Self-Compassion and Positive Aging

7

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Introduction

As people age, they experience a wide range of changes that can both positively and negatively influence mental and physical health. Social role transitions are plentiful in later life. Adjustment to an empty nest when children leave home, retirement, and grandparenthood are examples of transitions that can be simultaneously rewarding and yet stressful. While later life is a time of great happiness and fulfillment for many people (Carstensen et al., 2003), there is also considerable heterogeneity in people's ability to adjust to the transitions of later life (Steverink et al., 2001). Some people are better able to maximize the joys of aging while adapting well to inevitable changes, a process known as *positive aging* (Hill, 2011). Others, however, find the transitions of aging more challenging, and their well-being is compromised as a result (Carpentieri et al., 2017). Positive aging is best viewed as a process rather than an outcome (Kunuroglu & Yuzbasi, 2021; Freund & Baltes, 1998; Gergen & Gergen, 2001). Positive aging entails optimizing emotional, physical, and social well-being, and engaging meaningfully in life, despite challenges that may arise such as the emergence of health issues (Gergen & Gergen, 2001).

Self-compassion, with its emphasis on acknowledging and responding kindly to one's own experience of suffering (Neff, 2003), might help explain why some people are better able to optimize well-being and thus experience positive aging. Self-compassion might enable older adults to embrace later life transitions with balanced awareness, kindness, and an underlying sense of common humanity, rather than feeling isolated, overidentified with the negatives of aging, and self-critical of their experience of growing older (Brown et al., 2018a). As visualized in Fig. 7.1, this chapter outlines the literature linking self-compassion to four pillars of positive aging: (1) mental well-being, (2) physical well-being, (3) engagement in activity, and (4) social connectedness (Gergen & Gergen, 2001). Within this discussion, I explore processes that might explain *how* self-compassion facilitates positive aging, via cultivation of a healthy attitude toward aging, acceptance of change, behavioral flexibility, and flexible goal pursuit. First, I explore why self-compassion may be a natural resilience factor, as well as a helpful alternative to self-esteem to cultivate a healthy self-image in later life.

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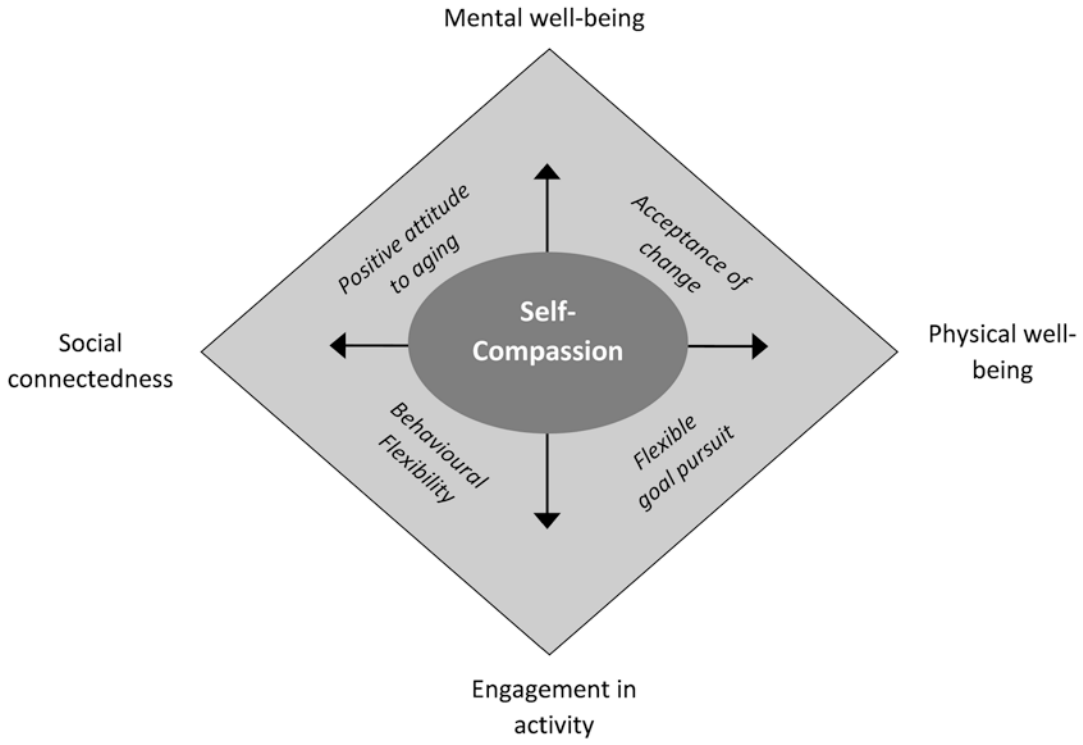

Fig. 7.1 A modified version of Gergan and Gergan's life span diamond model of positive aging. This modified model presents self-compassion as a central ingredient of the four pillars of positive aging: mental well-being, physical well-being, social connectedness, and engagement in activity. Processes that help explain *how* self-compassion facilitates positive aging are in italics

Cultivating a Healthy Self-Image in Later Life

The experience of aging undeniably affects an individual's perception of the self (Hazel, 1991). Key social institutions, including the media and workplaces, proliferate negative views of aging as a time of loss and decline (Australian Human Rights Commission, 2013, 2016). For instance, the Australian Human Rights Commission surveyed over 2000 older adults about their views on media representations of aging, and responses were overwhelmingly negative (Fig. 7.2). Participants believed that the media portrayed older adults as being frail, vulnerable, and burdensome, and furthermore these portrayals negatively influenced participants' attitude toward their own personal views of aging (Australian Human Rights Commission, 2013).

Echoing a cultural context that is predominantly negative about aging, an individual's self-esteem typically follows a sharp downward trajectory in older adulthood. Self-esteem is defined as one's overall sense of self-worth or attitude toward the self (Robins & Trzesniewski, 2005). As seen in Fig. 7.3, representing meta-analytic self-esteem data, self-esteem typically starts off high in childhood then plummets – especially for girls – during adolescence, before gradually rising again throughout early and middle adulthood. Self-esteem then takes a second sharp dive at approximately age 65, and it continues to fall for both men and women during later life, before reaching all-time lows in the eighth decade (Robins & Trzesniewski, 2005). There are substantial individual differences in late life self-esteem trajectories, and those with cognitive decline experience the most pronounced reductions (Wagner et al., 2013). Nevertheless, this

Fig. 7.2 Word cloud of older adult views of media representations of aging. The larger the word font, the more frequently the word was reported by participants. (Reprinted with permission from Australian Human Rights Commission, 2013)

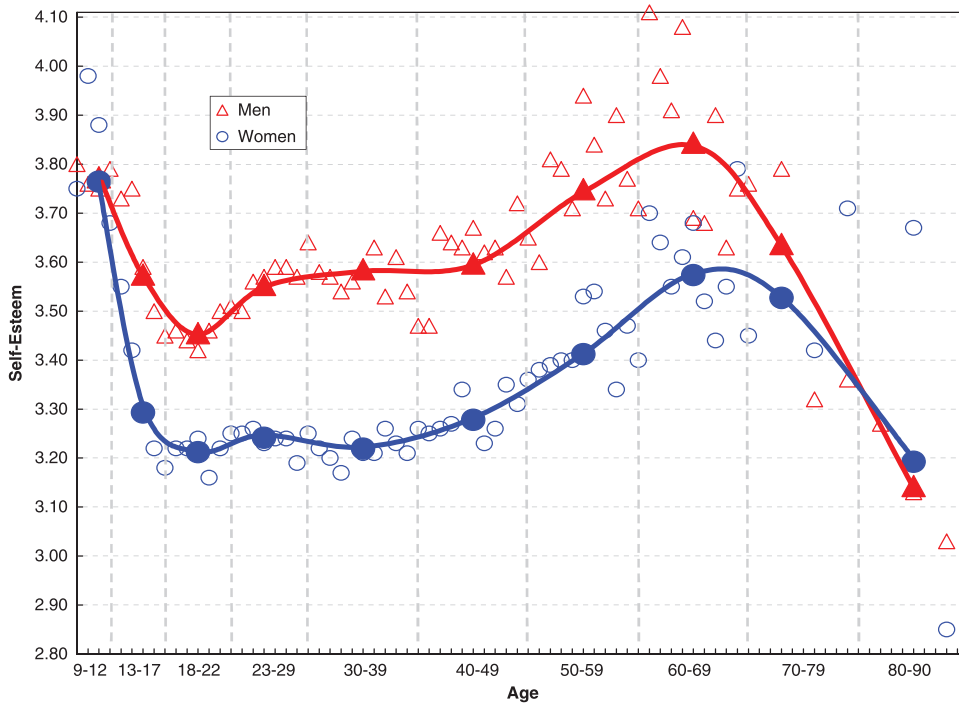

Fig. 7.3 Self-esteem trajectories across the life span. (Reprinted with permission from Robins & Trzesniewski, 2005)

data demonstrates that later life can be a vulnerability factor for low self-esteem. Because attempts to bolster self-esteem can be ineffective (Baumeister et al., 2003), an alternative approach is needed to facilitate healthy self-image in later life.

Unlike self-esteem that declines in older adulthood, evidence demonstrates that self-compassion increases with age (Homan, 2016;

Hwang et al., 2016; Neff & Vonk, 2009). In a study of 2187 adults aged 18–83, Neff and Vonk (2009) found that self-compassion was positively correlated with age, whereas partial correlations revealed that self-esteem significantly decreased as people aged (Neff & Vonk, 2009). Similarly, a Korean study of nearly 2000 younger and midlife adults found evidence of a small but significant positive association between age and self-compassion (r = 0.18) (Hwang et al., 2016). In agreement, in a multigenerational sample of adults aged 18 to 95 (n = 296), Homan (2016) found evidence of a strong positive association between self-compassion and age (r = 0.32). More recently, a large study of community-dwelling adults in the United States (n = 1090) found that the relationship between self-compassion and age followed an inverse U-shaped relationship with age, peaking at approximately 77 years (Lee et al., 2021). While the reasons for this are unclear, it may be that the physical and cognitive decline associated with advanced old age interfere with the capacity for mindfulness or self-kindness or that declining social connections and mobility increase one's sense of isolation.

It is unclear why self-compassion might increase with age, although some researchers have proposed plausible explanations. For example, Homan (2016) suggests that the accumulation of life experiences may lead to people becoming more self-compassionate as they age; as people navigate the challenges of life, they take a more gentle and flexible approach to themselves and others. Self-compassion is strongly related to reflective wisdom (Neff et al., 2007b), which is the capacity to engage in self-examination as a means to attain self-insight, as well as the capacity to gain insight by looking at situations from many different perspectives (Ardelt, 2011). For this reason, Neff and Vonk (2009) suggest that the growth of self-compassion with age might be associated with the development of wisdom (Neff & Vonk, 2009). Reflective wisdom appears to increase in later life, although the association is weak and varies as a function of education (Ardelt et al., 2018). Clearly, more empirical work is needed to understand why people tend to treat themselves more compassionately as they age. However, given that current evidence indicates that self-compassion increases with age, older adults may benefit from using this strength to maximize health and well-being in later life.

Self-Compassion and Mental Well-being in Later Life

An extensive body of research demonstrates that self-compassion is correlated with high mental well-being in younger adults (see Zessin et al., 2015 for a review), and a growing body of research is now finding similar – and in some cases stronger – associations between self-compassion and well-being in older adults. Mental well-being involves two facets: (i) the absence of distressing psychological symptoms such as symptoms of depression, anxiety, and stress and (ii) the presence of positive qualities including happiness, curiosity, and life satisfaction (Huppert & Whittington, 2003). Positive qualities can be further delineated into hedonic well-being, which involves the presence of pleasurable emotions and life satisfaction, and eudaimonic well-being, which is a sense of purpose and meaning in life (Ryan & Deci, 2001). Emerging research shows that self-compassion is correlated with all three of these aspects of mental well-being in later life (Brown et al., 2018a).

Low Levels of Psychological Symptoms Mounting evidence has found that self-compassion is associated with fewer symptoms of depression and anxiety in older adults. In terms of depression, a study by Smith (2015) was one of the first to investigate the association between depression and self-compassion in a sample of American older adults. Smith (2015) recruited 102 independent older adults living in a continuing care retirement community with a mean age of 82 years and found evidence of a strong association between levels of self-compassion and fewer depressive symptoms, whereby self-compassion explained over 50% of the variance in depressive symptoms (Smith,

2015). In agreement, a subsequent US study by Homan (2016) found evidence of a strong correlation between depressive symptoms and self-compassion in a community-based sample of older adults (mean age = 70 years), recruited from a local public library and senior center (Homan, 2016). A Canadian study of patients with chronic obstructive pulmonary disease and healthy controls (mean age = 67 years) echoed this finding, once again demonstrating strong links between self-compassion and depression in older adults (Harrison et al., 2017). This study is important, because it indicates that self-compassion may be protective of depression among older adults with health issues, a topic discussed later in this chapter.

New research is starting to consider the mechanisms that might explain how self-compassion is protective against depressive symptoms in older adults (Hodgetts et al., 2020; Thoma et al., 2021). In a community-based cross-sectional study of 241 Australian adults aged 65 years and older, Hodgetts et al. (2020) investigated the potential role of thinking styles in explaining the relationship between self-compassion and depression. Specifically, the research looked at how ruminative responses, defined as repetitive and passive focus on symptoms of distress, together with a focus on the possible causes and consequences of these symptoms (Nolen-Hoeksema et al., 2008), might account for (i.e., mediate) the relationship between self-compassion and depressive symptoms. The authors found evidence to support a mediation model, whereby older adults higher in self-compassion were less prone to ruminate on their problems, which in turn predicted fewer depressive symptoms. Interestingly, this pattern of associations was stronger for women than men, indicating that self-compassion may be especially protective of depressive symptoms for older women relative to older men. In their discussion, the authors speculate that self-compassion may be more aligned to femininity and therefore may be a more socially appropriate and thus effective strategy to reduce rumination for women relative to men; however, this idea was not tested empirically (Hodgetts et al., 2020; Yarnell et al., 2019). Since levels of self-compassion tend to be slightly lower in women relative to men (Yarnell et al., 2019), an alternate hypothesis is that aging women are in greater need of self-compassion, and thus a unit increase in self-compassion could be associated with a stronger reduction in rumination and depression for women who are starting from a lower self-compassion baseline.

In addition to the cross-sectional associations above, a pilot randomized controlled trial (RCT) has investigated the potential of a ten-session self-compassion-based training program to improve mental well-being and adaptation to stress in a sample of community-dwelling older adults (Perez-Blasco et al., 2016). The authors found that participation in the program was associated with significant reductions in anxiety relative to waitlist control, but there was no significant change in depression. Aside from the small sample size ($n = 45$) which was not adequately powered to detect treatment effects, another concern with this study is that the authors did not use the empirically validated 8-week *Mindful Self-Compassion* (MSC) intervention (Neff & Germer, 2013) and instead developed a study-specific intervention. MSC has been rigorously developed and now trialed in a range of settings, where it has been found to reduce depressive symptomatology (Finlay-Jones et al., 2018; Friis et al., 2016; Neff & Germer, 2013). For ease of between-study comparisons and quality assurance purposes, there is a pressing need to research the efficacy of the standard MSC program in older adult groups, with adequately powered designs that are capable of detecting between-group differences, as well as potential moderators (e.g., gender).

Hedonic Well-being A small group of studies has explored associations between self-compassion and hedonic well-being, including measures of positive affect and satisfaction with life (Allen et al., 2012; Phillips & Ferguson, 2012; Smith, 2015; Kunuroglu & Yuzbasi, 2021). Community-based cross-sectional studies of older adults residing in the United States (Allen

et al., 2012) and Turkey (Kunuroglu & Yuzbasi, 2021) have found that self-compassion is positively correlated with life satisfaction. In addition to a bivariate association with life satisfaction, Kunuroglu and Yuzbasi (2021) used path analysis to test a model where self-compassion mediated the relationship between life satisfaction and successful aging. This model was supported, indicating that levels of life satisfaction might help shape self-compassion, which in turn predicts successful aging in older adult groups. However, this study was cross-sectional in nature, and it is plausible that self-compassion may contribute to levels of life satisfaction, rather than the other way around. Indeed, a recent experimental study from Iran adds weight to this idea (Asadi Bijaeyeh et al., 2021). Asadi Bijaeyeh et al. (2021) examined the efficacy of an 8-week self-compassion training program in promoting life satisfaction and resilience among 15 female nursing home residents in Iran, relative to a control group of 15 female residents who did not receive the intervention. The authors found that self-compassion led to improved life satisfaction and resilience post-intervention, with gains maintained at follow-up (Asadi Bijaeyeh et al., 2021). This indicates that self-compassion-based training might help seniors cultivate greater satisfaction with life. More experimental research is needed to see if this finding replicates across cultures and settings.

To date, two studies have found evidence that self-compassion is associated with positive emotionality in later life. Smith (2015) recruited 102 adults residing in a retirement community in the United States (mean age = 82 years) and found that participants with higher self-compassion concurrently reported higher levels of happiness (Smith, 2015). An Australian study by Phillips and Ferguson (2012) examined links between self-compassion and positive affect in a younger sample of community-dwelling older adults with a mean age of 73 (Phillips & Ferguson, 2012). This study also found evidence of a positive association between self-compassion and happiness.

An interesting finding is that the association between self-compassion and well-being might strengthen across the life span. Data to support this idea comes from a large community study of 1813 Korean adults aged 22–61 years (Hwang et al., 2016). In this study, the authors found that the relationship between self-compassion and well-being strengthened with age, with self-compassion being more strongly associated with well-being for midlife compared to younger adults (Hwang et al., 2016). In this study, well-being was measured with the Concise Measure of Subjective Well-Being Scale (Suh & Koo, 2011) which predominantly measures hedonic well-being. The authors draw on developmental theory to help explain their results (Havighurst, 1948). From this perspective, life satisfaction is thought to be derived from increasingly fixed and uncontrollable factors with age. In younger adulthood, there is typically more freedom and opportunity to modify life circumstances to attain satisfaction and happiness. In contrast, as they age, people typically become increasingly established in family units and career pathways that have high barriers to exit. Thus, according to Hwang et al. (2016), the accepting perspective afforded by self-compassion may be increasingly relevant to facilitate adjustment to life circumstances that cannot be changed, because "fixed factors" become increasingly common with age. A caveat, however, is that this study included a sample of younger and midlife adults. In later life, many older adults experience greater flexibility and freedom relative to midlife as children gain independence and leave home. This transition may coincide with fewer financial stressors for some older adults. Older adults often have more flexibility in time, via retirement or reduced working hours, enabling more time to focus on hobbies and meaningful activities. Thus, an alternate hypothesis is that the relevance of self-compassion peaks at midlife and becomes less relevant in later years.

Available evidence, however, does not support this idea. A US study by Greene et al. (2016) surveyed 525 midlife and older adults who identified as being lesbian, bisexual, transgender, intersex, or queer, administering measures of self-compassion and mental and physical health. The authors found that self-compassion was a stron-

ger predictor of mental health among members of the sample who were aged 65 years and over (n = 124) relative to the midlife subsect of the cohort. The authors also found that older adults exhibited higher self-compassion than the midlife group, replicating the finding that self-compassion increases with age (Homan, 2016; Hwang et al., 2016). In their discussion, the authors do not speculate as to why self-compassion was a stronger predictor of mental health in older adulthood relative to midlife. One possibility relates to the notion that self-compassion is a developmental task that deepens with age due to life experiences (Homan, 2016). If older adults struggle to meet this developmental task of building a healthy relationship with themselves as they age, their well-being might suffer as a consequence. Future qualitative work could be helpful to shed light on this intriguing issue by interviewing aging adults about their experiences of self-compassion and well-being, for example.

Eudaimonic Well-being A small number of studies have investigated the association between eudaimonic well-being and self-compassion in older age groups, with unanimous findings that self-compassion is associated with greater eudaimonia (Allen et al., 2012; Homan, 2016; Phillips & Ferguson, 2012; Homan, 2018; Brown et al., 2016). Phillips and Ferguson (2012) developed a path analytic model to investigate the role of self-compassion in predicting two aspects of eudaimonic well-being – meaning in life and ego integrity – in a community sample of 185 older adults. The authors found that self-compassion was nearly twice as strong a predictor of meaning in life compared to positive affect, an index of hedonic well-being.

Phillips and Ferguson (2012) argue that self-compassion might facilitate meaning in life through enabling behavioral flexibility, which is the ability to adapt to find new meaning despite losses and changes. In younger adults, self-compassion seems to help people respond adaptively rather than disengage following a loss or disappointment (Neely et al., 2009; Neff et al., 2007a). In the same way, older adults high in self-compassion might have the flexibility to find new meaningful pursuits following role transitions such as retirement or adapt hobbies to accommodate functional changes rather than disengaging and giving up on them completely (Brandtstädter & Renner, 1990). While the capacity to find new goals is important across the life span, it is known to be particularly central to well-being in later life (Wrosch et al., 2003). As such, self-compassion might be a helpful psychological resource to facilitate behavioral flexibility and new goal setting in later life.

Ego integrity is the last of Eric Erikson's psychosocial stages of life span development (Erikson, 1963). According to this model, the developmental task of later life is to reach a place of fulfillment and a sense of content for a life well lived despite loss and inevitable mortality, rather than falling into despair. In their model, Phillips and Ferguson (2012) found that self-compassion was a positive predictor of ego integrity. This finding has not been replicated to date, and more work is needed to investigate the role of self-compassion in negotiating the developmental tasks of later life.

In sum, a small but compelling body of research has investigated the relationship between self-compassion and mental well-being in later life. Converging research now shows that self-compassion is associated with fewer psychological symptoms and higher hedonic and eudaimonic well-being. While self-esteem typically declines across later adulthood (Robins & Trzesniewski, 2005), self-compassion may be protected or even enhanced in later life and thus could be a natural resource developed through life experience that people can draw on to navigate challenges.

Self-Compassion May Improve Well-being via Promoting a Positive Attitude to Aging

In addition to direct effects, self-compassion may also shape adaptive attitudes to aging which in turn contribute to health, well-being, and functioning in the second half of life. In this way, self-

compassion may facilitate a more positive attitude toward aging, which in turn has adaptive ramifications for health (Brown et al., 2016). Brown et al. (2016) developed a structural equation model to investigate relationships between self-compassion, attitudes to aging, and health and well-being outcomes in a sample of 517 midlife women aged 40–60. In this study, women high in self-compassion typically reported a positive view of their personal experience of aging. Specifically, women higher in self-compassion viewed aging as an opportunity for psychological growth, including development of wisdom. They also held more adaptive attitudes about physical aging relative to those lower in self-compassion; for instance, they reported valuing the importance of exercise regardless of age. Finally, they were less likely to feel a sense of age-related psychosocial loss. Taken together, this shows that when aging starts to become personally relevant at midlife, self-compassion appears to help people embrace aging with a more positive attitude, despite the ageist views that are often communicated by social institutions such as the media.

In an earlier study by Allen and Leary (2013), older adults were asked to write about age-related events. The authors found those high in self-compassion embraced a more positive emotional tone when writing about their lived experiences of aging, adding support to the idea that self-compassion can enable people to hold a more adaptive view of age-related experiences. To explore this idea further, future research would do well to investigate if self-compassion inductions and interventions such as the MSC program (Neff & Germer, 2013) might help foster positive attitudes to aging.

Holding a positive view of aging has important benefits for well-being (Bryant et al., 2012) and physical health (Levy et al., 2002). Older adults with a positive view of aging tend to have fewer psychological symptoms and greater satisfaction with life (Bryant et al., 2012). In terms of physical health, a seminal longitudinal study of 660 adults aged 50 years and over found that those with a positive view of aging lived up to 7.5 years longer than those with a negative view of aging (Levy et al., 2002), indicating the significance of age-attitudes. However, many cultures – especially western cultures – hold ageist views (Fig. 7.2. Australian Human Rights Commission, 2013), and this can make it difficult for older adults to feel positively about their experience of aging. Further, empirical work has found that direct attempts to foster a positive attitude to aging can be ineffective (Levy et al., 2014); therefore, indirect pathways to feel positively about aging are needed. In the study by Brown et al. (2016) described above, a model was supported whereby higher self-compassion predicted a positive attitude to aging, which in turn predicted both mental and physical well-being (Brown et al., 2016). From these results, the authors suggest that self-compassion might be an effective pathway to feel more comfortable and accepting of the aging process, and this positive attitude in turn has important ramifications for mental and physical health.

Self-Compassion and Physical Well-being

By age 65, the average adult lives with two or more chronic medical conditions, and these comorbidities increase in prevalence with advancing age (Barnett et al., 2012). There are three pathways by which self-compassion might contribute to good physical health in later life. The first and most established pathway is through facilitating adjustment to illness, meaning self-compassionate people are better able to accept a change in health status. This may serve to lessen the psychological burden of illness. The second pathway is through facilitating healthy behaviors such as exercise and a healthy diet. Finally, but to date least conclusively, self-compassion has potential to exert a direct physiological effect on health in later life, for instance, through immune functioning and anti-inflammatory processes.

Adjustment to Illness A few studies have now considered self-compassion as a moderating factor that attenuates the impact of physical health symptoms on mental health in older adults (Allen et al., 2012; Homan, 2016; Smith, 2015; Herriot

& Wrosch, 2021). For instance, in a community sample of adults aged 67–90 years, Allen et al. (2012) found that self-compassion significantly weakened the association between physical symptoms and well-being. The authors found that for any given level of physical pain, limited mobility or poor self-reported health status, older adults with greater self-compassion experienced higher well-being compared to those with less self-compassion, who were more psychologically affected by their physical health conditions.

Data from studies by Homan (2016) and Smith (2015) largely accord with this idea. Homan (2016) found that self-compassion ameliorated the impact of poor self-rated health on depression (but not anxiety). In a sample of 102 senior residents living in a retirement community, Smith (2015) found no evidence of an overall association between self-reported health and both depression and happiness. However, when self-compassion was included as a moderator, those low on self-compassion evidenced a moderately strong connection between self-reported health and depression and happiness, whereas health was independent of well-being for those with higher self-compassion. This is a particularly interesting finding because it shows that older adults low on self-compassion may be at high risk of experiencing psychological symptoms and reduced well-being in response to health issues. In turn, lower well-being is known to contribute to poorer physical outcomes including morbidity and mortality (Carney & Freedland, 2017; Diener & Chan, 2011), completing a downward self-perpetuating cycle of poor physical and mental health.

A longitudinal study by Herriot and Wrosch (2021) followed health and self-compassion trajectories of 268 older adults with a mean age of 75 years at baseline to further investigate links between self-compassion and physical health. In this study, the authors found that self-compassion was associated with fewer physical symptoms in advanced age (i.e., 83 years, one standard deviation above the mean age of the sample) but not early older adulthood (i.e., 67 years, one standard deviation below the mean age of the sample). Moreover, longitudinal analyses revealed that low self-compassion was associated with a 4-year increase in chronic health issues for participants in advanced old age. In contrast, older participants who had higher self-compassion were protected against a subsequent rise in chronic health issues over the study period. In their discussion of these results, the authors explain that self-compassion may be especially important to health outcomes in advanced old age. Advanced old age is a time where there are often many uncontrollable losses which can contribute to poor health outcomes (Heckhausen et al., 2019), and the capacity to accept these losses with self-kindness, mindfulness, and common humanity may be paramount (Herriot & Wrosch, 2021).

It is plausible that self-compassion training might be helpful for aging adults living with health issues. For instance, Brown et al., 2019 developed a brief, four-session self-compassion-based intervention for midlife and older adults in outpatient hospital treatment for a chronic medical condition. In this small feasibility study (mean age = 64 years), authors found that patients responded well to the training program, rating the sessions as being enjoyable (mean rating 6.8/7) and relevant to daily life (mean rating 6.4/7). The participants also experienced marked reductions in depressive symptoms, as well as trends toward increased self-compassion and positive affect over the course of the program. A limitation of the study was that the intervention was brief; participants provided feedback that they would have preferred more time to practice self-compassion skills to consolidate their learning. While this is a preliminary study, the finding demonstrates that chronically unwell aging adults have an interest in self-compassion-based training, and it may facilitate adaptation to illness. Research to pilot the standard 8-week MSC with older adults is needed to extend this preliminary research and determine whether adaptations are required to tailor the program to the specific needs of older adults.

Health Behaviors Several studies from across the life span have now found that self-compassion

is associated with a range of healthy behaviors including exercise, healthy diet, and engagement with medical treatment and high-quality sleep (Dunne et al., 2018; Sirois et al., 2015; Hu et al., 2018; Terry et al., 2013; for reviews see Chaps. 18 and 19 of this Handbook). In a series of studies that included both younger and older adults (age range 18–75 years), Terry et al. (2013) found that self-compassionate people typically felt less guilt or embarrassment about health issues and were more likely to seek medical assistance earlier in the course of illness than those lower on self- compassion. A proactive approach to health may become increasingly important with age, as health issues accumulate. Likewise, the effects of healthy behaviors typically strengthen over time, with behavioral choices earlier in life affecting health and well-being outcomes across the life span (Vaillant, 2008). For this reason, the role that self-compassion might play in facilitating healthy lifestyle choices and a proactive approach to health is of central relevance to later life health and well-being.

Healthy behavior choices made at midlife are thought to be particularly powerful determinants of healthy aging trajectories (Willcox et al., 2006; Kelly et al., 2016). One study by Hallion et al. (2018) looked at self-compassion and physical activity participation in an online survey of 169 midlife adults aged 40 to 65. Contrary to the hypothesis, they found no evidence of a direct link between self-compassion and physical activity. However, the authors found evidence of an association between self-compassion and self-regulatory strategies, which in turn are known to contribute to healthy behaviors such as exercise (e.g., McAuley et al., 2011). This indicates that relationships between self-compassion and health behaviors might be indirect. It should be noted that this was a relatively small study that may have lacked statistical power. Clearly, additional large, well-designed studies are needed to expand on these results by considering links between self-compassion and health behaviors in older adulthood.

Direct Physiological Effects A small but growing body of research has investigated the underlying physiological correlates of trait self-compassion (Svendsen et al., 2016; Breines et al., 2014; Breines et al., 2015; Friis et al., 2015; Herriot et al., 2018), as well as physiological changes caused by self-compassion inductions and training programs (Brown et al., 2019; Friis et al., 2016; Kirby et al., 2017). Herriot et al. (2018) investigated relationships between self-compassion, age-related stressors (including functional disability, life regrets, and physical health issues), and cortisol levels in a community-dwelling group of 233 adults with a mean age of 75 years (Herriot et al., 2018). Cortisol is a hormone that is released in response to stress (Zorn et al., 2017). Findings of the study revealed that self-compassion significantly moderated the relationship between age stressors and diurnal cortisol secretion, whereby self-compassion was increasingly associated with low cortisol secretion in those reporting high regret and health-related stress. This finding demonstrates that self-compassion may dampen the physiological impact of age stressors, in this case through weakening cortisol reactivity to stress.

Physiological benefits of self-compassion have also been observed in younger adult groups (see Chap. 17 for a review), and these findings have implications for older adults. In an experiment of social stress, Breines et al. (2014) asked 41 young adults to give an impromptu speech followed by an arithmetic task in front of a live audience of evaluative judges (Breines et al., 2014). The authors found that self-compassionate participants experienced less stress-induced inflammation (interleukin-6; IL-6) after the stressful encounter compared to those lower on the trait. Stress-induced inflammation can contribute to longer-term health outcomes, increasing the risk of developing cardiovascular disease and diabetes (Juster et al., 2010). IL-6 and IL-6 receptor concentrations have also been found to relate to mental well-being in later life, including relationship quality and purpose in life (Friedman et al., 2007). Therefore, self-compassion may ameliorate inflammatory responses to stress, which in

turn may have positive ramifications for health and psychological well-being in later life. It should, however, be noted that evidence linking self-compassion with inflammatory markers is preliminary, and future work is needed to expand on these early results.

Heart rate variability (HRV) is an index of autonomic nervous system functioning associated with both physical and mental health across the life span (Brown et al., 2018b; Thayer et al., 2010; Bhattacharyya et al., 2008). High HRV is indicative of flexible nervous system that adapts efficiently to an ever-changing biopsychosocial environment (Thayer et al., 2012; Appelhans & Luecken, 2006). High resting HRV is associated with emotion regulation (Appelhans & Luecken, 2006), and emotion-based experimental tasks have been used to activate short-term increases in HRV (Smith et al., 2011). Self-compassion is an adaptive emotional regulation skill that helps soothe negative emotional states and is associated with high HRV in college students (Svendsen et al., 2016). Furthermore, self-compassionate inductions and interventions have been reported to increase resting HRV in studies of younger adults (Kirby et al., 2017). Yet little research has explored whether self-compassion training might improve HRV in older adults. In a pilot feasibility study of a self-compassion intervention for aging adults with health issues, Brown et al. (2019) reported a nonsignificant trend toward increased HRV following the training course, but a much larger study is needed to qualify these preliminary results. It should be noted that a recent meta-analysis of randomized controlled trials found no evidence that mindfulness-based training programs lead to improvements in resting-state HRV (Brown et al., 2021). Self-compassion training explicitly teaches people how to soothe negative emotional states, and so self-compassion may be more closely related to HRV compared to general mindfulness training programs (Svendsen et al., 2020).

In sum, there are three pathways by which self-compassion might facilitate healthy physical aging in later life. First, there is relatively strong evidence that self-compassion enables people to adjust to physical health threats, such that mental well-being is buoyed despite the inevitable challenge of being sick. Second, studies of younger adults demonstrate that those high in self-compassion are more likely to take care of themselves by making healthy lifestyle choices and the effects of these choices accumulate over time across the life span and become increasingly prominent with age. Third, self-compassion may lead to direct physiological benefits such as reduced inflammatory response to stress and improved HRV, but large-scale, high-quality research is needed to verify these effects.

Self-Compassion and Engagement in Activity

Later life can bring newfound opportunities for freedom, travel, and the pursuit of hobbies and personal growth. At the same time, role transitions such as retirement and the emergence of health issues can pose challenges for some older adults. With this matrix of gains and losses, flexibility is needed to adapt to change and thus enjoy the pleasures of aging without becoming overwhelmed by the losses.

Selective optimization with compensation (SOC) is a popular developmental model that helps describe how people adjust to inevitable life transitions that occur across the life span and become increasingly common in later life (Freund & Baltes, 1998). Selection involves committing to realistic personal goals and *adjusting* goals when needed based on changing circumstances. An example of this is a tennis player, who, with arthritis and advancing age, might narrow their repertoire and select to play fewer overhead shots in games to avoid pain and care for their joints. Optimization entails allocating resources to achieve higher levels of functioning in selected pursuits, for instance, the older tennis player might spend more time practicing their forehand shots to optimize their performance. Finally, compensation involves finding ways to compensate for loss, so that life priorities can still be pursued, despite any physical decline. To continue with the tennis example, the aging player might elect to play doubles and shorter games. If mobil-

ity issues continued to worsen such that playing tennis becomes unrealistic, the player might then compensate by taking up coaching, watching games instead of playing, or fundraising for their local tennis club. In this way, they can continue to engage in the hobby despite physical decline.

Engagement in SOC processes is a strong predictor of well-being in later life (Carpentieri et al., 2017; Freund, 2008). Less research has considered psychological factors that might predict the tendency to engage with SOC processes, versus the alternative which is either the relentless pursuit of unrealistic goals *or* disengagement due to the inability to adapt to change. While a novel area, data from both older and younger adult groups indicates that self-compassion might facilitate adaptive behavior in the form of SOC processes.

Firstly, studies of younger adults indicate that self-compassion is associated with goal regulation (Neff et al., 2005; Neely et al., 2009). Neff et al. (2005) found that college students who self-reported high levels of self-compassion were less likely to embrace outcome-oriented performance goals, in which people are motivated to achieve a goal to defend self-worth. Instead, self-compassionate people were more likely to adopt process-oriented mastery goals, motivated by curiosity and a desire to learn and engage for learning's sake. Research has found that mastery goals are more helpful than performance goals when goal flexibility (i.e., selection, optimization, and compensation) is needed. For instance, mastery is efficacious in the context of challenges such as interpersonal conflict (Darnon et al., 2007) and in the context of age-related symptoms such as memory loss (Hastings & West, 2011). The capacity to hold mastery goals that are more process-oriented may be a great benefit to facilitate flexibility and meaningful engagement with life in older adulthood.

A study by Allen et al. (2012) indicates that self-compassion is associated with goal flexibility in later life. In this study, the authors surveyed 71 older adults on their eagerness to use memory, hearing, and walking aids. The authors found that self-compassionate participants were less bothered about accepting these forms of support (Allen et al., 2012). Thus, in this study, self-compassion appeared to promote flexibility to *compensate* for age-related losses, such that functioning is maintained despite the loss. For instance, a willingness to accept a walking aid when it is justified could enable mobility for a senior to leave their house and engage with their local community. In contrast, those lower on self-compassion who are more bothered about accepting aids could be limited by age-related losses either through refusal to accept the aid or psychological distress caused by using the aid without acceptance. Part of the role of clinicians is to support older adults to see the value of accepting support when it is needed, and helping older adults build self-compassion can facilitate this process of acceptance and adjustment to loss.

There is now some evidence from both younger and older cohorts that self-compassion might enable the *flexible* pursuit of goals through enabling the processes of selection, optimization, and compensation. Self-compassionate people tend to embrace mastery rather than performance goals, and mastery goals are more flexible to accommodate challenges and changes compared to performance goals that are relatively fixed. Further, self-compassionate older adults are more likely to accept aids that can bolster daily life functioning to compensate for age-related losses. Future research is needed to delve more deeply into these issues and to consider the extent to which self-compassion might facilitate flexible pursuit in later life.

Self-Compassion and Connectedness in Later Life

Social isolation and loneliness are powerful predictors of poor health outcomes and risk of premature death (Holt-Lunstad et al., 2015; Nicholson, 2012). Health risks of isolation and loneliness are equivalent in strength to well-established risk factors such as smoking and obesity (Courtin & Knapp, 2017). For this reason, advancing social connection has been identified as a key public health priority (Holt-Lunstad et al., 2017). Unfortunately, those aged 75+ are

the age group most at risk of experiencing loneliness (Australian Institute of Health and Welfare, 2019). In turn, lack of connection with others is linked with high rates of suicide that are observed in later life (Van Orden & Conwell, 2011). Given the enormous costs of late life isolation, it is important to consider the extent to which self-compassion might have a role to play in facilitating social connectedness and helping address this major public health crisis. Given that a core component of self-compassion is "common humanity" (i.e., the capacity to recognize that one's difficulties are part of the common human experience), it may be expected that people with higher levels of self-compassion feel more connected to others, particularly during times of difficulty.

Few studies have investigated relationships between self-compassion and connectedness in later life, but early work has showed promising correlational effects (Allen et al., 2012; Homan, 2016). Homan (2016) investigated links between trait self-compassion and positive relationship quality in a sample of 121 older adults and found evidence of a strong relationship between the constructs ($r = 0.56$). Using a different measure, Allen et al. (2012) found that self-compassionate older adults were less likely to report that health issues interfered with their social functioning. While these were cross-sectional studies that limit inferences of causality, this emerging evidence indicates that self-compassion is associated with positive social functioning in later life. More recently, a longitudinal study of 1090 community-dwelling adults (baseline mean age 61.5 and 66 years for women and men, respectively) found that self-compassion was positively associated with mental well-being and inversely associated with loneliness across the life span (Lee et al., 2021).

Studies with younger adults add support to this idea. Self-compassion is associated with high-quality romantic relationships and a felt sense of community and relationship harmony (Neff & Beretvas, 2013; Akın & Akın, 2015; Yang, 2016). While these measures of relationship quality cannot counterbalance the *absence* of relationship that is prevalent in later life, it demonstrates that self-compassion is a skill associated with making the most out of relationships that you do have. Since self-compassion is associated with relationship quality, it is plausible that self-compassionate older adults might be able to derive more psychological benefit from casual social interactions, for instance, a chat with the mailman or local storeowners, relative to those who are less self-compassionate – an interesting hypothesis for future research.

A meta-analysis of interventions designed to prevent social isolation and loneliness in older adults found evidence that group-based programs are more effective than one-to-one programs providing personalized support (Cattan et al., 2005). Moreover, group programs that incorporated educational or training input were the most effective of all in reducing isolation. In their discussion, the authors recommend including training in intrapersonal resources within group programs, such as teaching on self-esteem. Since self-esteem is typically fragile in the face of difficulties and is not easily taught (Neff, 2011), offering group training on self-compassion could be a more effective pathway to social connection for older adults. Modifications of the MSC program to include content that is specifically relevant to older adults could be helpful (Bryant, 2017). In this way, the process of participation in the group would offer a direct route to the experience of social connectedness. Simultaneously, course content on self-compassionate aging might facilitate healthy aging among participants.

Broad Processes Explaining Why Self-Compassion Promotes Positive Aging

As illustrated in Fig. 7.1, *s*elf-compassion facilitates positive aging via broad, interrelated processes: attitudes to aging, acceptance of change, behavioral flexibility, and flexible goal pursuit. In turn, these processes enable the four pillars of positive aging which include mental well-being, physical well-being, engagement in activity, and social connectedness. In a society that holds explicit and implicit biases against aging and

older adults, embracing a positive view of aging can be challenging, perhaps especially for women who are exposed to negative media representations of aging women (Lemish & Muhlbauer, 2012). Research has found that self-compassion enables individuals to hold more positive views of aging, which in turn has beneficial sequelae for positive aging, especially in the domains of mental and physical health (Brown et al., 2016).

Self-compassion also facilitates adjustment to change. An example of this is converging evidence linking self-compassion to good adjustment to illness in the second half of life (Allen et al., 2012; Homan, 2016; Smith, 2015; Herriot & Wrosch, 2021). Self-compassionate older adults are more likely to maintain high levels of well-being, despite illness and physical symptoms that are increasingly common in later life. Finally, self-compassion enables behavioral flexibility as well as flexible goal pursuit via selection, optimization, and compensation processes (Freund & Baltes, 1998). One example of this is that self-compassionate older adults appear to be less bothered about accepting aids (e.g., for walking and hearing). This type of behavioral flexibility enables continued engagement in life.

Conclusion and Future Directions

Self-compassion is an adaptive psychological resource that facilitates adjustment to challenges across the life span, and it may be especially useful in later life when physical, psychological, and social changes are plentiful. The field of self-compassionate aging is relatively new. The first scientific paper on the topic was published in 2012 (Allen et al., 2012). The past decade has seen a rapid rise in publications, and most study designs have been cross-sectional, investigating associations between trait self-compassion and health and well-being outcomes in older adult groups (Brown et al., 2018a).

From the literature published to date, there is evidence that self-compassion is associated with four pillars of positive aging including (1) mental well-being, (2) physical well-being, (3) engagement in activity, and (4) social well-being (Gergen & Gergen, 2001). First, self-compassion is associated with mental well-being in later life, including reduced risk of psychological symptoms and a greater likelihood of both hedonic and eudaimonic well-being. Self-compassion may also hold benefits for physical health in later life, a second key pillar of positive aging, by facilitating adjustment to health issues, promoting healthy behaviors, and potentially direct physiological pathways such as immune functioning and HRV. Self-compassion is also associated with engagement in activity and social connectedness, the last two pillars of positive aging (Gergen & Gergen, 2001). Self-compassion enables meaningful activity and is associated with high-quality relationships (Homan, 2016), which can protect against loneliness and isolation in later life.

While research is still needed to uncover mechanisms that explain *how* self-compassion facilitates positive aging, there appears to be broad processes that are relevant. Self-compassion works by helping people embrace a positive attitude to aging and adjust to changes that are plentiful in later life, behavioral flexibility, and flexible goal pursuit. These broad processes relate to all four pillars of positive aging. More empirical work is needed to unpack these ideas.

The field of self-compassionate aging is still in its infancy. The field needs to move beyond cross-sectional research to develop and test the efficacy of rigorous self-compassion-based training programs that are modified to suit the needs of older adults (Bryant, 2017). We also need to see more experimental research, to consider if brief self-compassion inductions might be an effective way to prime aging adults to be more self-compassionate toward their experience of aging. In the context of an aging society, there is an urgent need to find cost-effective ways to support aging adults cope with the unprecedented changes and losses of later life (Gurwitz & Pearson, 2019). Self-compassion is a promising psychological resource that may help people respond to these challenges of aging, and more research is needed to expand this field of research.

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