Understanding the Self-compassionate Mindset in Older Adults

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Dissertation submitted in partial fulfillment of
the requirements for the degree of Doctor of Philosophy in the Department of
Psychology and Neuroscience in the Graduate School
of Duke University

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ABSTRACT

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Abstract

Self-compassion has been shown to predict well-being, possibly by buffering people against the unpleasant emotional and cognitive reactions that accompany negative life events. Although most previous research has been conducted with young adults, preliminary studies show that self-compassion may be beneficial for older adults. Three studies tested self-compassion's impact on thoughts, emotions, and behaviors associated with aging using samples of individuals between the ages of 62 and 104. Study 1 examined self-compassion as it relates to health promotion behaviors, specifically use of assistance and trying new activities. Although some findings supported the hypotheses, results showed that high and low self-compassionate individuals did not differ in their use of assistance or willingness to try new activities. Study 2 implemented a brief self-compassion manipulation to test its effects on thoughts and emotions. Unfortunately, random assignment failed to equate the experimental conditions, rendering the results difficult to interpret. After controlling for baseline self-compassion, the manipulation did not have the predicted effects on well-being. In fact, participants seemed to benefit more when merely writing about negative events than when writing about them in a self-compassionate fashion. Finally, Study 3 examined self-compassionate cognitions, specifically whether or not self-compassionate thoughts mediate the relationship between trait self-compassion and emotional well-being. Self-compassionate participants did think differently than their low self-compassion counterparts, and these cognitions mediated the relationship between self-compassion and positivity of their responses. However,

cognitions did not mediate the relationship between trait self-compassion and emotion outcomes. Two possible explanations for the unexpected results of the three studies include the relatively healthy nature of the sample and the strength of the self-compassion manipulation. Suggestions for future research include examining how self-compassion relates to the motivations behind engaging in health promotion, allowing participants to write more freely in the self-compassion manipulations, and bringing self-compassion research with older adults into controlled laboratory settings.

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1. Introduction

Despite the variety of negative life changes that accompany aging, many older adults maintain a high level of subjective well-being. The less-than-perfect relationship between objective life conditions and subjective well-being suggests that people's perceptions of the aging experience play an important role in their reactions (George & Clipp, 1991) and raises questions regarding factors that account for variability in well-being among older people. Not surprisingly, researchers who study aging have been quite interested in how people cope with age-related changes and particularly in how certain people come to take a proactive approach to staying healthy and maintaining well-being (Kahana & Kahana, 2003). What are the emotional, cognitive, and behavioral mechanisms that differentiate between older individuals who deal effectively with aging and those who do not?

Some such mechanisms—such as perceived control, social support, and self-esteem—have been shown to serve as protective factors in the aging process (Heckhausen & Schulz, 1995; Krause, 2007). However, a great deal of variance in psychological well-being remains unexplained. The purpose of this research was to examine an important variable that may help people maintain well-being as they age. This variable, *self-compassion*, has been identified as a characteristic that promotes adaptive cognitive, behavioral, and emotional processes in young adults (Neff, 2003a), and preliminary evidence suggests that it should also be linked to well-being and life satisfaction in the elderly. As will be explained, self-compassion involves treating oneself

with kindness and support in the face of adversity, much like people treat loved ones who experience personal problems (Neff, 2003a). People who adopt a self-compassionate mindset in the face of losses, failures, setbacks, and other difficulties tend to be happier, less anxious, more self-forgiving, and more willing to take personal initiative to promote their own well-being than those who are not self-compassionate (Neff, 2003b, Neff, Rude, & Kirkpatrick, 2007).

If self-compassion is shown to predict greater well-being in old age, interventions could be developed that teach older adults to be more self-compassionate. However, the development of a self-compassion intervention for older adults that teaches effective ways to manage the challenges of aging requires research that documents the relationship between self-compassion and well-being in old age and identifies the processes by which self-compassion has positive effects.

1.1 Background

Due to many advances in medical care, the average lifespan of Americans has increased during the past century. People are living longer and consequently requiring more care as they deal with the changes that accompany aging. Yet, some older adults are unable to cope with these changes successfully as reflected in the high level of depression in the elderly (Mirowsky & Ross, 1992). This differentiated decline in well-being suggests that certain personality or coping mechanisms buffer some older people against the stressful events of aging. Understanding these mechanisms should lead to increased

well-being for the older population, specifically for those who are most vulnerable to age-related declines in mental and physical health.

Subjective well-being is composed of the cognitive appraisal that one's life is satisfying, the presence of positive affect, and low negative affect (Andrews & Withey, 1976; Diener & Suh, 1997; Diener et al., 1999). (The terms *well-being, quality of life*, and *life satisfaction* are used synonymously in this paper as researchers have shown that they refer to essentially the same construct; Diener, Suh, Lucas, & Smith, 1999; George, 2006.) Considering the physical, mental, and social changes that are associated with aging, it may seem counterintuitive that older adults report relatively high subjective well-being despite their objective life situations (Carstensen, Gross, & Fung, 1997; George, Okun, & Landerman, 1985; Kunzmann, Little, & Smith, 2000). With increasing age, the likelihood of experiencing stressors such as the death of a partner or friend, becoming dependent on one's children, declining health, and lowered ability to engage in enjoyable and fulfilling activities increases (Baltes & Baltes, 1990; Lee & Markides, 1990; Manton, 1990). Because older people show great variability in how they cope with these changes, research has investigated potential mediators and moderators of the link between people's objective circumstances and their subjective quality of life (Cheng, 2004; Kunzmann et al. 2000; George, 2006). Most of this research has dealt with one of four broad topics involving cognitive appraisals, social support, self-esteem, and coping methods. These literatures suggest that adopting particular perspectives on life, having

the support of friends and family, maintaining high self-esteem, and appraising situations in certain ways lead to higher subjective well-being and better physical health.

1.2 Predictors of Well-being

1.2.1 Cognitive Appraisals

Cognitive appraisals involve how people think about their life situations. Two appraisals that have received attention vis-à-vis older adults are perceived control and sense of coherence. Maintaining a sense of high personal control is associated with well-being and life satisfaction (Bailis & Chipperfield, 2002; Baltes, Staudinger, & Lindenberger, 1999; Bandura, 1997; Rodin, Timko, & Harris, 1985; Schulz & Heckhausen, 1999; Skinner, 1996). However, older people do not always have control over their health, social circumstances, or environment, and encouraging older adults to have a sense of control over these uncontrollable conditions is sometimes not only impossible but perhaps maladaptive.

The lifespan theory of control differentiates between two types of control—primary and secondary (Heckhausen & Schulz, 1995). Primary control involves the extent to which one can control the environment, whereas secondary control involves controlling oneself in relation to the environment (Bailis & Chipperfield, 2002). For those who have primary control over important life domains, this sense of mastery is related to better functioning in the future (Zarit, 1996). However, as people age, they often do not have as much primary control and thus benefit from focusing their efforts on maintaining

secondary control. Therefore, encouraging older adults to take control of their reactions to situations is probably an adaptive strategy for maintaining subjective well-being.

Although some obstacles to maintaining control are inevitable, researchers have noted that social institutions tend to put older adults in situations where their sense of control is further undermined. For instance, being taken care of by other people can contribute to a low sense of control that has maladaptive consequences. Interventions that increase people's perceptions of control as they age show positive benefits for psychological well-being and physical health (Rodin & Langer, 1977), yet giving older adults control over aspects of their environment may not ultimately make up for the overall lack of control they feel as they age.

Related to secondary control is a sense of coherence (SOC). Whereas secondary control involves controlling one's responses to one's circumstances, SOC involves managing one's perceptions of one's place in the world. SOC involves three interrelated beliefs—events in one's environment are understandable and predictable (comprehensibility), resources exist that will help to cope with demands (manageability), and the challenges and demands of life are worthy of personal investment (meaningfulness) (Antonovsky, 1987). The extent to which people comprehend, manage, and draw meaning from life situations underlies well-being. SOC is associated with positive health outcomes and is a protective factor in the aging process (Nesbitt & Heidrich, 2000; Schneider, Driesch, Kruse, Wachter, Nehen, & Heuft, 2004). People with

a stronger SOC make more positive appraisals and are less likely to feel depressed and discouraged.

One of the key components of SOC is meaning, which has also been studied independently of SOC. Meaning involves the extent to which people have a sense of direction and personal identity (Reker, 1997) and is tied to the roles that people occupy (McCall & Simmons, 1966). These roles contribute to people's values, sense of purpose, goals, and their ability to reconcile past experiences (Krause, 2004). Toward the end of life, meaning becomes increasingly important as older adults must reconcile what they set out to do in life with what they actually accomplished (Erikson, 1959). Having meaning in life has been associated with better physical and mental health (Pinquart, 2002), and the relationship between stress and depression is partially mediated by one's sense of meaning, particularly when stress occurs in a highly valued role (Krause, 2004; 2007).

1.2.2 Social Support

Social support predicts well-being throughout the lifespan (Adelmann, 1994; Glass, Mendes de Leon, Marottoli, & Berkman, 1999; Harlow & Cantor, 1996; Young & Glasglow, 1998). A great deal of research indicates that people who have more social support experience less physical and mental decline as they age. Having closer social relationships also protects people against the onset and continuation of physical impairments and disabilities (Mendes de Leon, 1999; Seeman, Bruce, & McAvay, 1996; Unger, McAvay, Bruce, Berkman, & Seeman, 1999). Furthermore, social support is associated with a faster and more complete recovery from disability (Glass, Matchar,

Belyea, & Feussner, 1993; Wilcox, Kasl, & Berkman, 1994). Having an extensive social network provides multiple resources—logistical, emotional, and tangible—that people can pull from when faced with challenges and failures.

However, some studies also suggest that social relationships can be negative and detrimental at times (Krause, 2007; Rook, 1984). To the extent that another person is critical, negative, or demeaning, a social relationship will be maladaptive (Rook, 1984). Furthermore, caring others can also have a detrimental effect on well-being. Instrumental support that involves helping with self-care and other tasks can increase disability because it lowers self-sufficiency (Coyne, Wortman, & Lehman, 1988; Mendes de Leon, Gold, Glass, Kaplan, & George, 2001; Newsom, 1999; Seeman et al., 1996; Turk, Kerns, & Rosenberg, 1992). Overall, though, social support predicts well-being, and older adults are encouraged to pursue social ties, particularly following the loss of a significant relationship (Rook, 1984; Zettel & Rook, 2004).

1.2.3 Self-esteem

Consistent with research showing positive correlates of trait self-esteem in younger people, a study conducted in six countries showed that self-esteem is positively related to life satisfaction for older adults (Fagerstrom et al., 2007). Given that cross-sectional and longitudinal data show that self-esteem declines with age (Ranzjin, Keeves, Luszcz, & Feather, 1998; Robins, Trzesniewski, Tracy, Gosling, & Potter, 2002), the fact that subjective well-being increases with age suggests that older adults may engage in compensatory strategies that help to maintain well-being despite decreased self-esteem.

Some researchers have suggested that older people use more effective coping and emotion regulation strategies than younger people (Baltes & Baltes, 1990; Brandstaedter & Greve, 1994; Carstensen, Isaacowitz, & Charles, 1999). Erikson (1968) suggested that older adults are more accepting of themselves and, thus, have less reason to self-aggrandize and self-promote. The idea that older adults are more comfortable with themselves suggests that promoting self-esteem in the elderly may not be the best way to improve their well-being. Although self-esteem is positively related to life satisfaction, research shows that older adults who have higher self-esteem may adopt an identity strategy that involves ignoring aspects of themselves that are in decline and focusing on those aspects that are still healthy (Sneed & Krauss Whitbourne, 2001). Although this strategy is associated with higher self-esteem, turning a blind eye to one's failings is often not adaptive.

1.2.4 Coping

A fourth area of research on well-being in old age targets the role of problem-focused and emotion-focused coping. Problem-focused coping involves fixing the problem, whereas emotion-focused coping involves changing one's emotional response to the problem (Lazarus, DeLongis, Folkman & Gruen, 1985). As older adults encounter more unchangeable problems, they should rely more on emotion-focused coping to maintain well-being. Another line of research has differentiated between compensatory and accommodative coping strategies. Compensatory coping involves compensating for one's failures by performing well in another area, and accommodative coping involves

changing one's goals to allow for the failure. Research suggests that compensatory coping strategies are beneficial up to the age of 70, at which point accommodative coping strategies appear to be more useful (Brandstadter, Rothermund, & Schmitz, 1997). At some point, older adults can no longer compensate in other areas and benefit emotionally by allowing lower performance. Selection, Optimization, and Compensation Theory suggests that optimal coping utilizes both compensation and accommodation (Baltes & Baltes, 1990; Freund & Baltes, 2002; Freund, Li, & Baltes, 1999). As people age, they must be selective in choosing the activities on which to focus their efforts. By disengaging from goals that are no longer attainable, they can optimize their remaining capacities and focus on more realistic and attainable goals. This type of goal flexibility has beneficial implications for well-being in old age.

Another area of coping research focuses on proactive coping, also termed preventative coping and anticipatory coping. Proactive coping involves making an effort to prepare for potential stressful events that could occur in the future (Aspinwall, 2005; Aspinwall, & Taylor, 1997; Greenglass, 2002). In this view, the many changes, losses, and declines that accompany aging can be considered a multitude of potential future stressors. Kahana and Kahana (2003) proposed a proactivity-based model of successful aging suggesting that one's internal resources can affect proactive adaptations, including traditional preventative adaptations (such as exercise), corrective adaptations (such as marshalling support), and emergent adaptations (such as self-improvement). People who engage in proactive coping are more likely to avoid certain mental and physical problems

that accompany aging (Greenglass, Fiksenbaum, & Eaton, 2006). As will be seen, people who are higher in self-compassion may be more likely to cope proactively, thus preparing themselves for future challenges and losses.

1.2.5 Summary

Research has focused on four broad sets of factors that may be associated with well-being in old age. The cognitive appraisals involve beneficial thoughts and beliefs, social support involves access to resources that are provided by other people, self-esteem may be related to well-being (although not all research shows a relationship between well-being and self-esteem in the elderly), and certain cognitive and behavioral judgments help people to cope with changes that are associated with aging. The focus of the research described below was to extend existing research by examining the role of self-compassion in this picture. As will be described in detail, practicing self-compassion should protect people from certain declines in well-being and play a role in promoting psychological and physical health throughout the aging process.

1.3 Self-compassion

1.3.1 Self-compassion and Well-being

Self-compassion is a recently-identified construct that may play a role in adjustment to older age. Self-compassion involves "being open to and moved by one's own suffering, experiencing feelings of caring and kindness toward oneself, taking an understanding, nonjudgmental attitude toward one's inadequacies and failures, and recognizing that one's experience is part of the common human experience" (Neff,

2003a, p. 224). People who are self-compassionate treat themselves kindly when things go wrong, do not personalize their difficulties, and keep a more objective perspective of their situation. Just as people show compassion to loved ones who experience difficulties in life, some people respond to their own problems with self-directed compassion rather than with self-criticism, pity, or broad personalization. Self-compassion may contribute in important ways to understanding well-being in older people because differences in how people react to age-related changes in health, mental capacity, and life circumstances may reflect how compassionately they treat themselves when problems arise. Furthermore, unlike many known predictors of well-being, self-compassion can potentially be taught to people who are particularly self-critical (Gilbert & Procter, 2006). Adopting a self-compassionate mindset should affect how older adults feel about aging and themselves, as well as the choices that they make when faced with challenges, losses, and failures.

Studies of young adults show that self-compassion correlates highly with indicators of mental health and adjustment, including lower depression, lower anxiety, and higher life satisfaction (Neff, 2003b). It also has a positive association with happiness, optimism, positive affect, wisdom, personal initiative, curiosity, exploration, and agreeableness, and a negative relationship with neuroticism (Neff et al., 2007b). These associations show that self-compassion is a positive and beneficial characteristic that promotes healthy functioning, particularly in the face of failures, losses, and life stress (Leary, Tate, Adams, Allen, & Hancock, 2007). Importantly, although self-

compassion correlates with trait self-esteem (presumably because people who treat themselves kindly rather than harshly feel better about themselves), studies show that the relationships between self-compassion and psychological well-being are independent of those of self-esteem (Leary et al., 2007; Neff, 2003b). Indeed, self-compassion may uniquely predict well-being more strongly than self-esteem does (Leary et al., 2007).

Experimental studies of self-compassion have shown that self-compassion moderates reactions to negative or difficult circumstances. Self-compassion helps people maintain balanced emotional and cognitive reactions toward themselves, others, and difficult situations. Although self-compassionate responses could also be interpreted as indifference, indulgence, or a refusal to accept responsibility, research clearly shows that, on the contrary, people who are self-compassionate are more likely to accept responsibility for their mistakes and failures than those who are less self-compassionate (Leary et al., 2007). Their self-compassionate stance allows people who are high in self-compassion to accept responsibility and to move on rather than engaging in defensiveness or denial.

1.3.2 Self-compassion and Aging

Based on what research reveals about self-compassion in young adults, it also seems a likely predictor of well-being in older people and, in fact, self-compassion may become increasingly important for well-being as people age. As noted, aging involves negative life changes, such as declines in mental and physical health and loss of social connections. Many of these experiences involve lapses or failures, as when people

display memory failures or are unable to perform common tasks. Many older people become self-critical and angry in such situations, castigating themselves and bemoaning their lowered ability to function as they once did (Mirowsky & Ross, 1992). By adopting a more self-compassionate mindset, older adults should be more accepting of their failings, losses, and inadequacies because they are able to take a broader perspective and treat themselves kindly. Other negative experiences, such as the loss of a loved one, may evoke anger or despair even without self-responsibility. Self-compassion seems to protect people in many types of negative situations and events, including both those for which the person has some personal responsibility and those that are beyond one's control (Leary et al., 2007, Study 1). Thus, self-compassion may help older people to deal with an array of negative events, including coming to terms with the inevitability of their own death.

Even when older adults are not facing negative life changes, self-compassion may play a role in the ways that they prepare for future challenges. As noted, proactive coping involves preparing for difficult or stressful events that may occur. Aging is a looming stressful event for everyone approaching the later part of life. Some people ignore the possibility of negative changes for as long as possible until they become pertinent. In fact, as discussed earlier, people who have high self-esteem tend to engage in denial of potentially negative events more than people who have lower self-esteem. However, based on what is known about self-compassion, people who are higher in self-compassion should be more likely to act proactively before they are faced with age-

related changes. Just as compassion directed towards others leads people to promote the others' welfare, self-compassion should lead people to take better care of themselves.

For example, because they accept their failings, problems, and inadequacies with greater equanimity, self-compassionate older adults may be more likely to follow medical advice that will promote their long-term health and seek medical assistance more quickly when they need it. Self-compassionate older adults may also be more willing to accept assistance from others when needed because they take more responsibility for their problems. Self-compassionate older adults may be more willing to try new and challenging activities (activities that may reduce the probability of dementia; Erickson et al., 2007) because they are less afraid of failure and other people's impressions of them. All of these hypotheses suggest that self-compassion is associated with addressing negative changes earlier and trying new things that could maintain physical and mental health.

Thus, theory and research suggest that self-compassion may both promote adaptive responses to negative events in older age and prompt people to take steps that prepare for future negative events. If this is the case, teaching older people to be more self-compassionate should increase well-being, especially among those who are particularly self-critical. Research on the role of self-compassion in the elderly is needed in order to design an effective intervention. Specifically, before designing a self-compassion intervention, I need to know how self-compassionate older adults' thoughts about themselves and their lives differ from those of less self-compassionate people, and

I need to test the effects of brief self-compassion inductions in controlled experimental studies. The results of such studies will then allow an informed approach to designing future interventions.

1.4 Preliminary Studies

Allen, Goldwasser, and Leary (in press) conducted two studies assessing the relationship between self-compassion, objective life conditions, and subjective well-being in older adults. Both studies tested the hypothesis that self-compassion is a predictor of well-being among older adults. The first study included 132 participants over the age of 65 (recruited from the Duke Aging Center's subject registry) who completed measures of self-compassion, physical health, and well-being. The results of Study 1 showed that, as expected, indicators of both physical health and self-compassion were related to measures of well-being among older adults. Of course, the fact that people who report poorer health have lower subjective well-being is unsurprising, and the main effects of self-compassion on general well-being, successful aging, emotional problems, and life satisfaction are consistent with previous research on young adults. More importantly, the presence of significant interactions showed that, as predicted, self-compassion was particularly beneficial for participants who reported more negative life circumstances. Participants high in self-compassion maintained higher well-being and life satisfaction even when reporting greater physical pain, poorer hearing, more physical problems, or poorer general health.

Although self-compassion was related to positive outcomes across the board, the results suggested that self-compassion may be particularly important for people experiencing negative life events. Self-compassion seems to be a powerful moderator between physical health and subjective well-being and may help to explain some of the variance in how people deal with the negative aspects of aging. People who respond to these problems self-compassionately have a greater chance of maintaining well-being throughout later life.

This initial study suggested that self-compassion may help to protect older individuals who experience negative life events from a decline in well-being. In part, this effect is probably due to the coping strategies that are inherent in the self-compassionate mindset (Allen & Leary, 2010). However, the possibility exists that, in addition to construing negative events differently, self-compassionate people also engage in patterns of behavior that promote their well-being under difficult circumstances. Just as people show others compassion by treating them in ways that offer help and promote their well-being, self-compassionate people may treat themselves in similar caring ways.

The second study in Allen et al. (in press) examined whether older people who are higher in self-compassion are more willing to use assistance such as walkers, other people, and hearing aids as well as to engage in memory tactics that might help to maintain their cognitive functioning. The primary hypothesis was that self-compassionate people would be more accepting of their limitations and thus take more proactive measures to maintain well-being than people who are lower in self-compassion. People

who were higher in self-compassion were predicted to be more willing to use assistance due to their lower defensiveness about their personal limitations and their desire to promote their own well-being (Neff, Hsieh, & Dejitterat, 2005; Neff et al., 2007b).

Seventy-one older adults over the age of 60 recruited from an assisted living center completed a questionnaire measuring self-compassion, willingness to use assistance, and how much using assistance bothered them. The results only partially supported the hypotheses. Participants scoring higher in self-compassion were more willing to ask people to repeat themselves when they could not hear what others said, and among people who had difficulty walking, those who were higher in self-compassion were more willing to use a walker. These results supported the notion that self-compassionate people are more accepting of their physical limitations and more willing to take steps to maintain their well-being (Leary et al., 2007; Neff, 2003a; Neff et al., 2007b).

Self-compassion also moderated the relationship between memory difficulty and use of mnemonic tricks and strategies. For participants who had relatively few difficulties with memory, higher self-compassion was related to greater use of memory tactics. When people begin to have difficulty remembering things, they are motivated to slow the process of memory decline and likely to utilize mnemonic tactics. This effect may be stronger among people who are high rather than low in self-compassion because self-compassion is associated with taking personal initiative as well as the desire to maintain a fulfilling life (Neff et al., 2007b). Efforts to improve one's memory may help to maintain

neural plasticity and slow the process of memory decline (Erickson et al., 2007; Valenzuela & Sachdev, 2006).

Although these findings supported the hypotheses, one finding was not consistent with predictions. Among people who had trouble walking, those who were high in self-compassion were less willing to use another person for mobility compared to people lower in self-compassion. This unexpected finding might reflect the possibility that self-compassionate people desire to remain active and independent for as long as possible and therefore do not use support unnecessarily, although this would not explain why they were more willing to use a walker. Perhaps using a walker has different symbolic or social meaning than using a person for mobility, which connotes dependence on other people. More research is needed to examine the ways in which older people who are low versus high in self-compassion construe different kinds of physical assistance.

One result from Study 2 of Allen et al. (in press) supported the prediction that older people who are higher in self-compassion are less bothered by using assistance. Participants who scored higher in self-compassion reported being less bothered by needing assistance to walk than those low in self-compassion, possibly because they accept their limitations and see their difficulties as part of normal human experience rather than as unique and isolating (Leary et al., 2007; Neff, 2003a; Neff, Kirkpatrick, & Rude, 2007a).

In sum, the preliminary studies showed that self-compassion predicts well-being in an older population. Specifically, participants who were experiencing physical

difficulty seemed to derive the greatest benefit from being self-compassionate. Some evidence also suggested that self-compassion may be positively related to the use of assistance. The purpose of the present research was to extend these findings in order to understand how self-compassion may be beneficial throughout the aging process. Study 1 addressed the relationship between self-compassion and various health promotion behaviors including taking vitamins, exercising regularly, using assistance, and trying new activities. Study 2 involved a short self-compassion induction to test the hypothesis that leading older adults to think about the aging process in a self-compassionate way would lead to positive changes in emotional outcomes. Finally, Study 3 focused on the cognitions of self-compassionate individuals, specifically how these cognitions differed from those of less self-compassionate participants. Additionally, an aim of Study 3 was to test whether these cognitions mediated the relationship between trait self-compassion and indices of emotional well-being. Together these studies were designed to provide insight into how self-compassion affects thoughts, emotions, and behaviors as people age.

2. Study 1: Self-compassion and Health-promoting Behavior

In addition to replicating and extending the findings from the preliminary studies with respect to the relationship between self-compassion and well-being, Study 1 examined the relationship between self-compassion and health-promotion behaviors among older adults. Substantial research has focused on predictors of health promotion in the elderly, and Study 1 extended this work by testing the hypothesis that self-compassion is a positive predictor of health promotion behaviors. As noted, research shows that self-compassionate individuals take greater responsibility for their problems as well as greater personal initiative with respect to actions that enhance their well-being (Neff, 2003b; Leary et al., 2007). Thus, self-compassion should be positively related to health promotion behaviors such as exercise, taking vitamins, and so on. Furthermore, based on the finding that self-compassionate people take more personal responsibility, self-compassion should predict the willingness to seek and use assistance in various forms when needed. In addition, self-compassion should relate to less embarrassment and efforts to hide one's need for assistance.

Some health promotion behaviors affect cognitive functioning. The brain maintains some amount of plasticity even during the later years of life, and research suggests that engaging in new activities lowers memory loss and probability of dementia (Wang, 2008; Erickson et al., 2007; Valenzuela, Breakspear, & Sachdev, 2007; Valenzuela & Sachdev, 2006). Trying new things results in more synaptic connections and better cognitive functioning (Erickson et al., 2007). Yet, many older people resist new activities,

particularly challenging ones, because they are afraid of failing or being evaluated negatively by others. Our research suggests that young adults who are higher in self-compassion respond less negatively to failure feedback (Leary et al., 2007), so I expected older adults who are high in self-compassion to be more willing to engage in activities that involve potential failure, including the kinds of activities that are known to enhance mental and physical well-being among older individuals.

2.1 Methods

2.1.1 Participants

One hundred and fifty-five participants (87 women, 68 men) were recruited from the local community via pubic fliers at local senior citizen centers, word of mouth communication, and the Duke Aging registry. Participants ranged from 62 to 104 years of age (M = 73.9, SD = 6.82), and came from a variety of ethnic backgrounds; 109 were Caucasian (70.3%), 42 were African-American (27.1%), two were Asian American (1.3%), one was Hispanic (.6%) and one was Native American (.6%). Ninety-two participants were married (59.4%), 35 were widowed (22.6%), 25 were divorced (16.1%), and three reported being single (1.9%). A large majority of the sample came from independent living situations (149, 96.1%), and only six participants reported living in assisted living (3.9%).

2.1.2 Procedure

After being contacted by the researcher or seeing a flier advertising the study, participants contacted the researcher to request that a questionnaire be sent to them at

their home. Participants received an envelope including an information sheet, two copies of an informed consent form, the questionnaire (Appendix A), a payment form, and a form on which participants could indicate their willingness to participate in future studies. After completing the questionnaire, participants returned the materials in the pre-paid envelope provided. Upon receipt, the researcher mailed the participant a check for $10.00. The questionnaire was designed to take 45-60 minutes to complete; however, participants completed the questionnaires at home, and thus there is no way to know how much time it required or whether participants completed the questionnaire in one sitting.

2.1.3 Materials

Demographic data. Participants first provided information about their gender, age, ethnicity, marital status, and living situation.

Successful Aging. The degree to which participants believed that they were aging well was measured with the five items from the Attitude toward Own Aging scale (Lawton, 1975; Liang & Bollen, 1983). Questions included "I am aging successfully," "As people get older, they are less useful," and "I am as happy now as I was when I was younger." Participants responded on a 5-point scale from *strongly agree* to *strongly disagree* and the 5 items were averaged to create an index of successful aging.

Depression. The Geriatric Depression Scale-short form includes 15 items to which respondents answer "yes" or "no" (Sheikh & Yesavage, 1986). Ten items on the scale indicate presence of depression when answered positively ("Do you feel your life is empty"), while the rest indicate depression when answered negatively ("Are you

basically satisfied with your life?”). Every depressive answer was scored as a 2 and each non-depressed answer was given a 1, and then the 10 items were averaged. The scale was found to have 92% sensitivity and 89% specificity when evaluated against depression diagnostic criteria (Kurlowicz & Greenberg, 2007).

Self-compassion. After receiving feedback from participants in earlier studies that the Self-Compassion Scale (Neff, 2003b) seemed too long, I shortened the original 26-item scale to 12 items that included the four items that loaded highest on each of the three factors (self-kindness, common humanity, and mindfulness). The shortened scale correlated 0.91 with the original 26-item scale, and the mean of the shortened scale was 3.65, which is comparable to studies using the full scale with an older population. As in earlier studies with older adults, the reliability of the self-compassion scale (alpha = .75) was slightly lower than the reliability of the scale when used with younger adults (alpha of about .87) (Allen et al., in press). After the current study was conducted, Raes, Pommier, Neff, and Van Gucht (2011) created a different 12-item version of the Self-compassion Scale with a reported reliability of .87 when used with young adults. However, in head-to-head comparisons of the two shortened scales (Allen et al., in press), the two scales have similar reliabilities with an older population. These comparisons show that the two brief versions of the Self-Compassion Scale are essentially equivalent in assessing self-compassion in older people.

Health Promotion Behaviors. Participants reported whether or not they took a daily vitamin (*yes* or *no*), and rated how often they exercised each week on an 8-point

scale (1 = *I never exercise*; 8 = *7 times a week*). Exercise was defined as any type of walking, jogging, aerobics, yoga, or seated exercise.

Number of Active Organizations and Time Spent with Organizations. Participants listed all of the organizations in which they were an active member and listed how many hours per month they were engaged with that organization.

Interests and Activities since Turning 60. Participants listed the activities, hobbies, and experiences they tried for the first time since turning 60. Participants also indicated if they were still participating in each of these activities.

Trying New Activities in Different Domains. Participants reported how interested they would be in participating in activities that might lead to improvements in 6 domains--physical strength and endurance, memory, intelligence and problem solving abilities, friendships, mood, and helping other people. For each domain, participants rated their interest in participating in both easy and challenging activities that might lead to improvements. Participants responded on a 5-point scale from *not at all interested* to *extremely interested.*

Physical and Mental Difficulties. Participants rated their level of difficulty hearing without a hearing aid, remembering people's names, and walking without assistance. Participants responded on a 5-point scale from *not at all difficult* to *extremely difficult*. Participants were also asked how frequently they experience bodily pain and responded on a 5-point scale from *not at all* to *almost always.* As another measure of pain, participants indicated the intensity of their pain on a 5-point scale from *I don't*

experience any pain to *extremely intense.* These two questions were averaged to create an index of pain experience.

*Use of Assistance***.** Participants responded on a 5-point scale (from *never or almost never* to *almost always*) to questions assessing their use of various forms of assistance: using a hearing aid to understand what people are saying, asking people to repeat what they are saying, using mnemonic tricks, strategies, or techniques to remember things, taking medicine for pain, using a walker for stability when walking from one place to another, and using another person for stability when walking from one place to another.

Bothered by Assistance. Participants rated how much it would bother them to use assistance for hearing, memory, pain, and walking problems on 5-point scales from *not at all* to *extremely.*

Public concealment. Participants rated how often they tried to hide that they need assistance using a 5-point scale from *almost never* to *almost always* for hearing, memory, pain, and walking difficulties. Participants who did not need assistance hearing or walking or who did not take pain medication were given the option of skipping the question, so the analyses were performed only on participants who indicated needing assistance for hearing (n = 84), walking (n = 29), and pain (n = 53). People of all ages experience instances of forgetfulness; therefore, participants were not given the option to skip the public concealment question for memory difficulty.

PANAS-X (Watson & Clark, 1994). The 60 item extended version of the PANAS includes the Negative Affect (10 items) and Positive Affect (10 items) scales from the 20 item PANAS. In addition, the PANAS-X includes Basic Negative Emotion scales for fear (6 items), hostility (6 items), guilt (6 items), and sadness (5 items), Basic Positive Emotion scales for joviality (8 items), self-assurance (6 items), and attentiveness (4 items), and Other Affective state scales for shyness (4 items), fatigue (4 items), serenity (3 items), and surprise (3 items). Participants rated the extent to which they feel each emotion on average from 1 (*slightly or not at all*) to 5 (*extremely*).

Level of Impairment. Impairment was assessed using the Branch Instrumental Activities of Daily Living (IADLs) questionnaire (Branch, Katz, Kniepermann & Papsidero, 1984). Participants rated the degree to which they require help with personal care, cutting food, getting in and out of bed or a chair, getting dressed, getting up and down stairs, and bathing themselves on a scale of 1 (*not at all*) to 5 (*a lot*). The six items were averaged to create an index of impairment.

Mental Status. Participants completed the Short Portable Mental Status Questionnaire (Pfeiffer, 1975) to assess level of cognitive functioning and eliminate participants who may suffer from dementia. Questions assess general knowledge of current events such as "Who is the current President of the U.S.?" as well as understanding of time and place such as "What is the date today?" If a participant responded incorrectly to four or more of the 10 questions, his or her data were eliminated from the analyses.

2.2 Results

2.2.1 General Well-being

Means, standard deviations, and correlations among all individual difference variables are presented in Table 1. As can be seen, self-compassion was positively correlated with successful aging (r =.42, p < .001) and negatively correlated with depression (r = -.46, p < .001). These correlations are consistent with the results of previous research showing that self-compassion is associated with higher well-being.

Table 1 also shows the relationships between the individual difference variables and participants' health promotion behaviors—taking vitamins, and exercising. Self-compassion was significantly related to taking vitamins (r = .18, p =.027), but marginally related to frequency of exercise (r = .13, p =.106).

2.2.2 Use of Assistance

Hierarchical multiple regression analyses were used to examine the effects of self-compassion, ratings of difficulty in a particular domain (hearing, remembering, pain), and their interactions on participants' willingness to use assistance for these problems, how embarrassed they would be to use assistance, and how likely they are to hide that they need assistance. The means, standard deviations, and bivariate correlations for these variables are presented in Table 2. In each analysis, self-compassion was entered on Step 1, difficulty in the relevant domain was entered on Step 2, and the 2-way interaction between self-compassion and difficulty in that domain was entered in Step 3 Results are shown in Tables 3-5.

Hearing. Hierarchical multiple regression analysis was used to predict people's willingness to ask others to repeat themselves and willingness to use a hearing aid as a function of self-compassion, self-reported hearing acuity, and their interaction. Self-compassion did not significantly predict willingness to use a hearing aid, $t(146) = .65$, $p = .518$, $\beta = .05$, or asking other people to repeat themselves, $t(146) = -.42$, $p = .673$, $\beta = -.02$. However, self-compassion did significantly predict how embarrassed people reported they would be to use assistance to hear as well as how likely they would be to try to hide that they needed assistance hearing. More self-compassionate participants reported that they would be less embarrassed to use assistance, $t(146) = -2.88$, $p = .005$, $\beta = -.23$, and that they were less likely to hide their need for assistance from other people, $t(81) = -2.64$, $p = .010$, $\beta = -.28$.

Memory. Self-compassion, self-reported memory difficulty, and their interaction were used to predict the frequency with which participants used memory tricks and strategies to help them remember things. Self-compassion did not significantly predict participants' use of memory tricks and strategies, $t(149) = .29$, $p = .772$, $\beta = .02$, but self-compassion did significantly predict how much participants were embarrassed when they had trouble remembering things. More self-compassionate participants felt less embarrassed by lapses in memory, $t(149) = -2.13$, $p = .035$, $\beta = -.16$. In addition, self-compassionate participants were marginally less likely to try to hide their lapses in memories from others, $t(149) = -1.71$, $p = .09$, $\beta = -.13$.

Pain. Self-compassion, pain experience and their interaction were used to predict participants' use of pain medication. Self-compassion significantly predicted how often participants reported taking medicine for pain. Self-compassionate participants reported taking pain medication less frequently than participants who were less self-compassionate, $t(149) = -2.41$, $p = .017$, $\beta = -.16$. Self-compassion also predicted how embarrassed participants would be to use pain medication, showing that self-compassionate participants were less embarrassed by the possibility of needing pain medication than their less self-compassionate counterparts, $t(149) = -1.74$, $p = .085$, $\beta = -.14$. Although the effect was in the expected direction, self-compassion did not significantly predict how often participants tried to hide that they used medication.

Mobility. Almost all of the participants reported living independently; therefore, their mobility was fairly good. In fact, 114 of the 155 participants reported no walking difficulty. Thus, the 5-point rating of walking difficulty was dichotomized to distinguish participants with no walking difficulty and those who reported any amount of walking difficulty. Not surprisingly, few participants used assistance to walk. Only 11 participants reported any use of a walker, and 30 participants reported some use of another person for assistance. These outcomes were also dichotomized to reflect *no use of assistance* vs. *any use of assistance.* The impact of self-compassion and walking difficulty on the use of assistance was analyzed with stepwise logistic regression analyses. The dichotomized index of walking difficulty and the zero-centered self-compassion variable were entered into the model in Step 1, and their interaction was entered on Step 2. Results of the

logistic regression analyses are reported in Table 5. As can be seen, walking difficulty significantly predicted use of a walker and use of another person for assistance. However, self-compassion was not related to using assistance for mobility.

Participants were asked how much it would embarrass them to use assistance to walk. Over half of the sample responded that they would not be embarrassed at all by the need for assistance. This embarrassment variable was dichotomized to reflect *not embarrassed at all* (n = 86) vs. *any amount of embarrassment* (n = 69). Logistic regression analysis revealed that self-compassion predicted embarrassment; self-compassionate participants were more likely to report not being embarrassed at all (See Table 5).

Only 30 participants responded to the public concealment question, so the outcome was dichotomized into those who never tried to hide that they needed assistance walking (n = 14) and participants who indicated that they hid their need for assistance (n = 16). As before, logistic regression analysis was used to determine the impact of walking difficulty and self-compassion on public concealment, but no significant effects were obtained, possibly because the small n rendered the analysis very low in power.

2.2.3 Trying New Activities

Participants listed the organizations in which they were active members and indicated how many hours per month they spent with each organization. Participants also listed activities, hobbies, and experiences they started after turning 60 and indicated whether or not they still participated in those activities. The means and standard

deviations are listed in Table 6 along with the correlations between these indices of trying new activities and self-compassion. As can be seen, self-compassion did not correlate with these raw indices of trying new activities.

As another index of trying new activities, I created a variable to reflect persistence in new activities. Using the number of activities participants started since turning 60 and the number of activities they still engaged in, a variable was created to indicate the proportion of activities that participants started since age 60 in which they were still participating. Sixty-seven of the 137 participants who answered the question had a 1-to-1 ratio indicating that they were still participating in all of the activities they started since turning 60. This variable was dichotomized to reflect those who were not still participating in all of the activities that they had started (n = 70) and participants who were still participating in all of the activities they had started (n = 67). Logistic regression analysis indicated that self-compassion significantly predicted persistence in new activities, $\chi^2 = 7.12$, $p = .008$, Exp (B) = 2.47. Participants who scored high in self-compassion were 2.47 times more likely to continue activities that they first tried in older age.

Participants also rated their interest in participating in activities that could lead to improvements in six domains (physical strength and endurance, memory, intelligence and problem solving abilities, friendships, mood, helping other people). The difficulty of the activity was varied so that participants reported their interest in participating in both easy and challenging activities. A repeated measures multiple regression analysis was

conducted (using the GLM procedure in PASW) to test whether self-compassion predicted participants' interest in these activity domains and whether this relationship was moderated by the difficulty of the proposed activity. Not surprisingly, a main effect of domain showed that participants were more interested in some activities than others, and participants were more likely to say they would try easy activities ($M = 3.50$, $SE = .07$) as opposed to challenging ones ($M = 3.19$, $SE = .08$), $F(1,146) = 42.23$, $p < .001$.

More importantly, these effects were qualified by a significant interaction of self-compassion by activity domain, $F(5,142) = 3.57$, $p = .005$. The interaction was examined by running separate regression analyses for each of the six domains. For each domain, participants' responses for the easy and challenging activities were averaged to create an average willingness to try a new activity in that domain. Self-compassion negatively predicted participants' willingness to try new activities that would improve their mood. That is, highly self-compassionate participants were less likely to say that they would try new activities that would improve their mood than less self-compassionate participants, $t(151) = -2.71$, $p = .008$, $\beta = -.22$. Self-compassion did not significantly predict willingness to try new activities that would improve physical strength and endurance, $t(151) = .56$, $p = .573$, $\beta = .05$; memory, $t(151) = -1.26$ $p = .209$, $\beta = -.10$; intelligence, $t(151) = -.94$, $p = .348$, $\beta = -.08$; friendships, $t\ (151) = -.59$, $p = .554$, $\beta = -.05$; or ability to help others, $t(151) = .89$, $p = .377$, $\beta = .07$.

2.3 Discussion

The results of Study 1 showed that older people who are high in self-compassion believe that they are aging more successfully and experience lower depression than those who are low in self-compassion. The question is whether self-compassionate people engage more in behaviors that promote their physical and psychological well-being than people who are low in self-compassion or whether the beneficial effects of self-compassion are due primarily to how self-compassionate people think about themselves and their lives as they age.

Results showed that self-compassion was not related to willingness to use any form of assistance, including using a walker, relying on another person for support while walking, wearing a hearing aid, asking others to repeat themselves, or adopting memory tricks and strategies to remember things better.

However, self-compassion was negatively related to the use of pain medication and positively related to taking vitamins and exercising (although the effect for exercise was marginal). Taking vitamins or exercising to promote one's well-being seem straightforward, but the effect for pain medication is less clear. On one hand, pain medication may be beneficial to one's well-being, and refusing to take it could result in unnecessary pain and lower quality of life. On the other hand, taking pain medication when it is not needed could result in psychological or physical dependence or in undesired side effects and thus be maladaptive overall. The negative relationship between self-compassion and use of pain medication suggests either that people who are high in

self-compassion may be more concerned about the negative effects of using pain medication than people low in self-compassion or that the thoughts and feelings that are associated with a self-compassionate response to pain render pain medication less necessary. For example, the mindfulness component of self-compassion could cause self-compassionate participants to be less likely to exacerbate their pain and less likely to experience strong negative emotions when they are in pain.

Although self-compassion was not related to participants' willingness to use assistance, self-compassion was negatively associated with embarrassment and with the desire to conceal one's need for assistance from other people. These findings show that although high and low self-compassionate people may use the same amount of assistance, their thoughts and feelings concerning use of assistance are different. One component of self-compassion, common humanity, may be particularly responsible for this relationship. People who see their situation as being part of the human condition as one ages rather than unique to them should experience less embarrassment about their needs and be more willing to share the details of their situation with others (Neff, 2003a; Neff et al., 2007a; Leary et al., 2007).

Some evidence suggested that self-compassion is related to people's willingness to try new activities. Although self-compassion was not related to the number of activities that participants started after the age of 60, high self-compassionate participants were more likely to persist in the activities that they started. One possible explanation for this effect is that participants who stopped participating in their new activities did so for

reasons pertaining to physical difficulty, personal failure, or embarrassment. To the extent that self-compassion is related to a lower fear of failure and greater overall persistence (Neff et al., 2005), as well as to recognizing that struggling in activities is normal, self-compassionate people may weather the frustrations, setbacks, and difficulties of new activities more successfully.

Across most domains, self-compassion did not appear to play a role in people's willingness to try new activities. However, self-compassion did predict people's willingness to try new activities that might improve their mood. Contrary to expectations, however, high self-compassionate participants were less likely to try new activities that would improve their mood. Perhaps high self-compassionate participants do not feel the need to improve their mood because they already feel more positively overall and use self-compassionate thinking to cope with difficult events (Allen & Leary, 2010). In contrast, low self-compassionate participants not only experience more negative moods but also cope less effectively with negative events. Thus, they may be more motivated to engage in activities that make them feel better.

In brief, Study 1 provides further confirmation that self-compassion relates to thoughts and feelings associated with negative events. However, the findings are mixed regarding self-compassion's relationship with health promotion behaviors. Self-compassion was related to taking a vitamin, exercising frequency (marginally), and persistence in new activities; however, it did not predict willingness to use assistance or try new activities. Furthermore, self-compassion was negatively related to the use of pain

medication and negatively related to trying new activities to improve one's mood. This study addressed a small number of possible health promotion behaviors, and perhaps further studies will be able to clarify when self-compassion is related to health promotion, either negatively or positively.

3. Study 2: Inducing State Self-compassion

The aim of Study 2 was to determine whether leading older adults to think self-compassionately about aging produces positive changes in their feelings and attitudes about aging. Although the effects of a brief self-compassion induction would be expected to be short-lived, demonstrating that thinking self-compassionately can influence even temporary changes in reactions to aging is needed before large-scale interventions are designed. Two previous experimental investigations, both of them laboratory studies using college students as participants, have increased self-compassion temporarily in ways that changed participants' emotional reactions, so it should be possible to increase self-compassion with respect to aging. Leary et al. (2007, Study 5) asked participants to answer three questions that led them to think about a negative event that they had experienced in a self-compassionate way (coinciding with the three self-compassion components identified by Neff, 2003a). This brief self-compassion induction led participants to take greater responsibility for the event, experience less negative affect, and report feeling more similar to other people who had experienced similar things compared to participants whose self-esteem was boosted, participants who merely wrote about their feelings about the negative event, and participants in a control group.

In a study that dealt with guilt-induced eating (Adams & Leary, 2007), a self-compassion induction was used that was specific to eating unhealthy and calorie-laden foods. After female participants engaged in an unhealthy eating behavior (consuming a doughnut), the researcher led some participants to frame their overeating in a self-

compassionate manner. Highly restrictive eaters who received the brief self-compassion induction were less distressed and subsequently ate less in a follow-up taste test compared to restrictive eaters who did not receive the self-compassion induction. In both of these studies, the brief self-compassion induction led participants to respond to negative events with greater equanimity. Study 2 focused on inducing self-compassion in a way that leads older adults to be more accepting and understanding of the events and experiences associated with aging. The primary purpose of the study was to test the hypothesis that inducing participants to think about a negative event self-compassionately leads to self-compassionate cognitions and positive emotions.

3.1 Methods

3.1.1 Participants

Participants in Study 1 were asked to complete a contact form if they wished to be contacted for future studies. The participants who returned this form were contacted by phone and asked to participate in Study 2. Eighty-three participants completed and returned questionnaires; however eight were discarded due to insufficient data. Therefore, 75 participants (49 women, 26 men) are included in the analyses. Participants ranged from 65 to 88 years of age (M = 73.4, SD = 5.63). Fifty-two participants were Caucasian, and 23 participants were African-American. Regarding marital status, 44 participants described themselves as married, 17 reported being widowed, 12 were divorced, and two indicated that they were single. All but one participant reported living independently.

3.1.2 Procedure

Participants were contacted by phone and asked to participate in the study. The researcher mailed a questionnaire packet to individuals who wanted to participate. Participants who returned the questionnaire were mailed a check for $10.00 and thanked for their participation. The method of inducing a self-compassionate mindset was similar to that used by Leary et al. (2007) with the exception that it was geared toward older adults and focused specifically on aging. After signing the informed consent form, participants were told to "think about a negative event associated with aging—for example, something that involved failure, illness or disability, memory problems, or embarrassment." Participants were asked to describe the event fully, providing details concerning what led up to the event, who was present, precisely what happened, and how they felt and behaved at the time (instructions are in Appendix B).

Participants were randomly assigned to one of three conditions that differed in the nature of the questions that participants answered about this event—a self-compassion induction condition, a writing only condition, and a control condition (Appendix C). Participants in the **self-compassion condition** received three prompts to which they responded in paragraph form. The first prompt focused on the common humanity component of self-compassion, asking participants to list ways in which other people experience similar events. The second prompt asked participants to write a paragraph expressing understanding, kindness, and concern toward themselves with respect to the negative event in the same way that they might express concern to a friend who has

undergone the experience, thus focusing on the self-kindness element of self-compassion. The third prompt induced a mindful, accepting perspective (the third component of self-compassion) by having participants describe their feelings about the event in an objective and unemotional fashion. To control for the possibility that simply writing about the event may produce a change in emotional reactions (Pennebaker, Colder, & Sharp, 1990), participants in the **writing only condition** were asked to "really let go and explore your deepest emotions concerning the event." Participants in the **control condition** answered initial questions about the event and then completed the dependent measures (Appendix D).

The dependent measures included emotion ratings, questions regarding the event, thoughts and feelings about other age-related events, and the abbreviated Self-compassion Scale (Allen et al., in press, Neff, 2003a). Participants also completed the Short Portable Mental Status Questionnaire (Pfeiffer, 1975) before returning the questionnaire in the pre-paid envelope provided.

Using information from the mental status questionnaire (which asks the participants their street address and their mother's maiden name), it was possible to link participants' responses from Study 1 with their data from Study 2, thereby giving access to their scores on the abbreviated Self-compassion Scale (Allen et al., in press; Neff, 2003a) completed several months earlier in Study 1.

3.1.3 Materials

PANAS-X (Watson & Clark, 1994). As in Study 1, the 60 item extended version of the PANAS was used to assess emotional reactions in this study. However, instead of rating emotions on average, participants rated the extent they felt the emotion at that moment.

Perceptions of the negative event. Participants answered questions about the negative event that they described, including how bad the event was (1 = *not bad at all*; 7 = *extremely bad*), how angry or upset they felt at themselves regarding the event (1 = *not at all*; 5 = *a great deal*), the extent to which it was their fault (1 = *not at all your fault*; 5 = *completely your fault*), and how likely it is that the event could have been prevented if they had acted differently (1 = *not at all*, 5 = *almost certain*). These questions addressed the extent to which the self-compassion induction influenced evaluations of the event and self-blame.

*Successful Aging***.** Successful aging was assessed using the same 5-item measure described in Study 1 (Lawton, 1975; Liang & Bollen, 1983).

Thoughts and feelings about negative age-related events. Participants were given two short answer questions asking them to reflect on what they would think and feel if they broke a hip or started losing their memory for past events. These responses were coded independently by two researchers (Kappa = .80). Coders assessed the tone of the participant's responses from 1 (*very negative*) to 5 (*very positive*) and indicated whether

or not the response included thoughts of self-kindness, self-judgment, common humanity, isolation, mindfulness or overidentification.

*Self-compassion***.** The shortened Self-compassion scale described in Study 1 was used to assess self-compassion in this study.

3.2 Results

3.2.1 Preliminary Analyses

The distribution of scores on each dependent variable was examined for statistical outliers. Grubbs' (1950) test was applied, and if outliers were identified, these values were set at the value of their next nearest neighbor. One outlier was identified on overall negative affect, one outlier identified on fear, two outliers identified on hostility, two outliers were identified for guilt, and one outlier was identified on sadness.

3.2.2 Verification of Comparability of Treatment Groups

To examine pre-existing differences between participants in the self-compassion, writing, and control conditions, a one–way Analysis of Variance (ANOVA) was conducted on the baseline self-compassion measure (collected in Study 1). Unfortunately, experimental condition was a significant predictor of baseline self-compassion, $F(2, 72) = 5.45$, $p = .006$. Tukey's post hoc tests revealed that participants in the *writing only* condition ($M = 3.95$, $SD = .43$) were more self-compassionate than participants in the *self-compassion* ($M = 3.59$, $SD = .53$) and *control* ($M = 3.49$, $SD = .59$) conditions. This pattern indicated that random assignment had failed to equate experimental conditions with respect to initial self-compassion scores and that participants who were assigned

randomly to the writing only condition started the study significantly more self-compassionate than participants in the other two conditions. In light of this, all analyses included efforts to equate conditions for baseline self-compassion. Although these efforts do not in any way repair the problems caused by nonrandom assignment, they nonetheless allow the data to be explored for potential effects, and, in any event, comparisons of the self-compassion and control conditions are not compromised. Had the experiment involved easily-recruited participants, such as college students, it might have been possible to rerun it, but such a task was not possible given the laborious and time-consuming process of recruiting elderly individuals.

3.2.3 Manipulation Check

Participants in the *self-compassion* and *writing* conditions were asked to write about the event in either a self-compassionate way or to freely write in a way that allowed them to express their emotions. Coders read the responses and identified the presence of self-compassionate cognitions in the text. Coders indicated *yes* or *no* to the presence of self-kindness, self-judgment, common humanity, isolation, mindfulness, and overidentification in each participant's answers (Kappa = .77). An overall self-compassion writing score was created by adding the yes responses for the three positive dimensions and subtracting the yes responses for the negative dimensions; therefore, the self-compassion score ranged from -3 (presence of all negative dimensions with no positive dimensions) to 3 (presence of all positive dimensions and no negative dimensions).

Given that the prompts in the self-compassion condition specifically indicated that participants were to write about the event in a way that showed self-kindness, recognized that they are not alone in their suffering, and expressed thoughts in an unemotional, mindful way, one would expect more self-compassionate cognitions in the self-compassion condition than in the writing condition. An independent samples t-test showed that the answers of participants in the self-compassion (M = 1.77, SD = 1.11) condition did include significantly more self-compassionate cognitions than those of participants in the writing only condition (M = -.20, SD = 1.22), $t(45) = 5.76$, $p < .001$.

Coders also recorded the overall positively of the thoughts and feelings in participants' responses to the prompts. An independent samples t-test showed that participants in the *self-compassion* (M = 4.00, SD = .69) condition had more positive responses than participants in the *writing only* (M = 2.48, SD = 1.08) condition, $t(45) = 5.64$, $p < .001$.

3.2.4 Effects of Writing Self-compassionately

Given the failure of random assignment, baseline self-compassion (collected in Study 1) was used as a continuous factor in all analyses, thereby partialing out variance due to individual differences in self-compassion.

3.2.4.1 Emotions

To test the hypothesis that the self-compassion manipulation would affect participant's emotions in a positive direction, the GLM procedure was used to conduct a between-subjects multivariate analysis of variance that tested the effects of the

continuous baseline self-compassion scores, the self-compassion induction, and their interaction on the 13 emotions scales created from the PANAS-X. Using Pillai's Trace, the dependent emotion variate was not significantly affected by the main effect of the self-compassion induction condition, Pillai's trace = .35, $F(26,110) = .91$, $p = .594$. However, trait self-compassion was a significant predictor of the dependent variate, suggesting that self-compassion at Time 1 significantly predicted emotion at Time 2, Pillai's trace = .34, $F(13,54) = 2.14$, $p = .026$. Results of the univariate analysis conducted on each of the 13 emotion variables indicated that participants with higher baseline self-compassion scores reported less guilt, $F(1, 71) = 12.81$, $p = .001$; less sadness $F(1, 71) = 7.66$, $p = .007$; more self-assurance, $F(1, 71) = 5.59$, $p = .021$; less shyness, $F(1, 71) = 5.99$, $p = .017$; marginally less hostility, $F(1, 71) = 3.07$, $p = .084$; and marginally less negative affect, $F(1, 71) = 2.97$, $p = .089$; than participants with lower self-compassion scores.

In addition, the self-compassion by condition interaction was marginally significant at the multivariate level suggesting that condition may have affected participant's emotions differently for those who were high vs. low in baseline self-compassion, Pillai's trace = .50, $F(26,110) = 1.42$, $p = .10$. Examination of the univariate analyses revealed a significant interaction for attentiveness, $F(2, 71) = 5.14$, $p = .012$, and a marginally significant effect for fatigue, $F(2, 71) = 3.65$, $p = .069$. Tukey's follow-up tests were used to test the differences between the three conditions at -1 SD, the mean, and +1 SD of the baseline self-compassion scores. As seen in Figure 1, condition did not

relate to attentiveness for participants who were high in self-compassion. However, low self-compassion participants reported more attentiveness in the *writing only* condition than the *control* condition. Participants in the s*elf-compassion* condition did not significantly differ from participants in the other conditions. A similar effect was found for fatigue, showing that low self-compassion participants in the *writing only* condition reported significantly less fatigue than participants in the *control* condition. Once again, participants in the *self-compassion* condition did not differ in fatigue from the others (Figure 2). Although the failure of random assignment to equate the conditions with respect to self-compassion demands caution in interpreting these effects, the fact that baseline self-compassion was partialed out on the first step of these analyses at least suggests that the interaction is not highly contaminated by pre-existing between-group differences. However, these results do not support the hypothesis that the self-compassion condition had differential effects on participants who were low vs. high in trait self-compassion.

3.2.4.2 Self-blame

To test the hypothesis that inducing participants to think self-compassionately would affect the extent to which they blame themselves, two coders rated the extent to which the negative event could have been prevented by the participant on a 4-point scale from *definitely no* to *definitely yes* (Kappa = .58). The GLM procedure was used to test the effects of condition, self-compassion, coded preventability, and their interactions on self-blame as measured by the extent to which the participant saw the event as being his

or her fault, the extent to which the participant was angry with him or herself, and the extent to which the participant believed the event could have been prevented. Using Pillai's trace, results showed that condition did not significantly affect self-blame, Pillai's trace = .11, $F(6,114) = 1.15$, $p = .338$. However, baseline self-compassion, Pillai's trace = .16, $F(3, 56) = 3.57$, $p = .020$, and coded preventability, Pillai's trace = .23, $F(3, 56) = 5.67$, $p = .002$, predicted self-blame. These main effects were qualified by a significant self-compassion by preventability interaction, Pillai's trace = .14, $F(3, 56) = 2.94$, $p = .041$. Univariate analyses showed that the overall effect was driven by a significant interaction for the extent to which the participant saw the event as being his or her fault, $F(1, 58) = 8.23$, $p = .006$.

The interaction was decomposed using the Johnson-Neyman (J-N) technique (Potthoff, 1964) to identify the point along the regression line at which differences between groups reached significance. Preacher, Curran, and Bauer (2006) described how the J-N approach should be used to probe interactions in multiple linear regression. As opposed to the traditional "pick-a-point" approach, the J-N technique provides information about the effect of a predictor variable (x) on an outcome variable (y) across the entire range of the moderating variable. The J-N technique yields regions of significance that show the range of values for which the proposed moderator variable significantly moderates the relationship of x on y. Instead of testing specific simple slopes, the regions of significance provide an inferential test of all possible simple slopes of x on y. However, for the purpose of graphing these interactions, the pick-a-point

approach is necessary. The x-axis is anchored by the lowest and highest observed values of the predictor variable, and the moderator variable is graphed at the values of -1SD, the mean, and +1SD. In all cases an alpha level of .05 was used to determine the point at which the two regression lines begin to significantly differ.

The J-N technique revealed that participants' self-compassion was negatively related to participants' perception of personal fault when coded preventability was -.29 SD or lower and positively related to perception of personal fault when coded preventability was 1.90 SD or higher. When the event was coded as being less preventable, participants who were low in self-compassion felt more at fault than participants high in self-compassion. However, when the event was coded as being high in preventability, participants higher in self-compassion felt more at fault. Put another way, participants with self-compassion scores -.58 SD or higher felt more at fault when the event was preventable and participants with self-compassion scores lower than -4.42 SD felt more at fault when the event was less preventable. Figure 3 illustrates this interaction of self-compassion -1SD (-.55), M, +1SD (.55) and coded preventability at low (-.84) and high (2.16) values.

3.2.4.3 Successful Aging

The hypothesis that the self-compassion manipulation would affect participants' ratings of the degree to which they were aging successfully was tested with between-subjects GLM that included continuous baseline self-compassion and baseline successful

aging scores as factors. Condition did not influence thoughts that reflect successful aging, $F(2, 62) = .112$, $p = .894$.

3.2.4.4 Age-related Events

Participants were asked their thoughts and feelings about two negative age-related events involving breaking a hip and losing their memory. Two independent coders identified the presence of all 6 self-compassion dimensions (self-kindness, self-judgment, common humanity, isolation, mindfulness, and overidentification), and an overall self-compassion variable was created for each question. Condition did not affect the dependent variate that was composed of self-compassionate responses to the hip and memory questions, Pillai's trace = .03, $F(4, 138) = .53$, $p = .714$. Coders also identified the valence of the responses by rating them on a 5-point scale from *extremely negative* to *extremely positive*. Self-compassion did not predict ratings of the valence of participants' answers to the two questions, Pillai's trace = .03, $F(4, 138) = .50$, $p = .736$.

3.2.4.5 Self-compassion

The final hypothesis was that the self-compassion manipulation would increase self-compassion as measured by the abbreviated Self-compassion Scale (Allen et al., in press, Neff, 2003a). Using hierarchical regression analysis, baseline self-compassion was entered in at Step 1, two dummy-coded condition variables were entered in Step 2, and the self-compassion by condition interaction terms were entered into Step 3. Self-compassion at Time 1 significantly predicted self-compassion at Time 2, simply demonstrating test-retest stability of self-compassion scores, $r = .77$, Adjusted $\Delta R^2 = .59$,

t(73) = 10.15, $p < .001$. Condition did not significantly predict self-compassion at Time 2 (Adjusted R^2 $\Delta = .01$, $p = .340$); however, Step 3 showed a significant self-compassion by condition interaction (Adjusted R^2 $\Delta = .08$, $p < .001$). Figure 4 illustrates the impact of condition across 3 levels of baseline self-compassion (-1SD, *M*, +1SD). The experimental manipulation did not impact self-compassion for participants who were high in self-compassion before the study. However, for participants with lower baseline self-compassion scores, those in the *writing only* condition (*M* = 3.74, *SD* = .80) reported the highest self-compassion scores, participants in the *self-compassion* condition (*M* = 3.33, *SD* = .48) reported the next highest self-compassion scores, and participants in the *control* condition (*M* = 3.02, *SD* = .42) reported the lowest self-compassion.

3.3 Discussion

Unfortunately, random assignment failed to equate the three conditions with respect to baseline self-compassion. As a result, participants in the *writing only* condition had higher baseline self-compassion scores than those in the *self-compassion* and *control* conditions. However, by controlling for baseline self-compassion in the analyses, it was possible to examine the effects of the manipulation and particularly to compare the self-compassion and control conditions (although, again, these analyses do not in any way truly solve the problem, and the findings must be viewed as tentative). These analyses showed that the experimental manipulation was largely irrelevant to the majority of the findings. Although the manipulation check showed that participants in the self-compassion condition used more self-compassionate phrases than participants in the

writing only condition, the manipulation did not have much of an effect on the dependent variables. In fact, in the few situations where condition had a significant effect, participants in the writing only condition appeared to benefit the most. Low self-compassion participants felt more attentive and less fatigued when in the writing only condition as compared to the control condition.

Regarding changes in self-compassion from baseline to posttest, participants who were initially low in self-compassion had higher self-compassion scores in the writing only condition compared to the self-compassion and control conditions. However, initially low self-compassionate participants in the self-compassion condition reported higher posttest self-compassion than participants in the control condition. Overall, participants in the writing only condition appeared to benefit the most, suggesting that expressing one's thoughts and emotions in written form may lead to greater psychological benefits than responding to self-compassionate prompts. These results are inconsistent with the findings reported in Leary et al. (2007) and suggest that the self-compassion manipulation was not as effective for older adults as it was for college students. Although such an effect could occur because older adults tend to express more positive affect and less negative affect in their free-form writing compared to younger adults (Pennebaker & Stone, 2003), this explanation is disconfirmed by the finding that participants in the self-compassion condition expressed more positive thoughts overall. Alternatively, perhaps older people psychologically process their experiences differently when writing about them than younger people do.

Although the experimental manipulation had few predicted effects, baseline self-compassion significantly predicted various emotions, showing that trait self-compassion is stable and powerful over as long as 6 months. This is the first study to demonstrate predictive validity of the Self-compassion Scale over such a long time-span.

In relation to self-blame, participants who were lower in self-compassion tended to feel more at fault for events that coders viewed as less preventable than participants who were higher in self-compassion. Contrarily, participants high in self-compassion felt more at fault than less self-compassion individuals for events that coders judged as preventable. These findings support previous research showing that self-compassionate individuals are more likely to accept blame than less self-compassionate people when they are truly at fault (Leary et al., 2007). The fact that older people who are lower in self-compassion may accept undue responsibility for their negative experiences and circumstances is an intriguing finding that requires further attention. In brief, self-compassion appears to encourage personal responsibility when it is warranted and buffer against self-blame when it is undeserved

In sum, the self-compassion manipulation was tainted by failure of random assignment and, in any case, did not appear to impact the primary dependent variables of interest. If anything, the writing manipulation produced the most positive effects, indicating that freely expressing one's thoughts and emotions may be beneficial for older adults. In fact, low self-compassion participants who were in the writing condition reported higher self-compassion scores at the conclusion of the study than participants in

the other two conditions. Furthermore, results showed that self-compassion encouraged personal responsibility when the participant could have prevented the event, but discouraged self-blame when the event was not preventable. Trait self-compassion seems to have a stable impact on the way people feel and think about events in their lives.

4. Study 3: Self-compassionate Cognitions

Study 3 was designed to examine the nature of the cognitions that underlie self-compassion vis-à-vis aging. What are self-compassionate people thinking that leads them to treat themselves more kindly and to respond in a more adaptive manner to adversity? Understanding the nature of the self-compassionate mindset is essential for helping older people to think differently about themselves and aging. Research on young adults has shown that self-compassionate people think about negative events differently from people low in self-compassion. Leary et al. (2007, Study 1) asked participants to report four negative events over a three-week period and to rate how likely they would be to think certain thoughts. They found that self-compassionate participants were less likely to endorse thoughts such as "I seem to have bigger problems that most people do", "Why do these things always happen to me?" and "I'm a loser," but they were more likely to endorse the thought "This isn't any worse than what lots of other people go through." In another study, participants responded to scenarios and rated how likely they would be to have certain thoughts. The thoughts were factor analyzed, and high self-compassionate participants were less likely to have catastrophizing and personalizing thoughts, and more likely to have thoughts that promoted equanimity (Leary et al, 2007, Study 2). These studies provide a glimpse into the cognitions of self-compassionate people, which the present study extended by assessing the relationship between self-compassion and self-generated thoughts in older adults.

Study 3 addressed three questions: (1) How do the cognitions of self-compassionate older adults differ from those who are not self-compassionate?, (2) Do these cognitions differ because self-compassionate older adults downplay or ignore the negative factors associated with aging or because they fully recognize those factors but think about them compassionately?, and (3) Do these cognitions mediate the relationship between trait self-compassion and people's emotional reactions? The first question addresses the cognitions of older adults in response to real, experienced life changes with a focus on understanding how older adults think about and frame these events. The second question addresses whether self-compassionate people have higher well-being because they think about and frame negative events differently and not simply because they are less likely to think about negative events. The third question focuses on the mediating role of self-compassionate cognitions. If self-compassionate people think differently about their situations as well as respond more adaptively to negative events, then presumably their thoughts mediate the relationship between trait self-compassion and their emotional reactions.

Unlike Studies 1 and 2, self-esteem was included in the questionnaire to allow for the opportunity to disentangle the effects of self-compassion and self-esteem. These two constructs are strongly related, and some of their effects on well-being are similar (Neff & Vonk, 2008). Research has shown that self-compassion has explanatory power over and above that of self-esteem (Leary et al., 2007; Neff & Vonk, 2008). Given that previous studies have accomplished this task, I have not focused on self-esteem up to this

point. However, the purpose of the present study was to examine what was unique about the thoughts of self-compassionate people. For that reason, it was important to show that self-compassion is related to specific thoughts and that this relationship is not driven by self-esteem. Therefore, self-esteem was included in the questionnaire and used as a covariate in all analyses.

4.1 Methods

4.1.1 Participants

One hundred and thirty-one participants were recruited from the local community via pubic fliers at local senior citizen centers, word of mouth communication, previous participation, and the Duke Aging registry. However, only 121 participant questionnaires (38 men, 79 women, 4 unknown) contained enough information to be included in the study. Participants ranged from 63 to 93 years of age (M = 76.2, SD = 6.74) and came from a variety of ethnic backgrounds; 91 were Caucasian (75.6%), 28 were African-American (23.5%), one was Asian American (.8%), and one participant did not indicate his or her ethnicity.

4.1.2 Procedure

Participants who contacted the researcher and indicated that they would like to participate received an envelope that contained an information sheet, two copies of an informed consent form, the questionnaire, and a payment form. After participants returned the materials in the pre-paid envelope, the researcher mailed the participant $10.00. The questionnaire was designed to take 45-60 minutes of the participants' time,

but there is no way to know how much time it required or whether participants completed the questionnaire in one sitting.

Participants first completed the Brief Self-compassion Scale (Raes, et al., 2011) and the Self-esteem Scale (Rosenberg, 1965) (Appendix E). The Brief Self-compassion Scale consists of 12 items from Neff's (2003a) original measure, the four items that correlated most highly with each of the three subscales. Correlations with the original scale ranged from .78 to .92 in previous studies. Rosenberg's (1965) self-esteem scale was used to assess trait self-esteem. This 10-item measure is the most widely used measure of trait self-esteem and considerable research supports the reliability and validity of the scale (Blascovich & Tomaka, 1991). Then, participants were randomly assigned to respond to one of three sets of questions concerning aging (Appendix F).

The questions directed the participants to list an age-related change and event that they had experienced. The question was framed in one of three ways to examine people's responses to positive vs. negative aspects of aging. Participants in the **control condition** were asked to think about an age-related event that they had experienced. The participants in the **positive event condition** were asked to think about a positive age-related event, and participants in the **negative event condition** were asked to think about a negative age-related event. They were then asked a series of questions to understand their thoughts and feelings about the event. They were asked to rate how good or bad the event was (1 = *extremely bad*; 7 = *extremely good*), how good or bad the event made them feel about themselves (1 = *extremely bad*; 7 = *extremely good*), how much the event

impacted their life (1 = *no impact at all*, 7 = *huge impact*), and how much they thought about the change or event (1 = *never*; 5 = *a great deal*). Participants also rated the degree to which certain factors helped them cope with the negative event, including the support of other people, their own attitude, realizing that the change or event was normal, trying to be nice to themselves, their faith or religion, deliberately trying to control their emotions, and taking one day at a time (1 = *not at all*; 5 = *extremely*). Finally, an open-ended question asked what thoughts and feelings participants had regarding the event.

The second part of the questionnaire (Appendix G) asked participants to list three general thoughts about getting older, three ways their thoughts about aging have gotten more positive or more negative since they were 40 years old, and three pieces of advice that they would give to people in their 30s, 40s, and 50s. Finally, participants rated their emotions at that moment and completed measure of successful aging.

4.1.3 Materials

PANAS-X (Watson & Clark, 1994). This scale was used again to assess emotional reactions at the present moment.

Successful Aging. The Attitude Toward Own Aging subscale (Lawton, 1975; Liang & Bollen, 1983) was used again to assess one's attitude toward aging.

Open-ended questions. All open-ended questions were coded by two independent raters (Kappa = .72). Raters coded how objectively good or bad the event was (1 = *extremely bad*; 7= *extremely good*). The coders then rated the tone of the participant's response to the question regarding their thoughts and feelings about the event (1 = *very*

negative; 5 = *very positive*) and assessed the extent to which the response showed evidence of common humanity, isolation, self-kindness, self-judgment, mindfulness, and overidentification (0 = *no*; 1 = *maybe*; 2 = *yes*). Responses for the 3 negative subscales were summed and similarly, responses for the 3 positive subscales were summed creating two self-compassionate cognition variables. I refer to these two indices as *negative self-compassionate cognitions regarding the event* and *positive self-compassionate cognitions regarding the event*.

As noted, participants wrote responses to three prompts: (1) three general thoughts about getting older, (2) three ways their thoughts about aging have changed since 40, and (3) three pieces of advice for people in their 30's, 40's, and 50's. Each response (nine total responses) was coded for its overall tone (1 = *very negative*; 5 = *very positive*) and the extent to which the participant showed evidence of common humanity, isolation, self-kindness, self-judgment, mindfulness, and overidentification (0 = *no*, 1 = *maybe*, 2 = *yes*). Two self-compassion variables were created for each prompt by summing the negative subscales and summing the positive subscales. I refer to these two indices as *negative* and *positive* self-compassionate cognitions for (1) general thoughts about aging, (2) changes associated with aging, and (3) advice to younger adults.

4.2 Results

4.2.1 Preliminary Analyses

The negative affect (NA) scale was negatively skewed, so scores were dichotomized to distinguish participants who reported no evidence of negative affect and

participants who reported any indication of negative affect. Dichotomizing negative affect resulted in fairly even groups (none= 52, any amount = 53). Grubbs' (1950) test was applied, but no outliers were identified.

4.2.2 Verification of Comparability of Treatment Groups

In order to ensure that the three groups did not differ significantly on self-compassion, a one-way ANOVA tested whether baseline self-compassion scores differed by experimental condition. Condition was not related to self-compassion scores, $F(2, 117) = .35$, $p = .704$, showing that (unlike in Study 2) the three groups were comparable in self-compassion.

4.2.3 Manipulation Check

A one-way ANOVA tested whether ratings of how bad the event was differed by condition (as it should if participants wrote about positive vs. negative events as instructed). Rather than using the participant's rating of the event, the badness of the event was assessed using the coders' ratings of how bad vs. good the event was. As hoped, participants in the positive event condition ($M = 4.9$, $SE = .17$) reported events that were significantly more positive than participants in the neutral ($M = 2.8$, $SE = .17$) and negative ($M = 2.8$, $SE = .17$) conditions. Participants in the neutral and negative conditions did not differ in the negativity of the event suggesting that when asked to discuss an event associated with aging without being instructed regarding its valence, people are likely to discuss a negative event.

4.2.4 Self-compassionate Cognitions

One purpose of this study was to examine how self-compassionate participants' thoughts differ from those of their low self-compassion counterparts. As described earlier, coders rated the thoughts of participants for overall positivity, self-kindness, self-judgment, common humanity, isolation, mindfulness, and overidentification. Indices of *negative* and *positive* self-compassionate cognitions were created for (1) the event, (2) general thoughts about aging, (3) changes associated with aging, and (4) advice to younger adults. In addition to self-compassionate cognitions, I was also interested in how self-compassion relates to the overall positivity of participants' cognitions.

Table 9 provides means, standard deviations, and correlations (one-tailed) between trait self-compassion, trait self-esteem, the 8 indices of self-compassionate cognitions (negative and positive self-compassionate cognitions for each of the 4 writing sections) and the tone of each set of questions (4 total). Self-compassionate participants generated more positive self-compassionate thoughts regarding (1) the event (r = .31, p <.001), (2) general thoughts about aging (r = .22, p = .009), and (3) changes associated with aging (r = .36, p <.001). As expected, self-compassionate participants also generated less negative self-compassionate thoughts regarding (1) the event (r = -.26, p = .002), (2) general thoughts about aging (r = -.16, p = .046) and (3) changes associated with aging (r = -.27, p = .003). Self-compassion was not related to positive self-compassionate cognitions (r = .13, p = .096) or negative self-compassionate cognitions (r = -.14, p = .067) regarding advice to younger adults. Self-compassion was associated with the

overall positivity of the responses for (1) the event (r = .32, p <.001), (2) general thoughts about aging (r = .25, p = .003), and (3) changes associated with aging (r = .27, p = .002), but not for advice given to younger adults (r = .13, p = .082).

In addition to understanding the content of self-compassionate cognitions, the second question of interest was whether self-compassionate people tend to downplay negative events, evaluating them less negatively and consequently feeling happier with their circumstances. Consistent with previous research (Leary et al., 2007), self-compassion was not related to how bad participants rated the event (r = .11, p = .123), how bad participants felt about the event (r = .11, p = .108), how much of an impact the event had on their life (r = .09, p = .164), or how much they thought about the event (r = -.11, p = .110).

Hierarchical regression analyses assessed whether self-compassion, writing instruction condition, and their interaction predicted self-compassionate cognitions regarding (1) the event, (2) general thoughts about aging, (3) changes associated with aging, and (4) advice to younger adults. As discussed, participants in the positive event condition reported more positive events than participants in the neutral and negative conditions; therefore, the positive condition became the reference category for the dummy coded regression variables. Self-esteem was entered in Step 1 as a covariate, self-compassion was entered in Step 2, dummy coded condition variables were entered into Step 3, and the self-compassion by condition interaction terms were entered into Step 4 (See Table 8). With variance due to trait self-esteem removed, self-compassion

significantly predicted participants' self-compassionate cognitions regarding the event and self-compassionate cognitions regarding changes associated with aging. Condition significantly predicted self-compassionate cognitions to the event, showing that participants in the positive condition reported significantly more self-compassionate cognitions than participants in the neutral and negative conditions. The self-compassion by condition interaction was marginal for ratings of the event, but not significant for any of the other dependent variables.

4.2.5 Mediation Analyses

In order to test the hypothesis that participants' self-compassionate cognitions mediate the relationship between self-compassion and emotional responses, I conducted a series of multiple mediation analyses with self-compassion as the predictor, positive and negative self-compassionate cognitions regarding the event as the mediators, and self-esteem as a covariate. Both positive and negative self-compassionate cognitions were included as potential mediators because there has been some debate as to whether the positive or negative self-compassion subscales are more relevant to emotional well-being (Gilbert & Proctor, 2006). Following the recommendations made by Preacher and Hayes (2008), the significance of the indirect effects was estimated using a bootstrapping technique. Whereas the traditional Sobel test assumes a normal distribution of the indirect effects, bootstrap estimation is unaffected by nonnormality, thus producing more accurate and less biased estimates. Bootstrapping involves taking *n* cases with replacement from the original sample and re-estimating the proposed relationships *k* number of times. For

our purposes, k = 5,000, thus resulting in 5,000 estimates of the total and specific indirect effects of X on Y. These estimates of the indirect effect estimate are then sorted from low to high with 100(α/2) defining the lower and upper confidence intervals (CIs). If the CI does not include 0, there is evidence of mediation. Three types of confidence intervals are reported: percentile confidence intervals, bias-corrected confidence intervals, and bias-corrected and accelerated confidence intervals.

Using the SPSS macro INDIRECT developed by Preacher and Hayes (2008), mediation analyses revealed that self-compassion was a strong predictor of negative affect (c path = -1.08, p = .033); however, this relationship was not mediated by positive or negative self-compassionate cognitions. Self-compassion predicted positive cognitions (a_1 path = .75, p =.010) but not negative cognitions (a_2 path = -.15, p =.55), but surprisingly, these positive (b_1 path = -.17, p = .406) and negative (b_2 path = -.31, p = .236) cognitions did not significantly predict negative affect. Self-esteem significantly predicted negative affect suggesting that participants with higher self-esteem had lower negative affect (B = -1.30, p = .018). Regarding positive affect, self-compassion was not a significant predictor (B = .09, p = .491) after controlling for self-esteem (B = .55, p < .001). Due to possible suppressor effects, a direct relationship between X and Y is not required in order to pursue mediation (Collins, Graham, & Flaherty, 1998; MacKinnon, Krull, & Lockwood, 2000). However, upon further inquiry there were no significant mediator to outcome relationships, so mediation analyses were abandoned.

Self-compassionate cognitions were also examined as potential mediators of the relationship between self-compassion and the tone of the participants' responses to the event. Once again, self-compassion was a significant predictor of positive self-compassionate cognitions (a_1 path = .63, p = .014) but not negative ones (a_2 path = -.23, p = .313). Both positive (b_1 path = .39, $p < .001$) and negative (b_2 path = -.62, $p < .001$) self-compassionate cognitions predicted the overall tone of the participants' responses. The total effect of self-compassion on emotional tone was significant (c path = .66, p =.015); however, once the mediators were entered into the analysis, the direct effect of self-compassion on the tone of the participants' responses was no longer significant suggesting full mediation (c' path =.27, p = .136). Self-esteem was not a significant covariate in the model (B = -.18, p = .328). Point estimates and confidence intervals are provided in Table 10. In addition, I estimated a contrast between positive and negative self-compassionate cognitions to determine whether the product coefficients for the mediators significantly differed. Given that the value of 0 falls within the confidence intervals, I conclude that the product coefficients for the 2 mediators do not differ despite the fact that one is significant and the other is not.

Participants also indicated the extent to which a variety of factors helped them adjust to the event they discussed. The factors most closely associated with the features of self-compassion were assessed as being potentially influenced by self-compassionate cognitions. These factors included attitude, realizing that the changes or events are normal, trying to be nice to myself, and trying to control my emotions. As before,

mediation analyses assessed the extent to which self-compassionate cognitions mediated the relationship between self-compassion and the various coping factors. Self-compassion significantly predicted positive self-compassionate cognitions (a_1 path = .70, p = .007) but not negative ones (a_2 path = -.28, p = .223). Positive self-compassionate cognitions (b_1 path = .22, p = .013), but not negative self-compassionate cognitions (b_2 path = .01, p = .903), significantly predicted the extent to which participants' thought their attitude helped them cope with the event. The total effect of self-compassion was significant (c path = .47, p = .038), but the direct effect was not significant after accounting for the mediating variables (c' path = .315, p =.161). The point estimates for the product coefficients are presented in Table 10 along with confidence intervals. Once again, the confidence interval for positive self-compassionate cognitions does not include 0 suggesting that they mediate the relationship between self-compassion and the extent to which participants believed their attitude helped them cope with the age-related event. Additionally the contrast confidence intervals show that the indirect effects of the two mediators were not significantly different despite the significant mediation of positive self-compassionate cognitions.

Self-compassion did not significantly predict the extent to which participants assessed the event as being normal (c path = .31, p = .139), and there were no significant mediator to outcome relationships. Self-compassion did significantly predict the extent to which people coped with the event by trying to be nice to themselves (c path = .66, p < .001); however, the two positive and negative self-compassionate cognition mediators did

not significantly predict the outcome variable, showing no evidence of mediation (b_1 path = .06, p = .411; b_2 path = -.05 p = .534 respectively), Finally, self-compassion did not significantly predict the extent to which participants attempted to control their emotions in order to cope with the event (c path = .32, p = .169), and there were no significant mediator to outcome relationships.

4.2.6 Moderated Mediation Analyses

Given the impact of condition on the extent to which participants reported self-compassionate cognitions, a series of moderated mediation regression analyses were conducted to test whether condition impacted the relationship between self-compassion and use of self-compassionate cognitions. Moderated mediation analyses were pursued using the methodology recommended by Preacher, Rucker, and Hayes (2007) and included bootstrapping estimation of the conditional indirect effects. As specified earlier, this moderated mediation strategy offers several advantages as compared to Baron and Kenny's (1986) approach. Bootstrapped estimation does not require the distribution of the indirect effects to be normal; directly estimates the size of the indirect effects; produces higher power; and provides confidence intervals (CIs) for the estimated effects. Using this approach requires a significant relationship between the independent variable and the mediator as well as the mediator and dependent variable. However, a significant direct relationship between the independent variable and dependent variable is not required (Collins et al., 1998; MacKinnon et al., 2000). Referencing the strategy outlined by Preacher et al. (2007), I specified a moderated mediation model that tested (a) whether

self-compassion interacted with condition to predict more positive self-compassionate cognitions and (b) whether positive self-compassionate cognitions were positively related to the tone of the participants' responses (See Figure 4). Self-esteem was controlled in all analyses. Negative self-compassionate cognitions were excluded as a potential mediator in the analyses after finding no significant effects in previous mediation analyses.

Using the SPSS macro provided by Preacher et al. (2007), I tested whether condition moderated the relationship between self-compassion and positive self-compassionate cognitions in the full mediation model with the overall positivity of the participants' response to the event as the dependent variable. Typically, using a categorical moderator is not advised with this statistical program. However, with this type of moderated mediation model, it is possible to determine accurate estimates by running the model twice controlling for the second condition dummy code and the second condition dummy code by self-compassion interaction.

Results of the analysis showed that self-compassion was not a significant predictor of positive self-compassionate cognitions (a_1 path = .21, p = .578). Condition was highly significant for both models suggesting that participants reported less self-compassionate cognitions in the neutral (a_2 = -.77, p = .004) and negative (a_2 = -.98, p < .001) conditions as opposed to the positive condition. The overall effects for the interaction in the mediation models were not significant (a_3 = .50, p =.303; a_3 = .63, p =.227). Self-esteem was not a significant covariate in either the mediation (a_4 = .20, p =

.433) or the dependent variable model ($c'_4 = .27$, $p = .142$). In total, these findings do not show evidence of moderated mediation.

However, the significance tests of the conditional indirect effects contradicted the overall findings, suggesting that the indirect effects for both neutral (point estimate = .326, $p = .055$) and negative (point estimate = .382, $p = .038$) conditions were significant. As discussed earlier, bootstrapping estimation provides several advantages over the traditional significance test as it does not require the distribution of the indirect effect to be normal. Upon examining the three indices of bootstrap estimates, I found that the bootstrap confidence intervals for the indirect effect of neutral did *not* include 0 providing further support that the relationship between self-compassion and positive self-compassionate cognitions varied depending on whether the participant was in the neutral or positive condition. In addition one of the three bootstrap confidence intervals for the conditional indirect effect of negative (bias-corrected and accelerated) did not include 0, suggesting that the relationship between self-compassion and positive self-compassionate cognitions varied depending on whether the participant was in the negative or positive condition. Interpretation of these conditional indirect effects when the overall interactions are not significant is debatable, but for our purposes, they provide some indication of the impact of condition on the mediation model.

A moderated mediation model for the outcome of how much the participants' attitude helped them adjust to the event obtained similar results indicating that self-compassion was not a significant predictor of positive self-compassionate cognitions (a

path = .33, p = .434), and the effect of condition for both neutral (a_2 = -.74, p = .006) and negative (a_2 = -.96, p = .005) was significant. The interactions were not significant for the neutral or negative conditions (a_3 =.39, p =.456; a_3 =.51, p =.349, respectively). Self-esteem was not a significant covariate in either the mediation (a_4 = .21, p = .416) or the dependent variable model (c'_4 = .14, p = .539). Conditional indirect effects were also not significant suggesting no evidence of moderated mediation.

In previous mediation analyses, self-compassion significantly predicted positive self-compassionate cognitions. However, in the moderated mediation analyses, self-compassion, condition, and their interaction were entered simultaneously resulting in a nonsignificant relationship between self-compassion and positive self-compassionate cognitions (a^1 path). I assumed that the presence of the interaction in the model was responsible for this change in significance, so I performed exploratory analyses to test this assumption. Splitting the file by condition, I examined the relationship between self-compassion and positive self-compassionate cognitions separately for participants in the positive, neutral, and negative conditions (controlling for self-esteem). For participants in the positive condition, self-compassion was not significantly related to positive self-compassionate cognitions, t (38) = .60, p =.550, β = .11. Participants in the neutral condition showed a stronger (but still nonsignificant) relationship between self-compassion and self-compassionate cognitions, t (37) = 1.39, p =.172, β = .27. Similarly, self-compassion was positively related to self-compassionate cognitions for participants in the negative condition, but the effect was also not significant, t (36) = 1.14, p =.261, β

= .21. Although the small *n* rendered each analysis low in power, the size of the betas indicates that self-compassion was possibly related to positive self-compassionate cognitions for participants in the neutral and negative conditions but less so in the positive condition. These tentative, nonsignificant findings require future testing.

4.3 Discussion

The purpose of Study 3 was to examine the cognitions of self-compassionate older adults and to test whether these cognitions mediated the relationship between trait self-compassion and well-being outcomes. Participants completed the self-compassion and self-esteem measures and discussed their thoughts and feelings regarding an age-related event. Participants in the *positive* condition were told to write about a positiv*e* age-related event, and participants in the *negative* condition wrote about a negative age-related event. Participants in the *neutral* condition were not given any additional instruction. After reporting on the event, participants completed ratings for different emotional reactions and completed additional writing prompts including general thoughts about aging, changes associated with aging, and advice to younger adults.

First, the findings support the hypothesis that self-compassionate participants think differently about life events than low self-compassion participants. Self-compassionate participants were more likely to report thoughts that involved self-kindness, common humanity, and mindfulness (positive self-compassionate cognitions) when dealing with an age-related event, having general thoughts about aging, or reflecting on how their thoughts about aging have changed since turning 40. On the

flipside, self-compassionate participants were less likely to report thoughts of self-judgment, isolation, and overidentification (negative self-compassionate cognitions) when sharing their thoughts about these events. Consequently, self-compassionate participants expressed more overall positivity in their responses.

One area where self-compassion was not related to self-compassionate cognitions involved the advice that participants gave to younger adults. Interestingly, on the advice variable, the average number of positive self-compassionate thoughts was significantly higher than those reported for the other prompts. Perhaps participants were likely to encourage other people to be self-compassionate irrespective of their own propensity to be self-compassionate. Consistent with previous research (Leary et al., 2007), this finding suggests that participants who are low in self-compassion may show and encourage compassion in others as much as high self-compassion participants.

The results showed that self-compassionate individuals generated more positive and more self-compassionate thoughts. Elsewhere, I have argued that self-compassionate individuals tend to engage in positive cognitive restructuring—a form of coping in which the individual reframes the event to learn from the situation and move on (Allen & Leary, 2011). If low and high self-compassionate participants are experiencing similar events, but high self-compassionate individuals are responding more positively; then they may be restructuring the event through their use of self-compassionate cognitions.

The findings supported the hypothesis that low and high self-compassionate people experience equally negative events and do not differ in how bad the event makes

them feel, how much impact the event had on their lives, or how much they think about the negative event. Consequently, what distinguishes between low and high self-compassionate individuals is not their propensity to avoid negative events but rather their ability to cope with negative experiences by thinking self-compassionately about them.

The final goal of the study was to test the hypothesis that self-compassionate cognitions mediate the relationship between trait self-compassion and emotional well-being. Unfortunately (or perhaps, fortunately), very few participants showed evidence of high negative affect, so this variable was dichotomized to reflect participants who showed no negative affect and participants who showed any indication of negative affect. Although self-compassion did predict negative affect and positive self-compassionate cognitions, these cognitions did not predict negative affect. Given that the zero-order correlation between self-compassion and positive self-compassionate cognitions was significant, it appears that self-esteem may have accounted for the same variance in positive cognitions. Self-esteem was entered into the model first, so the covariate would take any shared variance with the self-compassionate cognitions. Additionally, negative affect was dichotomized due to its skewed distribution leaving far less variance to explain than would be desirable. Furthermore, the link between self-compassion and positive affect was not significant after controlling for self-esteem, and self-compassionate cognitions did not predict positive affect. Therefore, the hypothesis that self-compassionate cognitions mediate the relationship between self-compassion and positive and negative emotions was not supported.

However, positive self-compassionate cognitions related to the event (the sum of the participants' use of self-kindness, common humanity, mindfulness in their written responses to the event) did mediate the relationship between self-compassion and overall positivity of participants' responses, suggesting that self-compassionate participants respond more positively because of the self-compassionate themes present in their thoughts. Furthermore, positive self-compassionate cognitions mediated the relationship between self-compassion and the extent to which people said their attitude helped them adjust to the event that they described. Self-compassionate participants think more self-compassionately, thus in turn these positive thoughts lead to a better attitude toward specific events that they experience.

I also hypothesized that condition would moderate the relationship between self-compassion and self-compassionate cognitions. As seen in the regression analyses, the only hint of a possible interaction was with the self-compassionate cognitions regarding the event; therefore, a moderated mediation analysis was conducted to test this relationship. However, the formal tests of the interaction were not significant suggesting that moderated mediation was unlikely. On the other hand, for the tone outcome, the conditional indirect effects were significant, which offered a glimpse as to the direction of the impact of condition. The impact of self-compassion on self-compassionate cognitions was more positive if participants were in the neutral and negative conditions as opposed to the positive condition. This finding supports previous research showing that the positive effects of self-compassion are strongest when people are confronted with

negative life events (Allen et al., in press). In sum, self-compassion may be positive and adaptive across all circumstances, but it's the response to negative life events that most strongly differentiates high and low self-compassionate individuals.

5. General Discussion

5.1 Primary Findings

The purpose of this investigation was to examine self-compassion within an older sample as they cope with the sometimes difficult process of aging. Since 2003 when the first articles about self-compassion were published, numerous studies have examined the psychological features of self-compassion in college student samples. The findings of many of these studies showed that self-compassion is particularly relevant when people experience negative life events. Given that aging is accompanied by changes in people's emotional, cognitive, physical, and social lives, the benefits of self-compassion should be higher in an older population than among younger people. The preliminary studies (Allen et al., 2011) laid the groundwork for demonstrating that self-compassion is associated with beneficial outcomes in old age, and the present three studies were designed to extend these findings. More specifically, this investigation explored (a) the relationship between self-compassion and health promotion behaviors, specifically using assistance and trying new activities, (b) the impact of a short-term self-compassion manipulation on emotional well-being, and (c) the nature of self-compassionate cognitions and their potential mediating role in the relationship between self-compassion and subjective well-being.

Study 1 tested the hypothesis that self-compassionate participants would be more likely to engage in health promotion behaviors such as using assistance and trying new activities. Correlational evidence showed that self-compassion was related to taking a

vitamin and marginally related to frequency of exercise, suggesting at least a minimal relationship between self-compassion and health promotion. However, the results revealed no evidence that self-compassion was related to the use of physical assistance such as using a walker or a hearing aid, and self-compassion was negatively related to use of pain medication. As discussed earlier, this latter relationship may be driven by the mindfulness component of self-compassion in that self-compassionate older adults may be less likely to get carried away with their pain and are better at keeping their emotions regarding pain in check.

More importantly, the findings regarding the use of assistance are inconsistent with research suggesting that self-compassionate older people are more willing to use assistance to walk, hear better, and remember things (Allen et al., 2011). One explanation for this inconsistency is that the sample in Study 1 was more physically able than the sample used in Allen et al. (2011; Study 2). Therefore, self-compassion may be linked to the use of assistance only when the need for assistance is relatively high (and higher than that observed in this study). Although self-compassion's relationship with the use of assistance remains unclear, this study provided additional evidence that self-compassion is associated with lower embarrassment and public concealment over the use of assistance. Self-compassionate individuals seem to handle their need for assistance with greater acceptance and understanding.

Contrary to expectations, the findings showed little evidence that self-compassion was positively related to trying new activities. Of the 6 activity domains examined, self-

compassion was related only to willingness to try new activities that would improve one's mood, and that effect was in a negative direction. Although this finding was not expected, it might occur because self-compassionate individuals have less need to improve their emotions by engaging in certain behaviors. Although self-compassion was not related to how many new activities participants had tried after turning 60, it was related to persistence in activities that participants started. Perhaps, self-compassion is related less to trying new activities as it is to persisting in activities when they become difficult.

The results of Study 2 did not support the hypothesis that inducing a self-compassionate mindset would lead to positive emotions. Unfortunately, a failure of random assignment led to more self-compassionate participants being placed into the writing only condition. Although the analyses controlled for baseline self-compassion, the hypothesized effects of the self-compassion manipulation did not emerge. When the manipulation was significant, it tended to favor the writing only condition, suggesting that participants who were told to freely express their emotions benefitted the most (Pennebaker et al., 1990). In most cases, the self-compassion condition did not differ from the control condition.

However, when assessing self-compassion as the outcome, low trait self-compassion participants who were in the self-compassion condition reported significantly higher self-compassion than participants in the control condition. This finding provides some evidence that writing self-compassionately leads to higher self-compassion scores;

however, free-writing about one's thoughts and emotions seemed to have the most positive results overall. Of course, the fact that expressive writing may have more beneficial effects than writing self-compassionately does not necessarily indicate that self-compassionate writing has no effects, and other research shows that it does (Leary et al., 2007). Clearly, additional research is needed on ways to lead older adults to think self-compassionately about their experiences.

Although the self-compassion induction in Study 2 failed, the results showed that self-compassion significantly predicted emotional well-being as in previous research (Leary et al., 2007; Neely, Schallert, Mohammed, Roberts, & Chen, 2009; Neff, 2003b; Neff et al., 2005; Neff et al., 2007a; Neff et al., 2007b). In addition, participants who were lower in self-compassion considered themselves more at fault for events that were objectively not under their control. This finding provides further support for a growing body of literature showing that low self-compassionate individuals are unnecessarily self-critical (Gilbert & Proctor, 2006). Additionally, participants high in self-compassion were more likely to consider themselves at fault when the event was preventable thus reinforcing previous research where self-compassionate individuals accepted more personal responsibility for negative events in their lives (Leary et al., 2007).

Study 3 examined the nature of self-compassionate cognitions and supported the hypothesis that participants who are higher in self-compassion not only think more positively but that these thoughts are specifically related to self-compassion constructs. Furthermore, self-compassion was not related to how bad participants felt about the event

they described, how much the event impacted their lives, or how much they thought about the event. These results suggest that low and high self-compassionate individuals do not differ in how negatively they judge events, but they do differ in how they frame the events cognitively (see also Leary et al., 2007, Study 1).

The primary hypothesis in Study 3 was that self-compassionate cognitions would mediate the relationship between self-compassion and emotional well-being. However, self-compassionate cognitions did not mediate the relationship between self-compassion and positive and negative affect. Given that self-esteem was a covariate in the model, I suspect that its relationship with self-compassion and positive and negative affect sufficiently reduced the predictive capability of self-compassionate cognitions in the model.

In addition to positive and negative affect, I assessed whether self-compassionate cognitions mediated the relationship between self-compassion and the overall tone of participants' responses as well as how much the participants' attitude helped them adjust to the event. Positive self-compassionate cognitions mediated the relationship between self-compassion and the overall tone of the response. Thus, self-compassion was related to positivity only through its mutual relationship with positive self-compassionate cognitions. A similar finding was obtained for the extent to which participants said their attitude helped them adjust to the event. Therefore, Study 3 provided some evidence of the mediating role of self-compassionate cognitions, even though the primary emotional outcomes were not significant.

5.2 Explanations for Non-replicated Findings

The three studies supported some of the primary hypotheses but failed to support others. Previous research has both shown self-compassion to be related to use of assistance among older individuals and that similar self-compassion manipulations have affected emotional reactions, raising the question of why these findings were not replicated here. Possible answers to this question involve (a) the relatively healthy nature of the sample, and (b) the strength of the self-compassion induction.

First, the sample was recruited using a variety of methods, and all but six of the participants reported living independently, indicating that they were adept at living without much assistance and required minimal care by others. Study 1 focused on specific types of assistance relating to walking, hearing, memory, and pain. But, so few participants reported difficulty walking, that the walking variables had to be dichotomized and even then most of the participants fell into the category of having no walking difficulty or using no assistance. A significant interaction in the preliminary studies (Allen et al., in press) found that self-compassion was positively related to use of a walker, but only when participants were high in walking difficulty. This relationship is impossible to detect in the present study due to the lack of variability in walking difficulty. Similarly, I suspect that more variability in difficulty across the walking, hearing, and memory dimensions would have yielded stronger relationships with self-compassion.

Contrary to expectations, self-compassion was negatively related to use of pain medication. Allen et al. (in press) found a similar relationship between self-compassion and use of another person for assistance. They proposed that self-compassionate individuals may act more autonomously, relying less on other people to meet their physical needs. Given the negative relationship between self-compassion and use of pain medication, further research is needed to determine the mediating factors that differentiate between self-compassion's negative and positive relationships with the use of various kinds of assistance. The sample was healthier than anticipated and possibly healthier than one of the samples used by Allen et al., which was recruited from a residential center.

Although less is known about the sample characteristics in Study 3 than in the first two studies, about half of them had participated in Study 1. In addition to being healthy, this sample expressed very little negative affect. The fact that it was necessary to dichotomize most of the negative emotion scales because of highly skewed scores constricted the variability of the data and may have contributed to the failed mediation analyses. Although evidence showed that self-compassion related negatively to negative affect, relationships between negative affect and the self-compassionate cognition variables were expected. To a large extent, cognitions and emotions should go hand in hand because positive, self-compassionate thoughts should lead to less negative affect. Unfortunately, no support for this hypothesis was obtained.

As has been described in detail, random assignment failed to equate the experimental conditions in Study 2 with respect to baseline self-compassion. In addition, the self-compassion induction may have not been sufficiently strong to produce the predicted effects. The self-compassion manipulation involved asking participants to respond to the negative event they described using three prompts that mirrored the three central features of self-compassion (self-kindness, common humanity, and mindfulness or equanimity). These prompts were modeled after those used in Study 5 of Leary et al. (2007), but they were modified slightly to make them relevant to events that are associated with aging. Unlike those in Leary et al., the results of Study 2 showed virtually none of the expected effects of the manipulation. In fact, for some dependent variables, participants in the writing only condition, who could write whatever they wished about the age-related event or change, seemed to benefit the most, suggesting that older adults may benefit psychologically from writing about their emotions and feelings about negative events. Such findings are consistent with a great deal of research on the beneficial effects of writing (Pennebaker, 1997; Pennebaker et al., 1990).

In Pennebaker's original writing study (1990), college freshmen spent 20 minutes for three consecutive days either writing about their deepest thoughts and emotions as they transitioned to college life (experimental condition) or what they had done since they woke up in the morning (control condition). Participants were staggered so that they completed the experiment in either the 1st, 5th, 9th, or 14th week of classes. At the end of their first year of college, participants who were in the experimental condition were either

superior or equal to control participants in grade point average and positive mood. Most importantly in relation to the present study, these effects were not affected by whether or not participants wrote about their transition to college in the first week or in the last week of their first semester. Similarly to the transition to college life, the transition into old age is wrought with many challenges that require cognitive, physical, and emotional adjustments. Participants in the writing condition were given the opportunity to express their thoughts and emotions freely regarding a negative age-related event, and they appeared to benefit emotionally from this writing exercise more so than following a series of prompts designed to encourage self-compassion. Perhaps participants in the self-compassion condition felt limited by self-compassion prompts. Consequently, the self-compassion writing experience may not have impacted them as deeply.

5.3 Directions for Future Research

The findings and failures of the three studies present possible future directions for addressing the relationship between self-compassion and well-being in older adults. As seen in Study 1, the relationship between self-compassion and health promotion remains unclear. Self-compassion did not predict use of assistance or trying new activities, but it was related to persistence in new activities, taking vitamins, and marginally to frequency of exercise. These relationships might imply that self-compassion is related to health promotion at some level. More specifically, self-compassion could be related to the motivations to engage in health-promotion behaviors in that self-compassionate individuals are more intrinsically motivated to engage in health-promotion. A study by

Magnus, Kowalski, and McHugh (2009) showed that self-compassion was positively related to intrinsic motivation to exercise and negatively related to external and introjected motivation, as well as ego-goal orientation and social physique anxiety. Future research might disentangle the relationship between self-compassion and intrinsic motivation in relation to health promotion and determine whether motivation explains the link between self-compassion and persistence.

Although the self-compassion manipulation in Study 2 did not have the predicted results, I suspect that self-compassion can still be manipulated effectively in an older population. Given the success of the writing condition, a self-compassion manipulation might be improved by allowing the participant more freedom in their written expression. Neff (2009) provides a variety of self-compassion exercises, one of which is a writing exercise (Appendix H). The exercise asks participants to pick out a flaw about themselves and write about it, expressing their emotions honestly. After writing about the flaw, they think about an unconditionally loving imaginary friend who understands them and their life circumstances. Finally, the participant writes a letter to him or herself from the perspective of the imaginary friend expressing compassion toward the participant. The self-compassion manipulation in Study 2 did not include an initial section where the individual was encouraged to freely express his or her emotions. Future manipulations might benefit from allowing time for free writing before encouraging the participants to respond self-compassionately. Importantly, exercises such as Neff's should be explicitly

tested against alternative exercises, including a writing only condition that does not try to induce self-compassion.

Finally, future studies may want to bring older adults into a controlled laboratory setting in order to manipulate a negative age-related event and assess emotional and cognitive reactions immediately following the event. For example, leading older participants to experience actual age-related physical or mental challenges in the lab would allow a more systematic examination of how people who are high vs. low in self-compassion deal with such standardized events. I suspect that the relationships between self-compassion, self-compassionate cognitions, and negative affect would be stronger immediately following a negative event. Additionally, previous studies have examined self-compassion as an all-or-nothing state of being whereas it may involve a process of self-talk that ends in a self-compassionate state. Examining this process as it unfolds in response to a controlled event would be informative and potentially helpful in creating effective self-compassion interventions.

5.4 Conclusion

The three studies provided evidence that self-compassion was positively related to emotional well-being in the elderly, but they did not provide support for some of the hypotheses under investigation. Possible explanations of these discrepancies have been addressed including the healthy nature of the sample and the possible weakness of the manipulation. Given these problems and evidence from previous research, these studies may not have provided a fair investigation of the hypotheses, and future studies should

examine the hypotheses using other approaches. I suggest examining the relationship between self-compassion and motivations to engage in health promotion, creating a new self-compassion manipulation that allows for free expression, and bringing self-compassion research with older adults into controlled settings. Finally, these studies provide further support for the link between self-compassion and emotional well-being, offer future directions on how best to pursue the link from self-compassion to behavior, and provide new evidence regarding the nature of self-compassionate cognitions and their role in the relationship between self-compassion and subjective well-being in the elderly.

Table 1: Means, Standard Deviations, Alphas, and Bivariate Correlations for Self-compassion, Successful Aging, Depression, Taking a Vitamin, and Exercising Frequency.

	M	*SD*	α	SC	SA	DEP	Vit
SC	3.65	.52	.75	__			
SA	3.61	.82	.70	.42***	__		
DEP	1.94	2.71	.84	-.46***	-.64***	__	
Vit	.79	.41		.18*	.17*	-.17*	__
Exerc	4.23	1.85		.13	.22**	-.16	.13

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. Self-compassion (SC), Successful Aging (SA), Depression (DEP), Taking a Vitamin (Vit), Frequency of Exercise (Exerc).

Table 2: Bivariate Correlations between Self-compassion and Difficulty, Use of Assistance, Embarrassment, and Public Concealment across Hearing, Memory and Pain Dimensions.

	SC	HD	HR	HA	HE	HC	MD	MT	ME	MC	PD	PM	PE
HD	-.11	__											
HR	.11	.82***	__										
HA	.01	.52***	32***	__									
HE	.23**	-.03	03	.20**	__								
HC	.26***	.63***	30***	.07	21*	__							
MD	.24***	.31***	.29***	25***	02	13	__						
MT	.08	.31***	31***	18*	13	24*	39***	__					
ME	.26***	.27**	29***	04	30***	24*	45***	35***	__				
MC	.22***	26**	27***	08	16*	47***	42***	31***	72***	__			
PD	.16*	.17*	16*	.11	02	31**	17*	11	19**	27***	__		
PM	.24***	.12	22**	.06	03	32**	13	03	21**	30***	58***	__	
PE	.16*	.28	28***	.01	13	29**	19**	14*	14*	27***	16*	12	__
PC	.24*	.19*	16	02	22	21	.01	.10	11	.10	25*	29*	28*

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. Self-compassion (SC), Hearing Difficulty (HD), Willingness to Ask Others to Repeat Themselves (HR), Willingness to Use a Hearing Aid (HA), Embarrassed by Using Assistance to Hear (HE), Effort to Publicly Conceal the Need for Hearing Assistance (HC), Memory Difficulty (MD), Use of Tricks and Strategies (MT), Embarrassed by Using Assistance for Memory (ME), Effort to Publicly Conceal the Need for Memory Assistance (MC), Pain Difficulty (PD), Use of Pain Medication (PM), Embarrassed by Using Assistance for Pain (PE), Effort to Publicly Conceal the Need for Pain Assistance (PC).

Table 3: Hierarchical Regression Analyses Testing Self-compassion as a Moderator of Hearing Difficulty and Hearing Outcomes.

	Hearing Outcomes							
	Ask Others to Repeat Themselves		Use of Hearing Aid		Embarrassment		Concealment	
Predictor	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1	.68***		.52***		.05*		.11**	
SC		-.02		.05		-.23*		-.28**
HD		.82***		.53***		-.05		.18
Step 2	.002		.01		.001		.001	
SCxHD		-.05		.04		.02		-.05
Total R^2	.68***		.53***		.05*		.11*	
N	150		144		149		84	

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. Self-compassion (SC), Hearing Difficulty (HD).

Table 4: Hierarchical Regression Analyses Testing Self-compassion as a Moderator of Memory Difficulty and Memory Outcomes.

	Memory Outcomes					
	Use of Memory Tricks and Strategies		Embarrassment		Public Concealment	
Predictor	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1	.15***		.22***		.19**	
SC		.02		-.16*		-.13
MD		.39***		.41***		.39***
Step 2	.001		.001		.001	
SCxMD		-.04		-.04		.03
Total R^2	.15***		.22***		.19**	
N	150		152		152	

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. Self-compassion (SC), Memory Difficulty (MD).

Table 5: Hierarchical Regression Analyses Testing Self-compassion as a Moderator of Pain Difficulty and Pain Outcomes.

	Pain Outcomes					
	Medicine for Pain		Embarrassment		Public Concealment	
Predictor	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1	.37***		.05*		.06*	
SC		-.16*		-.14		-.14
PD		.56***		.16*		.18*
Step 2	.001		.001		.001	
SCxPD		-.04		.06		.01
Total R^2	.37***		.05*		.06*	
N	152		152		53	

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. Self-compassion (SC), Pain Difficulty (PD).

Table 6: Logistic Regression Analyses Testing the Role of Self-compassion as a Moderator in the Relationship between Walking Difficulty and Walking Outcomes.

	Walking Outcomes							
	Use a Walker (143 reported no use of a walker)		Another Person (123 reported no need to use another person for assistance		Embarrassment (86 reported not being embarrassed at all)		Public Concealment	
Predictor	Cox and Snell R^2	OR (CI 95%)	Cox and Snell R^2	OR (CI 95%)	Cox and Snell R^2	OR (CI 95%)	ΔR^2	β
Step 1	.15***		.26***		.06**		.06	
SC		2.03 (.58, 7.14)		.64 (.26, 1.61)		.36** (.18, .71)		-.23
WD (dichot)		.02*** (.003, 09)		.05*** (.02, .13)		.99 (.46, 2.15)		.08
Step 2	.001		.01		.01		.06	
SCxWD		6.52 (.08, 554.46)		-.48 (.07, 3.17)		.58 (.14, 2.47)		-.28
Total R^2	.15***		.27***		.05*		.11	
N	155		155		149		29	

Note: * p < .05, ** p < .01, *** p < .001. Self-compassion (SC), Walking Difficulty (WD)

Table 7: Means and Standard Deviations of Trying New Activities Variables and Bivariate Correlations with Self-compassion.

	M	*SD*	Self-compassion
Number of organizations	2.96	2.11	.10
Hrs. spent with organizations	33.45	36.00	-.10
Number of interests pursued since turning 60	4.61	3.47	.01
Number of active interests	3.65	2.89	.01
Proportion of active interests to pursued interests	.78	.29	.17*

Note: * $p < .05$.

Table 8: Means, standard deviations, and bivariate correlations for self-compassion, self-esteem, positive and negative self-compassionate cognitions, and the tone of participants' responses.

	M	*SD*	SC	SE	PE	NE	PT	NT	PC	NC	PA	NA	TE	TT	TC
SC	3.67	.55	__												
SE	4.21	.54	.58***	__											
PE	1.08	1.29	.31***	.23**	__										
NE	.70	1.15	-.26**	-.32***	-.48***	__									
PT	1.82	2.05	.22**	.22**	.14	-.02	__								
NT	1.29	1.73	-.16*	-.23**	-.09	.22*	-.50***	__							
PC	2.22	1.96	.36***	.31**	.16	-.11	.37***	-.24*	__						
NC	.62	1.04	-.27**	-.39***	-.16	.20*	-.30**	.33**	-.47***	__					
PA	3.15	1.46	.13	.29**	.28**	-.26**	.22*	-.03	.36***	-.18*	__				
NA	.13	.72	-.14	-.25**	-.15	.06	-.10	.02	-.19*	.39***		__			
TE	3.21	1.37	.32***	.25**	.64***	-.71***	.09	-.15	.07	-.11	.25**	-.15	__		
TT	3.15	.91	.25**	.33***	.15	-.12	.73***	-.77***	.39***	-.31***	.18*	-.16*	.13	__	
TC	3.52	.78	.27**	.37***	.27**	-.33***	.35***	-.35***	.69***	-.75***	.37***	-.43***	.28**	.45***	__

TA	3.91	.47	.13	.18*	.10	-.16	.09	-.05	.26**	-.35***	.49***	-.61***	.20*	.14	.38***

Note: * p < .05, ** p < .01, *** p < .001. Self-compassion (SC), Self-esteem (SE), Positive Self-compassionate Cognitions Regarding the Event (PE), Negative Self-compassionate Cognitions Regarding the Event (NE), Positive Self-compassionate Cognitions Regarding Thoughts about Aging (PT), Negative Self-compassionate Cognitions Regarding Thoughts about Aging (NT), Positive Self-compassionate Cognitions about Changes Associated with Aging (PC), Negative Self-compassionate Cognitions about Changes Associated with Aging (NC), Positive Self-compassionate Cognitions Regarding Advice to Younger Adults (PA), Negative Self-compassionate Cognitions Regarding Advice to Younger Adults (NA), Tone of the Event (TE), Tone of Thoughts about Aging (TT), Tone of Changes Associated with Aging (TC), and Tone of Advice to Younger Adults (TA).

Table 9: Hierarchical Regression Analyses Examining the Relationship between Self-compassion, Condition, and their Interaction on Self-compassionate Cognitions.

	Self-compassionate Cognitions							
	Event		General Thoughts		Changes		Advice	
Predictor	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1	,10***		.07***		.12***		.07**	
SE		.31***		.26*		.35***		.27**
Step 2	.03*		.01		.04*		.001	
SC		.22*		.11		.26*		-.03
Step 3	.18*		.001		.04		.01	
Condition D1		-.37***		.001		.001		-.08
Condition D2		-.47***		.04		.21		-.12
Step 4	.02		.01		.001		.02	
SC x Cond D1		.22		.04		-.04		-.07
SC x Cond D2		.08		.13		.02		-.12
Total R^2	.33***		.09**		.21***		.10**	
n	119		111		96		108	

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. Self-esteem (SE), Self-compassion (SC), Dummy Coded Condition Variable Comparing the Neutral and Positive Conditions (Cond D1), Dummy Coded Condition Variable Comparing the Negative and Positive Conditions (Cond D2).

Table 10: Mediation of the Effect of Self-compassion on Tone of Participants' Responses to the Event Through Positive Self-compassionate Cognitions and Negative Self-compassionate Cognitions

			Bootstrapping					
			Percentile 95% CI		BC 95% CI		BCa 95% CI	
	Point Estimate (a*b)	*SE* (a*b)	Lower	Upper	Lower	Upper	Lower	Upper
			Indirect Effects					
Positive SC Cognitions	.2499	.1017	.0514	.4551	.0685	.4750	.0678	.4742
Negative SC Cognition	.1424	.1855	-.1951	.5258	-.2189	.5059	-.2967	.4619
Total	.3923	.2411	-.0661	.8718	-.0870	.8584	-.1537	.8198
			Contrasts					
Pos. vs. Neg.	.1075	.1772	-.2637	.4279	-.2309	.4559	-.1935	.5140

Note: n = 120

Table 11: Mediation of the Effect of Self-compassion on the Extent to which Participants Said Their Attitude Helped Them Adjust to the Age-Related Event Through Positive Self-compassionate Cognitions and Negative Self-compassionate Cognitions

			Bootstrapping					
			Percentile 95% CI		BC 95% CI		BCa 95% CI	
	Point Estimate (a*b)	*SE* (a*b)	Lower	Upper	Lower	Upper	Lower	Upper
			Indirect Effects					
Positive SC Cognitions	.1541	.0813	.0151	.3276	.0287	.3626	.0263	.3519
Negative SC Cognition	-.0033	.0423	-.1120	.0675	-.1136	.0661	-.1005	.0841
Total	.1508	.0791	.0034	.3116	.0290	.0272	.0272	.3637
			Contrasts					
Pos. vs. Neg.	.1575	.1027	-.0108	.3919	.0015	.4193	-.0052	.4040

Note: n = 119.

Table 12: Moderated Mediation of the Effect of Self-compassion on the Tone of Participants' Responses through Positive Self-compassionate Cognitions as Moderated by Condition.

	Mediator Variable Model			Dependent Variable Model		
Predictors	Coefficient	*t*	*p*	Coefficient	*t*	*p*
Self-compassion	.2141	.56	.578	.4521	1.68	.095
Condition D1	-.7678	-2.94	.004	-1.2631	-6.66	< .001
Condition D2	-.9826	-3.71	<.001	-1.5106	-7.70	<.001
SC x Cond D1	.5041	1.03	.303	.0939	.27	.784
SC x Cond D2	.6281	1.21	.227	-.5848	-1.61	.111
Self-esteem	.2007	.79	.433	.2650	1.48	.142
Constant	.5796	3.16	.002	4.1319	30.85	< .001
Positive SC Cognitions	—	—	—	.4539	6.90	< .001

Note: n = 120. Dummy Coded Condition Variable Comparing the Neutral and Positive Conditions (Cond D1), Dummy Coded Condition Variable Comparing the Negative and Positive Conditions (Cond D2).

Table 13: Moderated Mediation of the Effect of Self-compassion on the Extent to which Participants said their Attitude Helped them Adjust to the Age-related Event through Positive Self-compassionate Cognitions as Moderated by Condition.

	Mediator Variable Model			Dependent Variable Model		
Predictors	Coefficient	*t*	*p*	Coefficient	*t*	*p*
Self-compassion	.3263	.78	.434	.6586	1.84	.068
Condition D1	-.7443	-2.82	.006	-.6136	-2.62	.010
Condition D2	-.9598	-3.59	<.001	-.4183	-1.73	.087
SC x Cond D1	.3860	.75	.456	-.6267	-1.41	.160
SC x Cond D2	.5115	.94	.349	-.3397	-.73	.470
Self-esteem	.2090	.82	.416	.1358	.62	.539
Constant	.5563	2.98	.004	4.0579	24.38	< .001
Positive SC Cognitions	__	__	__	.1604	1.98	.050

Note: n = 119. Dummy Coded Condition Variable Comparing the Neutral and Positive Conditions (Cond D1), Dummy Coded Condition Variable Comparing the Negative and Positive Conditions (Cond D2).

Figure 1: Univariate Analyses of the Significant Interaction of Self-compassion and Condition on Attentiveness.

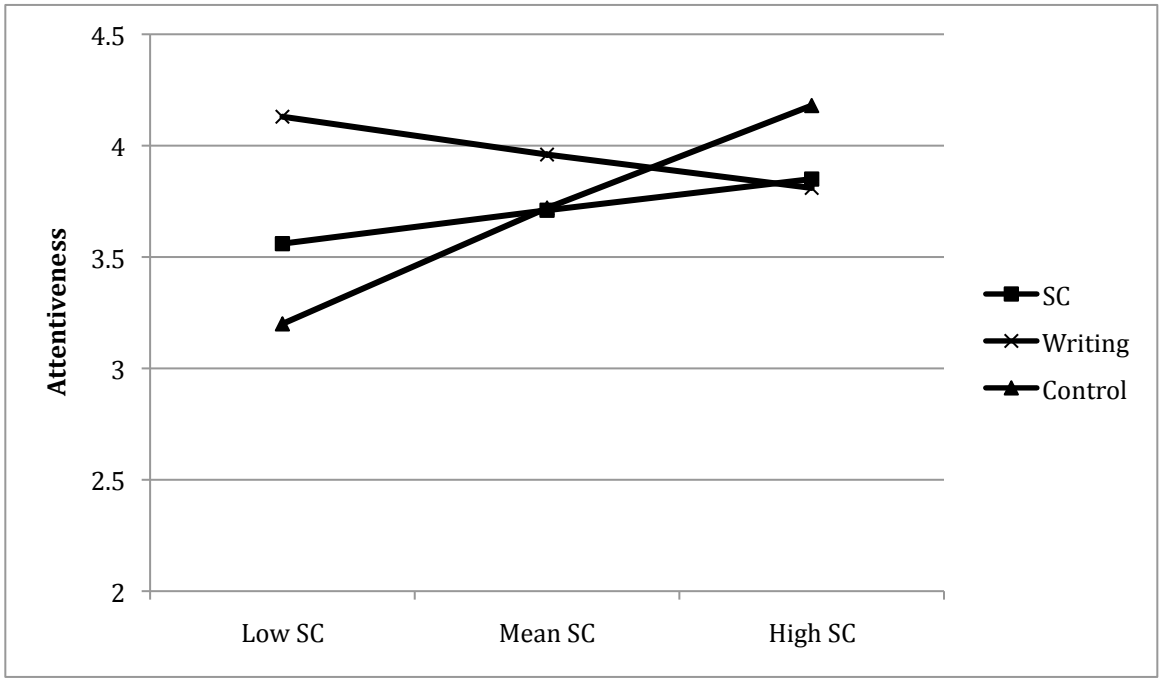


Figure 2: Univariate Analyses of the Significant Interaction of Self-compassion and Condition on Fatigue

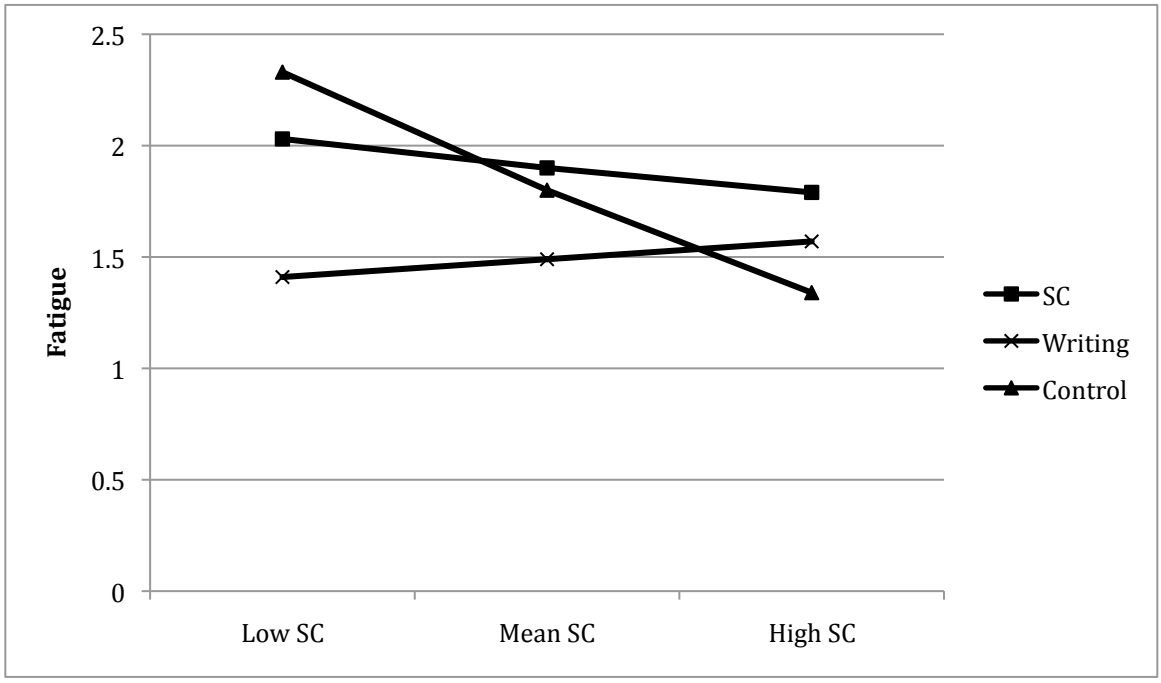


Figure 3: Interaction of Self-compassion and Coded Preventability on the Extent to which the Participant Saw the Event as Being His or Her Fault.

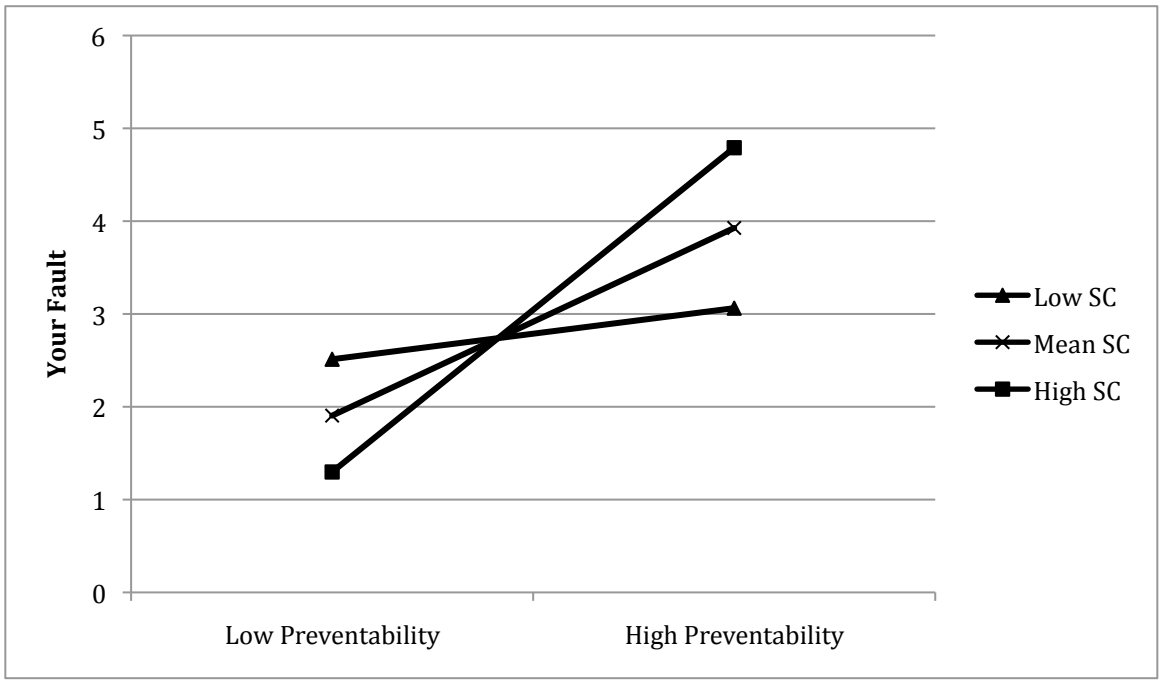


Figure 4: Self-compassion by Condition Interaction on Self-compassion at Time 2.

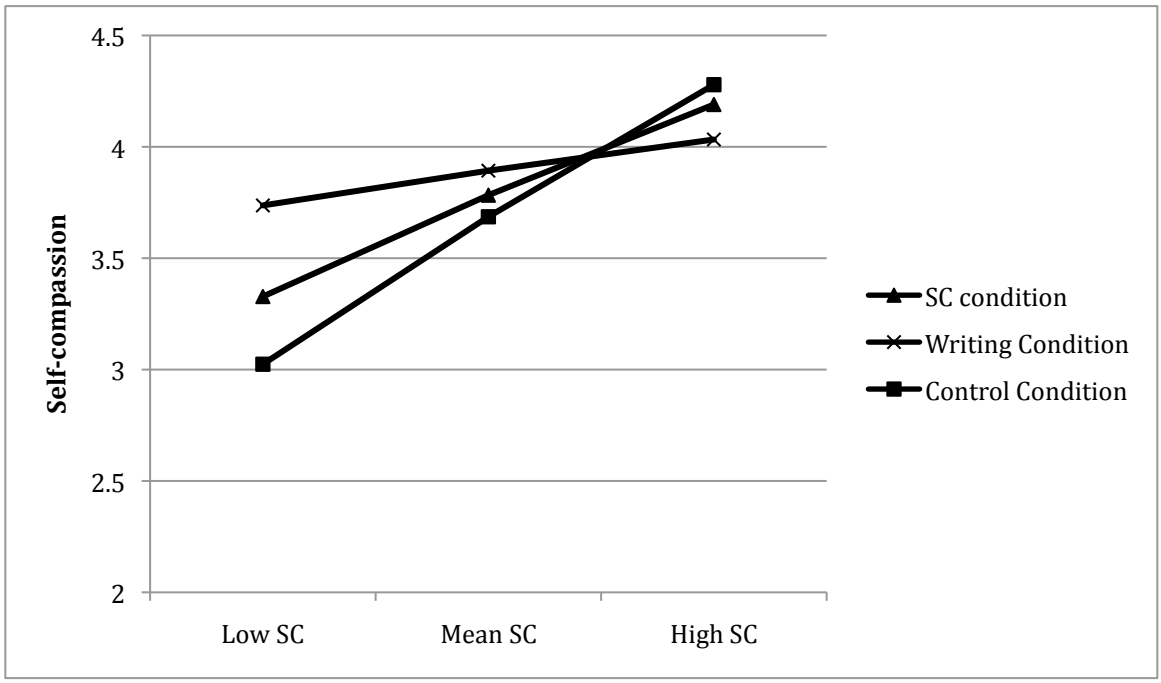
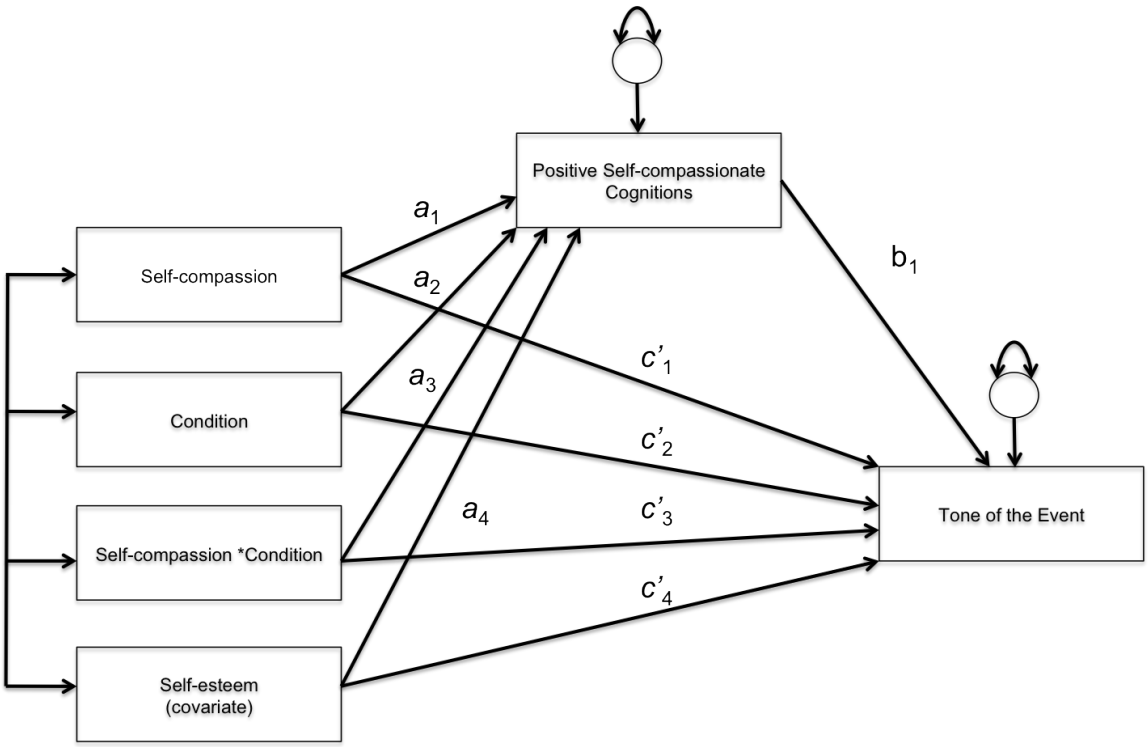


Figure 5: Moderated Mediation Model examining possible moderation of condition in the relationship between self-compassion and positive self-compassionate cognitions when predicting the overall tone of participants' responses.



Note. Two sets of analyses were needed to examine these relationships given the categorical nature of the moderator. In the first analysis, the condition dummy code 1 represented the difference between neutral and positive conditions, and I controlled for the dummy code 2 and the interaction of self-compassion and dummy code 2. In the second analysis, the condition dummy code 2 represented the difference between negative and positive conditions, and I controlled for dummy code 1 and the interaction of self-compassion and dummy code 1.

Appendices

Appendix A

Study 1 Questionnaire (Interests and Lifestyle Questionnaire)

Part 1: General Information

Gender (Check One): _____Male _____Female **Age** _____

How would you describe yourself? (Check all that apply)

_____Caucasian/White
_____African-American (Black)
_____Asian-American
_____Hispanic/Mexican American/Latino
_____Asian (including the Indian subcontinent)
_____Native American, Alaska Native
_____Other

Marital Status (Check One):
_____Married _____Single _____Divorced _____Widowed

Which one best describes your current living situation? (Check One)

_____Independent living _____Assisted living _____Nursing home

---

Do you take a daily vitamin? _____ Yes _____No

On average how many times do you exercise each week? (walking, jogging, aerobics, yoga, seated exercises, and so on) (check one)

____I never exercise

____1 time a week

____2 times a week

____3 times a week

____4 times a week

____5 times a week

____6 times a week

____7 times a week

Please list all organizations (social, religious, etc.) you are an active member of and how much time you spend with that organization each month.

Organization	Hours spent per month
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Part 2: How strongly do you agree or disagree with the following statements?

---

1. I am aging successfully (or aging well).

_____Strongly disagree

_____Moderately disagree

_____Neither agree nor disagree

_____Moderately agree

_____Strongly agree

2. Things keep getting worse as I get older.

_____Strongly disagree

_____Moderately disagree

_____Neither agree nor disagree

_____Moderately agree

_____Strongly agree

3. I have as much pep as I did last year.

_____Strongly disagree

_____Moderately disagree

_____Neither agree nor disagree

_____Moderately agree

_____Strongly agree

4. As people get older, they are less useful.

_____Strongly disagree

_____Moderately disagree

_____Neither agree nor disagree

_____Moderately agree

_____Strongly agree

5. I am as happy now as I was when I was younger.

_____Strongly disagree

_____Moderately disagree

_____Neither agree nor disagree

_____Moderately agree

_____Strongly agree

Part 3: Choose the best answer for how you feel.

1. Are you basically satisfied with your life? ____ No ____ Yes
2. Have you dropped many of your activities and interests? ____ No ____ Yes
3. Do you feel that your life is empty? ____ No ____ Yes
4. Do you often get bored? ____ No ____ Yes
5. Are you in good spirits most of the time? ____ No ____ Yes
6. Are you afraid that something bad is going to happen to you? ____ No ____ Yes
7. Do you feel happy most of the time? ____ No ____ Yes

8. Do you often feel helpless? ____ No ____ Yes

9. Do you prefer to stay at home, rather than going out and doing new things?

____ No ____ Yes

10. Do you have more problems with memory than most people do?

____ No ____ Yes

11. Do you think it is wonderful to be alive now? ____ No ____ Yes

12. Do you feel pretty worthless? ____ No ____ Yes

13. Do you feel full of energy? ____ No ____ Yes

14. Do you feel that your situation is hopeless? ____ No ____ Yes

15. Do you think that most people are better off than you are? ____ No ____ Yes

Part 4: In this section we want to know how you deal with difficult situations. Check the answer that best indicates how often you behave in the stated manner.

1. When I'm feeling down I tend to obsess and fixate on everything that's wrong.
   _____Almost never
   _____Rarely
   _____Sometimes
   _____Frequently
   _____Almost always

2. When I'm down, I remind myself that there are lots of other people in the world feeling like I am.

   _____Almost never
   _____Rarely
   _____Sometimes
   _____Frequently
   _____Almost always

3. When I feel inadequate in some way, I try to remind myself that most people feel inadequate from time to time.

   _____Almost never
   _____Rarely
   _____Sometimes
   _____Frequently
   _____Almost always

4. When I'm going through a very hard time, I give myself the caring and tenderness I need.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

5. When I'm feeling down, I tend to feel like most other people are probably happier than I am.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

6. When something painful happens, I try to take a balanced view of the situation.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

7. When I see aspects of myself that I don't like, I get down on myself.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

8. When I fail at something important to me I try to keep things in perspective.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

9. When I'm really struggling, I tend to feel like other people must be having an easier time of it.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

10. I'm kind to myself when I'm unhappy or experiencing suffering.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

11. I can be a bit cold-hearted towards myself when I'm unhappy or experiencing suffering.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

12. When something painful happens I tend to blow the incident out of proportion.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

Part 5: INTERESTS AND ACTIVITIES

List any new activities, hobbies, or experiences that you tried for the first time since you turned 60. Write them in this box. After each item listed, please mark "yes" if you are currently participating in the activity or something similar. Mark "no" if you no longer participate in this activity

Activity/Hobby/Experience	Yes	No
1._____	____	____
2._____	____	____
3._____	____	____
4._____	____	____
5._____	____	____
6._____	____	____
7._____	____	____
8._____	____	____
9._____	____	____
10._____	____	____
11._____	____	____
12._____	____	____
13._____	____	____
14._____	____	____
15._____	____	____

Part 6: We are interested in knowing how interested you would be in trying some new activities.

How interested would you be in participating in **easy** activities that will improve your **physical strength and endurance**?

_____Not at all interested
_____Somewhat interested
_____Moderately interested
_____Very interested
_____Extremely interested

How interested would you be in participating in **challenging** activities that will improve your **physical strength and endurance**?

_____Not at all interested
_____Somewhat interested
_____Moderately interested
_____Very interested
_____Extremely interested

How interested would you be in participating in **easy** activities that will improve your **memory**?

_____Not at all interested
_____Somewhat interested
_____Moderately interested
_____Very interested
_____Extremely interested

How interested would you be in participating in **challenging** activities that will improve your **memory**?

_____Not at all interested
_____Somewhat interested
_____Moderately interested
_____Very interested
_____Extremely interested

How interested would you be in participating in **easy** activities that will improve your **intelligence and problem solving abilities**?

_____Not at all interested
_____Somewhat interested
_____Moderately interested
_____Very interested
_____Extremely interested

How interested would you be in participating in **challenging** activities that will improve your **intelligence and problem solving abilities**?

_____Not at all interested
_____Somewhat interested
_____Moderately interested
_____Very interested
_____Extremely interested

How interested would you be in participating in **easy** activities that will involve making more **friendships**?

_____Not at all interested
_____Somewhat interested
_____Moderately interested
_____Very interested
_____Extremely interested

How interested would you be in participating in **challenging** activities that will involve making more **friendships**?

_____Not at all interested
_____Somewhat interested
_____Moderately interested
_____Very interested
_____Extremely interested

How interested would you be in participating in **easy** activities that will improve your **mood**?

_____Not at all interested
_____Somewhat interested
_____Moderately interested
_____Very interested
_____Extremely interested

How interested would you be in participating in **challenging** activities that will improve your **mood**?

_____Not at all interested
_____Somewhat interested
_____Moderately interested
_____Very interested
_____Extremely interested

How interested would you be in participating in **easy** activities that involve **helping other people**?

_____Not at all interested
_____Somewhat interested
_____Moderately interested
_____Very interested
_____Extremely interested

How interested would you be in participating in **challenging** activities that involve **helping other people**?

_____Not at all interested
_____Somewhat interested
_____Moderately interested
_____Very interested
_____Extremely interested

Part 7: Now we would like to ask some questions about how well you can get around by yourself.

How difficult is it for you to walk without assistance? (check one)

_____Not at all difficult
_____Slightly difficult
_____Moderately difficult
_____Very difficult
_____Extremely difficult

How often do you use another person for stability when walking from one place to another? (check one)

_____Never or Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

How often do you use a cane when walking from one place to another? (check one)

_____Never or Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

How often do you use a walker when walking from one place to another? (check one)

_____Never or Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

How often do you use a wheelchair when walking from one place to another? (check one)

_____Never or Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

How much would using assistance to walk embarrass you? (check one)

_____Not at all
_____Slightly
_____Moderately
_____Very much
_____Extremely

If you need assistance to walk, how often do you try to hide from other people that you need help to walk? (check one)

_____I don't need assistance walking
_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

Part 8: Now we have questions about your hearing.

How difficult is it for you to hear what other people are saying without a hearing aid? (check one)

_____Not at all difficult
_____Slightly difficult
_____Moderately difficult
_____Very difficult
_____Extremely difficult

If you use a hearing aid, how difficult is it for you to hear what other people are saying using a hearing aid? (check one)

_____I don't use a hearing aid
_____Not at all difficult
_____Slightly difficult
_____Moderately difficult
_____Very difficult
_____Extremely difficult

How often do people have to repeat themselves so that you can hear them? (check one)

_____Never or Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

How often do you use a hearing aid to understand what people are saying? (check one)

_____Never or Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

How much would it embarrass you to use assistance (like a hearing aid) to hear? (check one)

_____Not at all
_____Slightly
_____Moderately
_____Very much
_____Extremely

How often do you try to hide that you can't always hear what people are saying? (check one)

_____I don't have any trouble hearing
_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

Part 9: The next questions are about your memory.

How difficult is it for you to remember things? (check one)

_____Not at all difficult
_____Slightly difficult
_____Moderately difficult
_____Very difficult
_____Extremely difficult

How often do you use tricks, strategies or techniques to help you remember things? (check one)

_____Never or Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

How much does it embarrass you when you don't remember things? (check one) _____ Not at all

_____ Slightly
_____ Moderately
_____ Very much
_____ Extremely

How often do you try to hide it from other people when you don't remember things? (check one)

_____Never or Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

Part 10: These questions ask about pain that you may experience.

How frequently do you experience bodily pain?

_____Not at all
_____Rarely
_____Sometimes
_____Frequently
_____Almost Always

How intense is the pain that you experience?

_____I don't experience any pain
_____Mildly intense
_____Moderately intense
_____Very intense
_____Extremely intense

How often do you take medicine for pain? (check one)

_____Never or Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

How much would it embarrass you that you sometimes need to use pain medication? (check one)

_____Not at all
_____Slightly
_____Moderately
_____Very much
_____Extremely

How often do you try to hide the fact that you take medication? (check one)

_____I don't need pain medications
_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

Part 11: Emotions

INSTRUCTIONS: This scale consists of a number of words and phrases that describe different feelings and emotions. Read each item and then mark the appropriate answer (number) in the space next to that word. **Indicate to what extent you generally feel this way, that is, how you feel on average.**

Use the following scale to record your answers:

1 **very slightly or not at all**	**2** **a little**	**3** **moderately**	**4** **quite a bit**	**5** **extremely**
____ cheerful		____ sad	____ active	____ angry at self
____ disgusted		____ calm	____ guilty	____ enthusiastic
____ attentive		____ afraid	____ joyful	____ downhearted
____ bashful		____ tired	____ nervous	____ sheepish
____ sluggish		____ amazed	____ lonely	____ distressed
____ daring		____ shaky	____ sleepy	____ blameworthy
____ surprised		____ happy	____ excited	____ determined
____ strong		____ timid	____ hostile	____ frightened
____ scornful		____ alone	____ proud	____ astonished
____ relaxed		____ alert	____ jittery	____ interested
____ irritable		____ upset	____ lively	____ loathing
____ delighted		____ angry	____ ashamed	____ confident
____ inspired		____ bold	____ at ease	____ energetic
____ fearless		____ blue	____ scared	____ concentrating
____ disgusted with self		____ shy	____ drowsy	____ dissatisfied with self

Part 12: These are some questions about your daily functioning.

To what extent do you need help with personal care (i.e. wash face, brushing teeth, or shaving)? (check one)

_____Not at all
_____Slightly
_____Moderately
_____Very much
_____A lot

To what extent do you need help cutting your food, spreading butter, etc.? (check one)

_____Not at all
_____Slightly
_____Moderately
_____Very much
_____A lot

To what extent do you need help getting in and out of the bed or a chair? (check one)

_____Not at all
_____Slightly
_____Moderately
_____Very much
_____A lot

To what extent do you need help getting dressed (i.e. fastening buttons, tying shoelaces, etc.)?

_____Not at all
_____Slightly
_____Moderately
_____Very much
_____A lot

To what extent do you need help getting up and down stairs? (check one)

_____Not at all
_____Slightly
_____Moderately
_____Very much
_____A lot

To what extent do you need help bathing yourself? (check one)

_____Not at all
_____Slightly
_____Moderately
_____Very much
_____A lot

Some General Questions.

What is the date today? _____

What day of the week is it? _____

What is the name of the place you are in?_____

What is your street address?_____

How old are you?_____

When were you born? _____

Who is the president of the United States? _____

Who was the president just before him? _____

What was your mother's maiden name?_____

Subtract 3 from 20 and keep subtracting 3 from each number, all the way down, writing the answers below:

_____

Appendix B

Study 2 Questionnaire (Writing about the Negative Event)

Think about a negative event associated with aging—for example, something that involved failure, illness, disability, memory problems, or embarrassment.

Describe precisely what happened.

What led up to the event?

Who else was present when this event occurred?

Take a few minutes to think about how you felt and behaved following the negative event.

Appendix C

Study 2 Questionnaire (The Manipulation)

Self-compassion Condition

Aging can bring about negative life events for all people, and it is important to recognize that other people are experiencing these difficulties as well. List ways in which other people experience events similar to the one that you described above.

When other people experience negative events, we may show them compassion by responding with understanding, kindness, and concern. Write a paragraph that expresses understanding, kindness, and concern toward yourself with respect to the negative event in the same way that you would express concern to a friend who had the same experience.

Following a negative event, some people may allow themselves to get carried away with their emotions when, in fact, it would be more beneficial to remain objective and less emotionally involved. Describe your feelings about the event in a calm and detached fashion. Write about whatever emotions you may have felt in an unemotional and matter-of-fact way without getting carried away with them.

Writing Only Condition

Following a negative event, it may be helpful to fully express one's feelings and emotions by writing them down. For the next five minutes, write a couple of paragraphs exploring your deepest emotions concerning the event.

Appendix D

Study 2 Questionnaire (Dependent Measures)

INSTRUCTIONS: Below are a number of words and phrases that describe different feelings and emotions. Read each item and indicate how much you are experiencing each feeling **right now** (at this moment). Mark the appropriate answer (number) in the space next to that word, using the following scale:

Right now I feel:

1 **very slightly or not at all**	**2** **a little**	**3** **moderately**	**4** **quite a bit**	**5** **extremely**
____ cheerful		____ sad	____ active	____ angry at self
____ disgusted		____ calm	____ guilty	____ enthusiastic
____ attentive		____ afraid	____ joyful	____ downhearted
____ bashful		____ tired	____ nervous	____ sheepish
____ sluggish		____ amazed	____ lonely	____ distressed
____ daring		____ shaky	____ sleepy	____ blameworthy
____ surprised		____ happy	____ excited	____ determined
____ strong		____ timid	____ hostile	____ frightened
____ scornful		____ alone	____ proud	____ astonished
____ relaxed		____ alert	____ jittery	____ interested
____ irritable		____ upset	____ lively	____ loathing
____ delighted		____ angry	____ ashamed	____ confident
____ inspired		____ bold	____ at ease	____ energetic
____ fearless		____ blue	____ scared	____ concentrating
____ disgusted with self		____ shy	____ drowsy	____ dissatisfied with self

Think back to the negative event that you described earlier in the study. Please answer the following questions with that event in mind.

1. How bad was the event? (Circle a **number**)

1	2	3	4	5	6	7
Not bad at all						Extremely bad

2. How much does thinking about this negative event make you angry or upset at **yourself**?

_____Not at all
_____A little bit
_____Somewhat
_____Quite a bit
_____A great deal

3. To what extent was this event your fault?

_____ Not at all your fault
_____Slightly your fault
_____Somewhat your fault
_____Mostly your fault
_____Completely your fault

4. How likely is it that the event could have been prevented if you had acted differently?

_____Not at all
_____Slightly Likely
_____Somewhat Likely
_____Very Likely
_____Almost Certain

Short Answer about Reactions to Physical and Mental Impairment

In this section we will ask you to react to some hypothetical events that you may or may not have experienced

What would you think and feel if you broke your hip and were unable to walk for a period of time?

What would you think and feel if you started losing your memory for important past events?

Personality Measures

How strongly do you agree or disagree with the following statements?

1. I am aging successfully (or aging well).

_____Strongly agree
_____Moderately agree
_____Neither agree nor disagree
_____Moderately disagree
_____Strongly disagree

2. Things keep getting worse as I get older.

_____Strongly agree
_____Moderately agree
_____Neither agree nor disagree
_____Moderately disagree
_____Strongly disagree

3. I have as much pep as I did last year.

_____Strongly agree
_____Moderately agree
_____Neither agree nor disagree
_____Moderately disagree
_____Strongly disagree

4. As people get older, they are less useful.

_____Strongly agree
_____Moderately agree
_____Neither agree nor disagree
_____Moderately disagree
_____Strongly disagree

5. I am as happy now as I was when I was younger.

_____Strongly agree
_____Moderately agree
_____Neither agree nor disagree
_____Moderately disagree
_____Strongly disagree

In this section we want to know how you deal with difficult situations. Check the answer that best indicates how often you behave in the stated manner.

1. When I'm feeling down I tend to obsess and fixate on everything that's wrong.
   _____Almost never
   _____Rarely
   _____Sometimes
   _____Frequently
   _____Almost always

2. When I'm down, I remind myself that there are lots of other people in the world feeling like I am.

   _____Almost never
   _____Rarely
   _____Sometimes
   _____Frequently
   _____Almost always

3. When I feel inadequate in some way, I try to remind myself that most people feel inadequate from time to time.

   _____Almost never
   _____Rarely
   _____Sometimes
   _____Frequently
   _____Almost always

4. When I'm going through a very hard time, I give myself the caring and tenderness I need.

   _____Almost never
   _____Rarely
   _____Sometimes
   _____Frequently
   _____Almost always

5. When I'm feeling down, I tend to feel like most other people are probably happier than I am.

   _____Almost never
   _____Rarely
   _____Sometimes
   _____Frequently
   _____Almost always

6. When something painful happens, I try to take a balanced view of the situation.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

7. When I see aspects of myself that I don't like, I get down on myself.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

8. When I fail at something important to me I try to keep things in perspective.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

9. When I'm really struggling, I tend to feel like other people must be having an easier time of it.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

10. I'm kind to myself when I'm unhappy or experiencing suffering.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

11. I can be a bit cold-hearted towards myself when I'm unhappy or experiencing suffering.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

12. When something painful happens I tend to blow the incident out of proportion.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

Appendix E

Study 3 Questionnaire (Self-compassion Short Scale and Self-esteem Scale)

Gender (Check One): _____Male _____Female **Age** _____

How would you describe yourself? (Check all that apply)

_____Caucasian/White
_____African-American (Black)
_____Asian-American
_____Hispanic/Mexican American/Latino
_____Asian (including the Indian subcontinent)
_____Native American, Alaska Native
_____Other

In this section we want to know how you deal with difficult situations. Check the answer that best indicates how often you behave in the way described.

1. When I'm feeling down I tend to obsess and fixate on everything that's wrong.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

2. When I feel inadequate in some way, I try to remind myself that most people feel inadequate from time to time.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

3. When I'm feeling down, I tend to feel like most other people are probably happier than I am.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

4. When something painful happens, I try to take a balanced view of the situation.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

5. When I fail at something important to me I tend to feel alone in my failure.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

6. When I fail at something important to me I become consumed by feelings of inadequacy.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

7. I try to be understanding and patient towards those aspects of my personality I don't like.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

8. I try to see my failings as part of the human condition.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

9. When I'm going through a very hard time, I give myself the caring and tenderness I need.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

10. When something upsets me I try to keep my emotions in balance.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

11. I'm disapproving and judgmental about my own flaws and inadequacies.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

12. I'm intolerant and impatient towards those aspects of my personality I don't like.

_____Almost never
_____Rarely
_____Sometimes
_____Frequently
_____Almost always

Indicate the degree to which you agree or disagree with each of the following statements:

1. I feel that I'm a person of worth, at least on an equal plane with others.

_____ Strongly disagree

_____ Disagree

_____ Neither agree nor disagree

_____Agree

_____ Strongly agree

2. I feel that I have a number of good qualities.

_____ Strongly disagree

_____ Disagree

_____ Neither agree nor disagree

_____ Agree

_____ Strongly agree

3. All in all, I am inclined to feel that I am a failure.

_____ Strongly disagree

_____ Disagree

_____ Neither agree nor disagree

_____ Agree

_____ Strongly agree

4. I am able to do things as well as most people.

_____ Strongly disagree

_____ Disagree

_____ Neither agree nor disagree

_____ Agree

_____ Strongly agree

5. I feel that I have much to be proud of.

_____ Strongly disagree

_____ Disagree

_____ Neither agree nor disagree

_____ Agree

_____ Strongly agree

6. I take a positive attitude toward myself.

_____ Strongly disagree

_____ Disagree

_____ Neither agree nor disagree

_____ Agree

_____ Strongly agree

7. On the whole, I am satisfied with myself.

_____ Strongly disagree

_____ Disagree

_____ Neither agree nor disagree

_____ Agree

_____ Strongly agree

8. I wish I could have more respect for myself.

_____ Strongly disagree

_____ Disagree

_____ Neither agree nor disagree

_____ Agree

_____ Strongly agree

9. I certainly feel useless at times.

_____ Strongly disagree

_____ Disagree

_____ Neither agree nor disagree

_____ Agree

_____ Strongly agree

10. At times I think I am no good at all.

_____ Strongly disagree

_____ Disagree

_____ Neither agree nor disagree

_____ Agree

_____ Strongly agree

Appendix F

Study 3 Questionnaire (Event Manipulation)

Aging is accompanied by a variety of positive and negative changes and events. We are interested in the negative changes and events. Below you are going to be asked to think about an age-related change or event that you have experienced.

Age-Related Change or Event:

Think of an (*positive/negative)* age-related change or event that you have experienced and write it here:

_____

_____

_____

1. When you think about this change or event, what thoughts and feelings do you have? Describe your thoughts and feelings about the change or event in a few sentences.

2. **Circle** a number to indicate how good or bad this change or event **was**.

1	**2**	**3**	**4**	**5**	**6**	**7**
Extremely Bad			Neither			Extremely Good

3. **Circle** a number to indicate how good or bad this change or event **made you feel.**

1	**2**	**3**	**4**	**5**	**6**	**7**
Extremely Bad			Neither			Extremely Good

4. **Circle** a number to indicate how much of an impact this age-related change or event had on your life.

1	**2**	**3**	**4**	**5**	**6**	**7**
Extremely Bad			Neither			Extremely Good

5. How much do you think about this change or event?
   _____Never
   _____Rarely
   _____Sometimes
   _____Often
   _____A great deal

6. How much control do you have over this change or event?
   _____No control at all
   _____Slight control
   _____Not sure
   _____A good amount of control
   _____Complete control

7. To what extent did each of these factors help you adjust to this change or event?
   a. The support of other people
   _____ Not at all
   _____Slightly
   _____Moderately
   _____Very
   _____Extremely

b. My attitude

_____Not at all

_____Slightly

_____Moderately

_____Very

_____Extremely

c. Realizing that this change or event is normal

_____Not at all

_____Slightly

_____Moderately

_____Very

_____Extremely

d. Trying to be nice to myself

_____Not at all

_____Slightly

_____Moderately

_____Very

_____Extremely

e. My faith or religion

_____Not at all

_____Slightly

_____Moderately

_____Very

_____Extremely

f. Deliberately trying to control my emotions

_____Not at all

_____Slightly

_____Moderately

_____Very

_____Extremely

g. Taking one day at a time

_____Not at all

_____Slightly

_____Moderately

_____Very

_____Extremely

Appendix G

Study 3 Questionnaire (Responses to Aging, Emotions, Successful Aging Scale)

As we try to understand the events, thoughts, and emotions that accompany aging, we hope to give you every opportunity to share your own personal experience. Below we will ask you several questions. Your responses to these questions will help us to better understand the unique individual experience of aging and its impact on daily life.

1. **List three general thoughts that you have about growing older.**

    1. _____

    _____

    2. _____

    _____

    3. _____

    _____

2. **List three ways your thoughts about aging have gotten more positive or more negative since you were 40 years old.**

    1. _____

    _____

    2. _____

    _____

3. _____

---

3. **What are three pieces of advice about aging that you would give to people who are in their 30s, 40s, and 50s?**

1. _____

_____

2. _____

_____

3. _____

_____

INSTRUCTIONS: Below are a number of words and phrases that describe different feelings and emotions. Read each item and indicate how much you are experiencing each feeling **right now** (at this moment). Mark the appropriate answer (number) in the space next to that word, using the following scale:

Right now I feel:

1 **very slightly or not at all**	**2** **a little**	**3** **moderately**	**4** **quite a bit**	**5** **extremely**
____ cheerful		____ sad	____ active	____ angry at self
____ disgusted		____ calm	____ guilty	____ enthusiastic
____ attentive		____ afraid	____ joyful	____ downhearted
____ bashful		____ tired	____ nervous	____ sheepish
____ sluggish		____ amazed	____ lonely	____ distressed
____ daring		____ shaky	____ sleepy	____ blameworthy
____ surprised		____ happy	____ excited	____ determined
____ strong		____ timid	____ hostile	____ frightened
____ scornful		____ alone	____ proud	____ astonished
____ relaxed		____ alert	____ jittery	____ interested
____ irritable		____ upset	____ lively	____ loathing
____ delighted		____ angry	____ ashamed	____ confident
____ inspired		____ bold	____ at ease	____ energetic
____ fearless		____ blue	____ scared	____ concentrating
____ disgusted with self		____ shy	____ drowsy	____ dissatisfied with self

How strongly do you agree or disagree with the following statements?

1. I am aging successfully (or aging well).

_____Strongly agree

_____Moderately agree

_____Neither agree nor disagree

_____Moderately disagree

_____Strongly disagree

2. Things keep getting worse as I get older.

_____Strongly agree

_____Moderately agree

_____Neither agree nor disagree

_____Moderately disagree

_____Strongly disagree

3. I have as much pep as I did last year.

_____Strongly agree

_____Moderately agree

_____Neither agree nor disagree

_____Moderately disagree

_____Strongly disagree

4. As people get older, they are less useful.

_____Strongly agree

_____Moderately agree

_____Neither agree nor disagree

_____Moderately disagree

_____Strongly disagree

5. I am as happy now as I was when I was younger.

_____Strongly agree

_____Moderately agree

_____Neither agree nor disagree

_____Moderately disagree

_____Strongly disagree

Appendix H

Exercise 2

Exploring self-compassion through writing

Part One:

Everybody has something about themselves that they don't like; something that causes them to feel shame, to feel insecure, or not "good enough." It is the human condition to be imperfect, and feelings of failure and inadequacy are part of the experience of living a human life. Try writing about an issue you have that tends to make you feel inadequate or bad about yourself (physical appearance, work or relationship issues…) How does this aspect of yourself make you feel inside - scared, sad, depressed, insecure, angry? What emotions come up for you when you think about this aspect of yourself? This is just between you and the paper, so please try to be as emotionally honest as possible and to avoid repressing any feelings, while at the same time not being overly melodramatic. Try to just feel your emotions exactly as they are – no more, no less – and then write about them.

Part Two:

Now think about an imaginary friend who is unconditionally loving, accepting, kind and compassionate. Imagine that this friend can see all your strengths and all your weaknesses, including the aspect of yourself you have just been writing about. Reflect upon what this friend feels towards you, and how you are loved and accepted exactly as you are, with all your very human imperfections. This friend recognizes the limits of human nature, and is kind and forgiving towards you. In his/her great wisdom this friend understands your life history and the millions of things that have happened in your life to create you as you are in this moment. Your

particular inadequacy is connected to so many things you didn't necessarily choose: your genes, your family history, life circumstances – things that were outside of your control.

Write a letter to yourself from the perspective of this imaginary friend – focusing on the perceived inadequacy you tend to judge yourself for. What would this friend say to you about your "flaw" from the perspective of unlimited compassion? How would this friend convey the deep compassion he/she feels for you, especially for the pain you feel when you judge yourself so harshly? What would this friend write in order to remind you that you are only human, that all people have both strengths and weaknesses? And if you think this friend would suggest possible changes you should make, how would these suggestions embody feelings of unconditional understanding and compassion? As you write to yourself from the perspective of this imaginary friend, try to infuse your letter with a strong sense of his/her acceptance, kindness, caring, and desire for your health and happiness.

After writing the letter, put it down for a little while. Then come back and read it again, really letting the words sink in. Feel the compassion as it pours into you, soothing and comforting you like a cool breeze on a hot day. Love, connection and acceptance are your birthright. To claim them you need only look within yourself.

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Biography

Ashley Batts Allen was born in Raleigh, North Carolina on May 11, 1984. Ashley attended Wake Forest University from 2001-2005 and received a Bachelors of Arts in May 2006 in Psychology. Ashley attended Wake Forest University from 2005-2006 and transferred to Duke University in the fall of 2006. She received her Masters of Arts in Psychology from Duke University in 2009.

List of Publications

Allen, A. B. & Leary, M. R. (in press). Self-compassion and well-being among older adults. *Self and Identity*.

Leary, M. R. & Allen, A. B. (in press). Personality and persona: Personality processes in self-presentation. *Journal of Personality*. doi: 10.1111/j.1467-6494.2010.00704.x

vanDellen, M. S., Allen, A. B., & Campbell, W. K. (in press). Individual differences in response to devaluation: Trait self-esteem, narcissism, and self-compassion. In N. DeWall (Ed.), *Handbook of Social Exclusion*, New York: Wiley.

Leary, M. R., & Allen, A. B. (2011). Belonging motivation. In D. Dunning (Ed.*), Social motivation*. New York: Guilford Press.

Leary, M. R. & Allen, A. B. (2011). Self-presentational persona: Simultaneous management of multiple impressions. *Journal of Personality and Social Psychology*. doi: 10.1037/a0023884

Leary, M. R., Allen, A. B., Terry, M. L. (2011). Managing social images in naturalistic vs. laboratory settings: Implications for understanding and studying self-presentation. *European Journal of Social Psychology, 41,* 411-421.

Allen, A. B. & Leary, M. R. (2010a) Reactions to others' selfish actions in the absence of tangible consequences. *Basic and Applied Social Psychology, 32,* 26-34.

Allen, A. B. & Leary, M. R. (2010b) Self-compassion, stress, and coping. *Social and Personality Psychology Compass, 4,* 107-118.

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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.

Leary, M. R., Estrada, M. J., & Allen, A. B. (2009) The analogue-I and the analogue-me. *Self and Identity, 8,* 147-161.

Leary, M. R., Tate, E. B., Adams, C. E., Allen, A. B., & Hancock, J. (2007). Self-compassion, self-esteem, and reactions to negative events: The implications of treating oneself kindly. *Journal of Personality and Social Psychology, 92,* 887-904.

List of Honors

2010-2011	Preparing Future Faculty Fellowship
2009-2011	National Research Service Award (NRSA)
2009	Summer Research Fellowship (Duke University)
2008-2009	Dan Levitan Social Policy Graduate Research Fellowship
2008	Vertical Integration Program (mentored Duke undergraduate)