, 43,* 645-653. https://doi.org/10.1007/s10802-014-9937-y

Zessin, U., Dickhäuser, O., & Garbade, S. (2015). The relationship between self-compassion and well-being: A meta-analysis. *Applied Psychology: Health and Well-being, 7*(3), 340-364. https://doi.org/10.1111/aphw.12051

Zhang, J.W., & Chen, S. (2016). Self-compassion promotes personal improvement from regret experiences via acceptance. *Personality and Social Psychology Bulletin*, *42*, 244–258. https://doi.org/10.1177/0146167215623271

Zhang, J.W., & Chen, S. (2017). Self-compassion promotes positive adjustment for people who attribute responsibility of a romantic breakup to themselves. *Self and Identity, 16*(6), 732-759. https://doi.org/10.1080/15298868.2017.1305985

Zhang, J.W., Chen, S., & Shakur, T.K.T. (2020). From me to you: Self-compassion predicts acceptance of own and others' imperfections. *Personality and Social Psychology Bulletin, 46*(2), 228-242. https://doi.org/10.1177/0146167219853846

Zhang, Y., Luo, X., Che, X., & Duan, W. (2016). Protective effect of self-compassion to emotional response among students with chronic academic stress. *Frontiers in Psychology, 7,* 1802. https://doi.org/10.3389/fpsyg.2016.01802

Zwolinski, J. (2014). Does inclusion after ostracism influence the persistence of affective distress? *Group Dynamics: Theory, Research, and Practice, 18*(4), 282-301. http://doi.org/10.1037/gdn0000012

Appendix

Study 2 Writing Exercise Instructions

Self-Compassion Condition

(1) It's part of life to struggle with adversity, but these experiences are just a **normal part of life**. In the box below, write down **ways in which other people also experience events that are similar to the one you described**.

(2) Many times people get carried away with their emotions. In the box below, try to put **psychological distance between yourself and your emotions**, and write about the event in a **detached**, **objective** fashion.

(3) In the box below, write a paragraph **expressing kindness, understanding, and concern** toward **yourself**, much like you would write a **supportive letter to a friend** if this had happened to him or her.

Self-Esteem Condition

(1) In times like these, it is **easy to forget our strengths**. In the box below, write down your **positive characteristics** and indications that you are **competent** and **valuable**.

(2) When you have a bad experience, you can try to **interpret events in a way that makes you feel better about yourself**. In the box below, write a paragraph about the experience, explaining how **what happened was not your fault**.

(3) When we are faced with a past failure, we can remind ourselves of **past successes**. In the box below, write a paragraph about a time when you were in a **similar situation** and you did something that **made things turn out better**.

Writing Control Condition

(1) In the box below, write about your **thoughts**, really **letting yourself go** and **exploring your deepest thoughts** about the negative experience you selected.

(2) In the box below, write about your **emotions**, really **letting yourself go** and **exploring your deepest feelings** about the negative experience you selected.

(3) In the box below, write about your **beliefs**, really **letting yourself go** and **exploring your deepest beliefs** about the negative experience you selected.