

Review Article

Self-compassionate Aging: A Systematic Review

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Abstract

Background and Objectives: There is considerable heterogeneity in experiences of aging, with some experiencing greater well-being and adapting more successfully to the challenges of aging than others. Self-compassion is a modifiable psychological skill that might help explain individual differences in well-being and adjustment in later life. The aim of this study was to systematically review the literature on self-compassion and well-being outcomes in studies of older adults aged 65 and older.

Research Design and Methods: This systematic review was conducted according to PRISMA guidelines, using databases PsycINFO, Medline, and Embase. The search term self-compassion was paired with terms relating to well-being, psychological symptoms, and adjustment. Meta-analysis was used to synthesize results on the relationship between self-compassion and four outcomes including depression, anxiety, hedonic well-being, and eudaimonic well-being.

Results: Eleven studies met inclusion criteria for this review. Meta-analysis revealed that self-compassion was associated with lower levels of depression ($r = -.58$, 95% CI $[-.66, -.48]$) and anxiety ($r = -.36$, 95% CI $[-.60, -.07]$), and higher levels of hedonic ($r = .41$, 95% CI $[.15, .62]$) and eudaimonic ($r = .49$, 95% CI $[.41, .57]$) well-being. Further, three studies found self-compassion weakened the impact of physical symptoms on well-being outcomes.

Discussion and Implications: We found preliminary evidence that self-compassion is associated with well-being outcomes in older adults, and that self-compassion may buffer the psychological sequelae of health symptoms in later life. Higher quality studies with uniform outcome measures are needed to replicate and extend these results.

Keywords: Analysis—literature review, Psychology of aging/psychiatry, Psychosocial, Successful aging, Well-being

Ageing is one of the great, universal challenges that we each face as part of being human. As medical and technological advances enable us to live longer than any other time in history, understanding how to make the most of these extra years—or “age well”—is a question attracting rapidly increasing attention by researchers, policy makers, and clinicians (Beard et al., 2016). Later life is a time of substantial change. Retirement, grandparenthood, health issues in self and loved ones, and a greater emphasis on personal growth and pursuit of hobbies are all changes commonly associated with later life (Charles & Carstensen, 2010). A large and growing body of evidence shows that people

vary widely in how they adapt to these changes (Wang, 2007), and successful adaptation to change is a key aspect of ageing well (Haase, Heckhausen, & Wrosch, 2013). Identifying modifiable factors that help explain individual differences in well-being in later life is a key public health objective, to help understand and ultimately improve the lived experience of ageing (Jeste et al., 2013).

Self-compassion can be defined as relating toward the self with kindness and acceptance, especially during challenging moments of suffering or stress (Neff, 2003), and this construct could explain why some people experience better late-life adjustment than others. Self-compassion

involves the relative predominance of three positive qualities—mindfulness, self-kindness, and common humanity—over their opposites: overidentification, self-criticism, and a sense of isolation. Studies in younger adults have found that self-compassion is a powerful predictor of mental health, including high levels of positive well-being (satisfaction with life, emotional balance, and a sense of purpose), and low levels of psychological symptoms, including depression, anxiety, and stress (Barnard & Curry, 2011; MacBeth & Gumley, 2012). Self-compassionate people are also more likely to have helpful thoughts, with less worry and rumination, lead healthy lifestyles, and have more fruitful relationships with others relative to those who are low on self-compassion (Arimitsu & Hofmann, 2015; Neff & Beretvas, 2013; Sirois, Kitner, & Hirsch, 2015). Studies of younger adults show that self-compassionate people are more resilient facing major life events such as divorce and diagnosis of a serious illness (Brion, Leary, & Drabkin, 2014; Sbarra, Smith, & Mehl, 2012). These benefits, coupled with evidence that self-compassion is a skill that can be taught (Neff & Germer, 2013), indicate that self-compassion may be a skill that could facilitate resilience and ageing well.

Self-compassion, Well-being, and Healthy Ageing

Healthy ageing is a multifaceted construct that encompasses mental, social, and physical well-being (Lara et al., 2013). Self-compassion is a promising skill that may foster healthy aging in each of these domains. Mental well-being, itself a multifaceted construct, includes both the presence of positive indices of well-being as well as the absence of psychological symptomatology including depression, anxiety, and stress (Huppert & Whittington, 2003). Meta-analysis of studies with younger adults has found that self-compassionate people tend to have high positive well-being, including both hedonic (positive thoughts and feelings) and eudaimonic (sense of purpose in life) well-being (Zessin, Dickhäuser, & Garbade, 2015). Concurrently, meta-analysis also demonstrates that self-compassion is associated with low levels of psychological symptoms, the negative component of mental well-being (MacBeth & Gumley, 2012).

Although, to the best of our knowledge, no systematic review has brought together the evidence on mental well-being and self-compassion specifically in older adults, emerging evidence shows that self-compassion may become an ever more important predictor of well-being as we age (Hwang, Kim, Yang & Yang, 2016). This is because self-compassion is activated in times of hardship (Neff, 2003), enabling individuals to respond with acceptance and self-kindness instead of self-criticism and resistance to the changes and challenges that life presents. Thus, the more inevitable difficulties one faces with aging, the more pertinent self-care attitudes such as self-compassion may be to well-being. Supporting this idea, in a study of more than

1,800 adults aged 20 to 50, Hwang and colleagues (2016) found that age strengthened (moderated) the relationship between self-compassion and well-being, such that self-compassion was a stronger predictor of well-being for mid-life relative to younger adults. Although a limitation is that older adults were not included in the sample, the finding highlights the need to consider self-compassion in the ageing context, as self-compassion may become increasingly important as people age.

Alongside links to mental well-being, self-compassion is also relevant to social well-being, the second component of healthy aging. Social well-being involves a sense of social connectedness (Lara et al., 2013) and is typically high in those with self-compassion (Neff, 2003). In younger adults, self-compassion has also been found to relate to positive relationship behavior, as well as high levels of well-being and satisfaction in relationships (Neff & Beretvas, 2013), demonstrating that self-compassion is relevant to both personal and relational well-being.

Finally, self-compassion is relevant to physical well-being, the third component of healthy aging. Self-compassionate people tend to lead healthy lifestyles (Sirois, Kitner, et al., 2015). Studies have also found that self-compassion is associated with adaptive adjustment to a range of age-related physical symptoms including menopausal hot flashes (Brown, Bryant, Brown, Bei, & Judd, 2014), persistent pain (Wren et al., 2012), and arthritis (Sirois, Molnar, & Hirsch, 2015). In these studies, self-compassion has been found to weaken the relationship between physical symptoms and well-being outcomes, meaning that those high on self-compassion are less negatively affected by their physical symptoms. In other words, self-compassion may enable aging adults to adjust to the physical changes associated with ageing more skillfully, such that they can maintain well-being in the face of illness.

The Current Study

Self-compassion is a promising psychological resilience factor that has recently emerged in the ageing literature, but to date no study has systematically investigated the literature to determine what is known about how self-compassion relates to well-being and health in older adults. The purpose of this study, then, was to review the literature investigating the relationship between self-compassion and health and well-being outcomes in studies of older adults. We also considered the potential role of self-compassion in moderating the impact of poor health on well-being, given that self-compassion becomes salient in the context of hardship.

Methods

Identification of Relevant Studies

This is a systematic review conducted according to the PRISMA guidelines (see [Supplementary Table 1](#) for PRISMA checklist) and registered on the PROSPERO database (ID:

CRD42018087475). Peer-reviewed journal articles published between 2002 (when the first research on self-compassion was published) and May 2018 were systematically searched using the PsycINFO, Medline, and Embase electronic databases. The search term “Self-compassion” was paired with “well-being,” “happiness,” “satisfaction with life,” “health,” “anxi,*” “depress,*” “stress,” “adjustment,” “health,” and “coping.” Search results were restricted to studies of participants with a mean age of 65 or older (see [Supplementary Table 2](#) for a sample search strategy).

Inclusion Criteria

Studies derived from the earlier search terms were included if they met the following criteria:

- Inclusion of an objective measure of self-compassion or a self-compassion based intervention/experiment
- Inclusion of at least one objective well-being or health outcome measure
- Studies with a mean participant age of at least 65
- Publication in English

Qualitative studies, conference abstracts, and articles published in a language other than English were excluded from this review.

Selection of Studies

The abstracts of the studies derived from the literature search were screened against the inclusion criteria. The full texts of relevant articles were assessed for eligibility by one reviewer (L. Brown) and independently checked by a second reviewer (C. Bryant). Disagreements were resolved by discussion until a consensus was reached.

Data Extraction

Information on the country and year of publication, sample size and age group, study design, study setting, well-being/health outcome measure, and research findings were extracted for all included studies (see [Tables 1–3](#)).

Assessment of Study Quality

Study quality was assessed by two independent reviewers using the 11-item Agency for Healthcare Research and Quality methodology checklist, following recent recommendations ([Zeng et al., 2015](#)). Three items from this quality assessment tool were excluded, because they related to subjective data analysis and follow-up procedures, which were not components of studies included in this review. Each checklist item is rated as being present (1/1), absent (0/1), or unclear (.5/1), and items were summated to generate an overall study quality rating with a maximum possible score of eight. All disagreements in quality ratings

were resolved by consensus. The two writing task experimental studies included in this review were not assessed for study quality, given the incompatible study design, and are thus included as additional material.

Statistical Analyses

Quantitative synthesis of data requires a minimum of two studies reporting a common relationship ([Cumming, 2014](#)). Where at least two studies reported a relationship between self-compassion and a specific well-being outcome, a random-effects meta-analysis was conducted to quantitatively aggregate the results. Each meta-analysis was conducted using r values as the effect size measure, due to the ease of interpretability of this measure and its good statistical properties ([Rosenthal & DiMatteo, 2001](#)). Because Pearson's r is not normally distributed, all study r values were transformed to Fisher's z to compute a combined effect size measure, and this score was subsequently transformed back to r to interpret the final result ([Rosenthal & DiMatteo, 2001](#)).

We report meta-analytic results for the relationship between self-compassion and four outcomes: hedonic well-being, eudaimonic well-being, depression, and anxiety (for study measures of these indices, see [Supplementary Table 3](#)). Heterogeneity in study findings was assessed using Cochran's Q and Tau-Squared. When Q indicated significant heterogeneity in study findings, we investigated outliers using Cook's D (where a distance >1 indicates an outlying study), and conducted a meta-regression to investigate if variability in study results could be explained by mean participant age and study quality. Evidence of publication bias was considered using Kendall's τ test for funnel plot asymmetry, whereby a significant result ($p < .05$) indicates evidence of bias. All analyses were conducted using R statistical software package.

Results

The search of PsycINFO, Medline, and Embase yielded a total of 318 unique studies, and these were subjected to screening against inclusion and exclusion criteria. The flow-chart of included studies is presented in [Figure 1](#). A total of 11 studies including 5 community-based studies, 3 clinical studies of patients with a health condition, and 3 self-compassion intervention/experimental studies met inclusion criteria for this review. The mean study quality was 4.8/8. Common reasons for lost points on quality include failure to describe participant exclusions from analyses, failure to describe the handling of missing data, and failure to report response rates. Characteristics of studies are presented in [Tables 1–3](#).

Psychological Symptoms

Three studies reported the relationship between self-compassion and depressive symptoms in older adults ([Harrison,](#)

Table 1. Characteristics of Community-Based Studies

Reference	Country	Participants	Mean age	Study design	Key outcome measures	Statistical analyses	Key findings	Conclusions	Study quality
(Allen, Goldwasser, & Leary, 2012)	United States	Study 1 included 132 adults aged 67 to 90 recruited from the community. Study 2 included 71 adults aged 63 to 97 recruited from a local independent living facility	—	Cross-sectional study where participants completed self-compassion and well-being (study 1) and willingness to use assistance for walking, hearing and memory (study 2)	<p><i>Study 1:</i> Satisfaction with life, psychological well-being, social functioning, attitudes to ageing, pain, and physical health</p> <p><i>Study 2:</i> Health impairment, attitudes to ageing, use of assistance, and willingness to use assistance</p>	Pearson's <i>r</i> correlations, and hierarchical regression analyses to investigate interaction effects	Self-compassion was associated with life satisfaction ($r = .31$), psychological well-being ($r = .49$), social functioning ($r = .28$), and attitude to ageing ($r = .27$), and moderated the association between pain and outcomes. In <i>study 2</i> , self-compassion was associated with willingness to use aids to overcome impairments	Self-compassion may be a resource to promote well-being and reduce the burden of health symptoms that come with age	4.5
(Greene, Britton, & Shepherd, 2016)	United States	This study included a subgroup of 124 LBGQTQ older adults	69.2	Cross-sectional questionnaire based study	Mental health measured using the Health Status Questionnaire-12	Pearson's <i>r</i> correlations followed by hierarchical regression where self-compassion was entered in the first step	The correlation between self-compassion and mental health was .62. Self-compassion explained 37% of the variance in mental health ($r^2 = .37$). Physical health, financial anxiety, and self-transcendence explained additional variance above self-compassion	Self-compassion was a stronger predictor of mental health in older but not midlife adults. Authors argue that findings demonstrate the importance of self-compassion in LBGQTQ developmental gerontology	5

Table 1. (Continued)

Reference	Country	Participants	Mean age	Study design	Key outcome measures	Statistical analyses	Key findings	Conclusions	Study quality
(Homan, 2016)	United States	121 older adults recruited from a local public library and community senior center	70.6	Cross-sectional questionnaire based study	Psychological well-being (including six dimensions of eudaimonic well-being: self-acceptance, positive relationships, purpose in life, personal growth, environmental mastery, and autonomy), self-esteem, psychological symptoms of depression, and anxiety	Pearson's <i>r</i> correlations followed by hierarchical regression to test the unique contribution of self-compassion to well-being, and the moderating role of self-compassion on health	Self-compassion was positively associated with psychological well-being (<i>r</i> range: .38 to .73) and age (<i>r</i> = .32), and negatively associated with anxiety (<i>r</i> = -.23) and depression (<i>r</i> = -.65). Self-compassion moderated the relationship between health and depression ($\beta = .31$)	Self-compassion is related to a wide range of desirable outcomes among older adults	3.5
(Phillips & Ferguson, 2013)	Australia	Study of 185 older adults. Participants were recruited from retirement villages and clubs, and through acquaintances of the researchers	73.4	Cross-sectional, questionnaire-based study design	Positive and negative affect, meaning in life, and ego integrity.	Pearson's <i>r</i> correlations followed by structural equation modelling to investigate the role of self-compassion in predicting psychological well-being outcomes	Self-compassion was positively associated with positive affect (<i>r</i> = .26), negative affect (<i>r</i> = -.47), ego integrity (<i>r</i> = .30) and meaning in life (<i>r</i> = .43). Positive and negative self-compassion were differentially associated with well-being outcomes	Results indicate that self-compassion may be a resource for positive aging, and that the factor structure of the SCS delineates positive and negative self-compassion in older adults	6.5
(Smith, 2015)	United States	102 independent older adults living in a continuing care retirement community	82.1	Cross-sectional, questionnaire-based study design	Perceived stress, happiness, depression, and self-reported health	Pearson's <i>r</i> correlations followed by multiple regression analyses to investigate the relationship between self-compassion and well-being	Self-compassion was positively associated with happiness (<i>r</i> = .63), and health (<i>r</i> = .29), and negatively associated with stress (<i>r</i> = -.60) and depression (<i>r</i> = -.53). Self-compassion moderated the relationship between ill-health and well-being	High self-compassion is positively associated with well-being in older adults and may buffer against the negative effects of poor health and stress	2.5

Table 2. Characteristics of Studies of Older Adults with Medical Conditions

Reference	Country	Participants	Mean age	Study design	Key outcome measures	Statistical analyses	Key findings	Conclusions	Study quality
(Altenburg et al., 2011)	Germany	94 patients with type 2 diabetes including 47 patients with foot ulcers and 47 matched controls	65	Two group cross-sectional study investigating correlates of diabetic foot ulcers	Self-compassion, alcohol consumption, anxiety, and demographics	Between group differences using <i>t</i> tests	There was no significant difference in self-compassion between those with and without diabetic, $p = .29$	Factors other than self-compassion, including low health conscious behavior and high alcohol consumption were associated with diabetic foot ulcers	5.5
(Harrison et al., 2017)	Canada	The quantitative component of the study included 70 patients with chronic obstructive pulmonary disease (COPD; mean age 70.8) and 61 healthy controls (mean age 62.2)	67	Mixed-methods study. The quantitative component of the study was a two group cross-sectional study investigating emotional differences between COPD patients and healthy controls	Depression, anxiety, and mastery	Pearson's <i>r</i> correlations followed by <i>t</i> tests to investigate group differences	Pooling across groups, self-compassion was significantly related to anxiety ($r = -.50$) and depression ($r = -.51$). When comparing between groups, COPD patients had significantly lower self-compassion (mean = 3.3) relative to healthy controls (mean = 3.6)	Authors argue there is a need to increase awareness of self-related emotions, including self-compassion, in patients with COPD. Authors suggest that self-compassion interventions may be useful for COPD patients and that further research is warranted	6
(Toise et al., 2014)	United States	46 implantable cardioverter defibrillator (ICD) patients	66.3	Randomized controlled trial where participants were allocated to an 8-week yoga intervention ($n = 26$) or treatment as usual control ($n = 20$)	Self-compassion, anxiety, mindfulness, and cardiac functioning indexed by device-treated ventricular events	Student's <i>t</i> tests to investigate group differences between the intervention and control groups	The 8-week yoga intervention resulted in significantly improve self-compassion, relative to the control group. The intervention also led to a reduction in device treated cardiovascular events, reduced anxiety, and improved mindfulness	This study shows that self-compassion can be developed through a mind-body intervention in older adults with a heart condition	5

Note: LBGTQ = Lesbian, bisexual, gay, transgender, queer; SCS = Self-Compassion Scale.

Table 3. Characteristics of Intervention/Experimental Studies

Reference	Country	Participants	Study design	Key outcome measures	Statistical analyses	Key findings	Conclusions	Study quality
<i>Self-compassionate based interventions</i>								
(Perez-Blasco, Sales, Meléndez, & Mayordomo, 2016)	Spain	45 community dwelling older adults recruited through a senior program offered at The University of Valencia	Intervention study where participants were randomized to a 10-session self-compassion and mindfulness intervention ($n = 22$) or waitlist control ($n = 23$)	Resilience, coping strategies, depression, anxiety, stress, negative self-focus, and avoidance. Note, self-compassion was not measured objectively in this study	Analysis of variance for repeated measures, with a time-by-group interaction to investigate group differences in key variables over time	There was a significant time-by-group interaction whereby the intervention group experienced improved resilience and coping strategies, and decreased anxiety, stress, and negative self-focus relative to waitlist control	Self-compassion and mindfulness training may be useful for improving resilience and coping strategies, and in reducing anxiety and stress among older adults.	4.5
<i>Writing tasks</i>								
(Allen & Leary, 2014)	United States	Study of 121 older adults recruited from the community (mean age = 76.2)	Experimental study where participants were randomly assigned to write about a positive, negative, or neutral age-related event. Participants also completed questions related to the event and their reactions	Attitudes toward the event, self-compassionate cognitions, and emotional tone of writing	Hierarchical regression to investigate if self-compassion, writing condition, and their interaction were associated with self-compassionate cognitions about the event and ageing	Trait self-compassion and positive writing condition were associated with self-compassionate thoughts. There was no interaction between writing condition and trait self-compassion. Self-compassionate thoughts explained the relationship between trait self-compassion and emotional tone of writing	Self-compassion was associated with positive responses to aging, with self-compassionate thoughts mediating the relationship between trait self-compassion and emotional tone	NA

Table 3 (Continued)

Reference	Country	Participants	Study design	Key outcome measures	Statistical analyses	Key findings	Conclusions	Study quality
(Imrie & Troop, 2012)	United Kingdom	Thirteen palliative care patients (mean age 68) attending a day hospice, of whom eight were randomly allocated to a self-compassion manipulation or control condition	Experimental study where patients were allocated to a self-compassionate writing exercise ($n = 4$) or a writing control ($n = 4$)	Happiness, stress. Note: In this study self-compassion was measured using an adapted version of the FSCRS	Insufficient n for inferential analysis—only descriptive changes in questionnaire scores are reported	Preliminary trends showed that those in the self-compassion induction reported increases in self-soothing, self-esteem, and also stress relative to the control writing condition. Both groups reported increased happiness	Expressive writing may be useful in a hospice setting, and self-compassionate writing may have benefits	NA

Note: FSCRS: Self-Criticizing/Attacking and Self-Reassuring Scale.

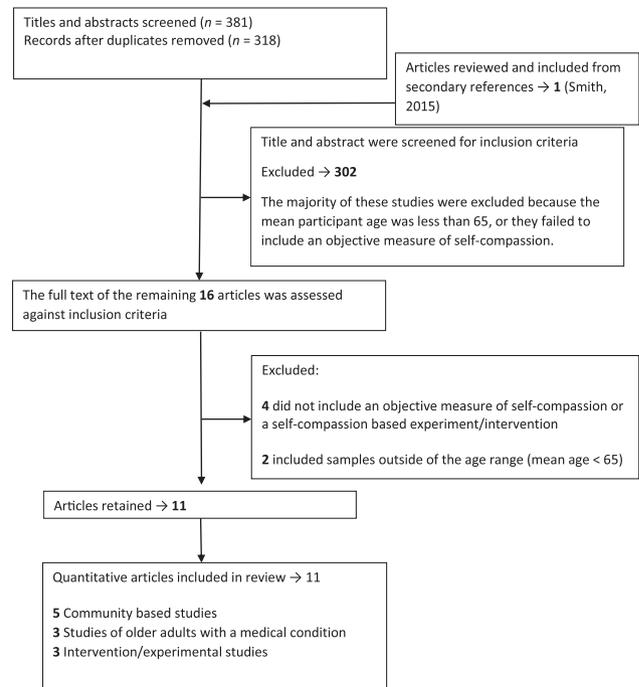


Figure 1. Flowchart of included studies in this review.

Robertson, Goldstein, & Brooks, 2017; Homan, 2016; Smith, 2015). A random effects meta-analysis revealed a medium-to-strong relationship between self-compassion and depressive symptoms ([Figure 2], $r = -.58$, 95% CI $[-.66, -.48]$). Cochrane's Q revealed no evidence of significant heterogeneity in effect sizes between studies, $Q(2) = 2.69$, $p = .26$, and Kendall's τ revealed no evidence of publication bias, $p = .33$.

There was a medium negative relationship between self-compassion and anxiety symptoms in the two studies that reported this effect (Harrison et al., 2017, Homan, 2016; $r = -.36$, 95% CI $[-.60, -.07]$; [Figure 3]). There was significant heterogeneity in results, $Q(1) = 4.24$, $p = .039$. Meta-regression showed that neither participant age ($\beta < .001$, $p = .80$) nor study quality ($\beta = -.06$, $p = .13$) explained this between-study variance. Kendall's τ revealed no evidence of publication bias $p = .99$.

In addition to depression and anxiety, other reported associations between self-compassion and negative psychological outcomes include perceived stress ($r = .60$) reported by Smith (2015); negative affect ($r = .47$), reported by Phillips & Ferguson (2013); and impaired functioning caused by mental symptoms ($r = .62$) reported by Greene and colleagues (2016).

Positive Psychological Health

A total of four studies reported the association between self-compassion and positive indices of well-being in older adult samples (Allen et al., 2012; Homan, 2016; Phillips & Ferguson, 2013; Smith, 2015). Three studies reported

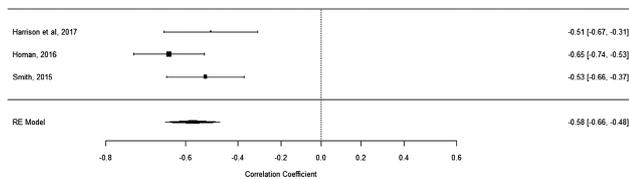


Figure 2. Forest plot of studies reporting the relationship between self-compassion and depressive symptoms.

the relationship between self-compassion and hedonic well-being, and three studies reported the association between self-compassion and eudaimonic well-being.

Random effects meta-analysis revealed a moderately strong relationship between self-compassion and hedonic well-being ($r = .41$, 95% CI [.15, .62]). Cochrane's Q revealed evidence of significant heterogeneity in effect sizes between studies, $Q(2) = 15.61$, $p < .001$. Inspection of residuals revealed the effect size reported by Smith (2015) was an outlying case (Cook's distance = 1.02). Meta-regression revealed that study quality was a significant negative predictor of the self-compassion–hedonic well-being relationship, whereby poor-quality studies tended to report a stronger relationship between self-compassion and hedonic well-being, $\beta = -.12$, $p = .03$. Kendall's τ test for publication bias was not significant, $p = .33$. Figure 4 illustrates a forest plot of the relationship between hedonic well-being and self-compassion.

The overall relationship between self-compassion and eudaimonic well-being was medium (see Forest plot in Figure 5; $r = .49$, 95% CI [.41, .57]). Cochrane's Q revealed no evidence of significant heterogeneity in effect sizes between studies reporting eudaimonic well-being, $Q(2) = 2.52$, $p = .28$, and neither study quality nor age moderated the strength of the relationship between eudaimonic well-being and self-compassion. Kendall's τ was not significant, $p = .33$.

Social Functioning

Two studies reported relationships between self-compassion and social functioning in older adults (Allen et al., 2012; Homan, 2016). The strength of this relationship reported by Homan (2016; $r = .56$) was twice that reported by Allen and colleagues (2012; $r = .28$), and this may in part reflect the different measures of social functioning used in these studies. Allen and colleagues used two items from the SF-36 (Brazier et al., 1992), measuring the degree to which physical and health symptoms interfered with social functioning. Homan (2016), in contrast, used the positive relationship subscale of the psychological well-being scale (Ryff & Keyes, 1995), assessing the presence of fruitful relationships (e.g., "I enjoy personal and mutual conversations with family or friends").

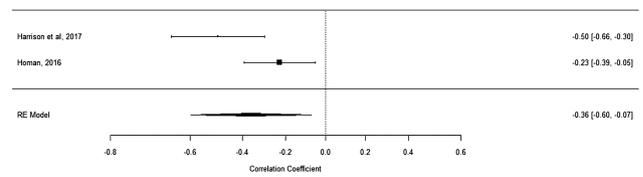


Figure 3. Forest plot of studies reporting the relationship between self-compassion and symptoms of anxiety.

Adjustment to Poor Health

Three studies reported the role of self-compassion in moderating the relationship between self-reported physical health and well-being outcomes (Allen et al., 2012; Homan, 2016; Smith, 2015). In a series of moderation analyses, Allen and colleagues (2012) found that self-compassion moderated the relationship between physical pain and well-being, self-reported health and well-being, and mobility and well-being. For those with poor self-reported health, poor mobility, and high pain, self-compassion weakened the effect of these health problems on well-being. Thus, in this study, self-compassion was more strongly associated with well-being for those with high levels of physical symptoms relative to those with fewer physical symptoms (Allen et al., 2012).

Homan (2016) found that self-compassion moderated (weakened) the relationship between self-rated health and depression, such that the relationship between poor health and depression was weaker for those with higher levels of self-compassion ($\beta = .31$). However, although poor health was associated with anxiety ($\beta = -.19$), self-compassion did not moderate this relationship ($\beta = -.16$, $p = 0.09$).

Smith (2015) investigated the relationship between self-reported health and two well-being outcomes: depression and happiness. Overall, the relationship between self-reported health and well-being outcomes was not significant. However, when self-compassion was included as a moderator, the author found a dissociation whereby the relationship between health and depression ($\beta = -.48$), and health and happiness ($\beta = .30$) was only significant for those low in self-compassion. Those high in self-compassion were protected against the effect of ill-health on well-being.

Self-compassion in Medical Populations

Three studies have measured self-compassion in the context of older adults with a medical condition including type 2 diabetes (Altenburg et al., 2011), chronic obstructive pulmonary disease (COPD; Harrison et al., 2017), and cardiac defibrillator patients (Toise et al., 2014).

Two studies conducted between-group comparisons of self-compassion in patient groups. Altenburg and colleagues' (2011) study focused on psychosocial differences between patients with type 2 diabetes with and without diabetic foot ulcers. Group data on self-compassion were not

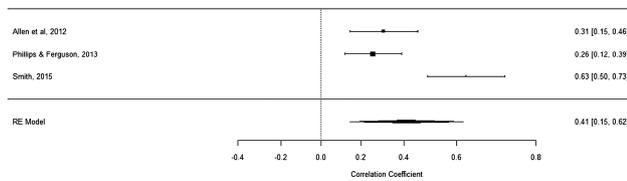


Figure 4. Forest plot of studies reporting the relationship between self-compassion and hedonic well-being.

reported in text, but was obtained by contacting the lead author. The authors found no significant difference in self-compassion between those with foot ulcers (mean = 3.52, $SD = 0.45$) and those without foot ulcers (mean = 3.42, $SD = .38$), $p = .29$. In a sample of 70 COPD patients, however, Harrison and colleagues (2017) found that patients had significantly lower self-compassion (mean = 3.3) relative to healthy controls (mean = 3.6).

Toise and colleagues (2014) conducted a trial where cardiac defibrillator patients were randomized to an 8-week yoga intervention or treatment as usual control. At baseline, both groups had a mean self-compassion score of 3.42. Following the intervention, those in the yoga condition increased in self-compassion by .24 points, whereas those in the control condition decreased by .29 points, and this between-group difference in self-compassion at follow-up was significant ($p = .007$). In addition, the yoga group alone also experienced reductions in anxiety, and a 32% lower risk in experiencing device-treated ventricular events relative to the control group.

Intervention/Experimental Studies

In addition to the yoga intervention described earlier (Toise et al., 2014), only one study has investigated outcomes of a self-compassion based intervention for older adults (Perez-Blasco, Sales, Melendez, & Mayordomo, 2016). In this study, 45 community dwelling older adults were randomized to attend a 10-session self-compassion and mindfulness intervention or waitlist control. There were significant group-by-time interactions, whereby the self-compassion training course resulted in significantly improved resilience and coping strategies, together with decreased anxiety and negative self-focus relative to waitlist control. However, no group-by-time interactions were found for depressive symptoms or stress. Unfortunately, an objective measure of self-compassion was not available, so the extent to which the intervention improved self-compassion remains unknown.

Two studies of older adults used experimental designs involving self-compassionate writing tasks (Allen & Leary, 2014; Imrie & Troop, 2012). Allen and Leary (2014) collected a baseline measure of self-compassion and then randomly allocated 121 older adults to write about an age-related positive, negative, or neutral event. The authors found that those high on self-compassion wrote about age-related events with a more positive emotional tone, and the effect was mediated by self-compassionate thoughts

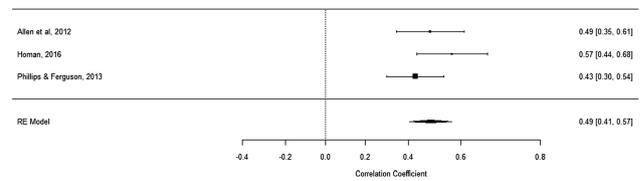


Figure 5. Forest plot of studies reporting the relationship between self-compassion and eudaimonic well-being.

(Allen & Leary, 2014). Thus, although those high and low on self-compassion experienced similar age-related events, those high on self-compassion perceived age events in a more positive light. A preliminary pilot study by Imrie & Troop (2012) assigned eight palliative patients attending a day hospice to write about a stressful event from either a neutral or self-compassionate perspective. Although there was insufficient data for inferential analyses, preliminary descriptive data showed that both writing conditions were associated with increased happiness, but that the self-compassion group also reported increased stress.

Discussion

To the best of our knowledge, this is the first systematic review of studies investigating self-compassion and well-being in older adult populations. Self-compassionate ageing is an emerging area of research, and 11 studies—involving a range of heterogeneous study designs and outcome measures—met criteria for this review. Although heterogeneity in outcome measures limited our quantitative data synthesis, our findings show preliminary support for self-compassion as a promising psychological resilience factor in the context of ageing. Our results show that self-compassion is associated with reduced symptoms of depression and anxiety, and higher levels of both hedonic and eudaimonic well-being in older adults. Importantly, there is also evidence that self-compassion may lessen the emotional burden of health issues in later life. Thus, self-compassion may be especially relevant to well-being for those experiencing health issues that are common in later life.

Self-compassion and Mental Well-being

We found a medium-to-strong negative relationship between self-compassion and depressive symptoms ($r = .58$, 95% CI [.48, .66]). This relationship is similar in size to results of a meta-analysis investigating self-compassion and psychopathology in younger adults ($r = .54$, 95% CI [.51, .57]; [MacBeth & Gumley, 2012]). Although the relationship between anxiety and self-compassion appeared lower than with depression in our sample ($r = .36$, 95% CI [.07, .66]), the confidence intervals were very wide, spanning 59% of the possible range of values for a negative correlation, and so further research is required to clarify if the relationship between anxiety and self-compassion is weaker than the relationship between depression and self-compassion in

older adults. A second explanation that might help explain why self-compassion is more strongly associated with depression than anxiety in older adults is that there may be some construct overlap between the negative aspects of self-compassion (self-criticism, overidentification, and isolation) and common cognitive and emotional symptoms of depression, such as rumination and feelings of hopelessness. Thus, further psychometric work is needed to ascertain if self-compassion is distinguishable from depression.

We also found evidence of a moderately strong relationship between self-compassion and indices of positive well-being, including hedonic ($r = .41$, 95% CI [.15, .62]) and eudaimonic ($r = .49$, 95% CI [.41, .57]) well-being. Thus, self-compassion is not only related to lower levels of psychological symptoms in older adults, it is also related to the presence of positive functioning including happiness and a sense of meaning in life. This finding is comparable to a recent meta-analysis of younger adults, where the overall relationship between self-compassion and well-being was found to be moderately strong ($r = .47$, 95% CI [.44, .49] [Zessin et al., 2015]). Furthermore, in younger adults Zessin and colleagues found that self-compassion was more strongly related to eudaimonic well-being ($r = .62$) than positive affective well-being ($r = .39$). Our finding appears to echo this distinction, but due to our small sample size, more research is needed to clarify the strength of relationships between self-compassion and various well-being outcomes in older adult samples.

Self-compassion and Social Well-being

Only two studies included in this review investigated the relationship between self-compassion and social well-being in later life (Allen et al., 2012; Homan, 2016). In these studies, self-compassion was correlated with social functioning ($r = .28$; Allen et al., 2012) and positive relationships ($r = .53$; Homan, 2016). Furthermore, in an experimental writing task Allen & Leary (2014) found that those high on self-compassion had a more positive emotional tone when writing about age-related events, indicating that self-compassion may positively flavor one's perspective of aging. This work, however, is preliminary. Given that social well-being is a core component of healthy aging (Lara et al., 2013), future empirical research is needed to explore if self-compassion helps to shape social well-being and adjustment with aging.

Self-compassion and Adjustment to Physical Health Issues

A key finding from this review is the relationship between self-compassion and good adjustment to poor health among older adults. Three studies considered self-compassion as a moderator in the relationship between self-reported health and well-being outcomes (Allen et al., 2012; Homan, 2016;

Smith, 2015). In all three of these studies, self-compassion was found to be a significant moderator of the relationship, whereby participants high on self-compassion reported higher mental well-being for a given level of physical symptoms relative to those low on self-compassion. Thus, it appears that self-compassion is a promising resilience factor that enables older adults to maintain well-being and be less distressed by their health issues. The majority (65%) of older adults now lives with at least two chronic health conditions (Barnett et al., 2012), and the prevalence of health issues continues to increase with advancing age. Given that self-compassion is a learnable skill that responds to training (Neff & Germer, 2013), interventions that teach older adults how to be more self-compassionate could be helpful in promoting psychological adjustment in the context of health issues. Because self-compassion is also related to a range of health behaviors including exercise, diet, and sleep (Sirois, Kitner, et al., 2015), it is plausible that self-compassion-based adjunctive treatments in medical settings may facilitate healthy lifestyle choices and medical adherence in older adult patients groups—a hypothesis to be tested in future research.

Self-compassion Interventions for Older Adults

To date, very few studies have considered self-compassion-based interventions in older adult groups, and future research is warranted to address this limitation. Only one small study (sample size = 45) included in this review investigated outcomes of a self-compassion and mindfulness intervention in an older cohort (Perez-Blasco et al., 2016). In this study, the intervention was associated with reduced anxiety and improved resilience relative to wait-list control, but there was no evidence of reductions in depressive symptoms. In addition to the small sample size, and lack of an active control group, a limitation of this study was that the authors devised a new hybrid intervention, inspired by a range of validated interventions including the Mindful Self-Compassion (Neff & Germer, 2013) and Mindfulness-Based Stress Reduction (Kabat-Zinn, 1982) programs, making it difficult to untangle the active ingredient in the intervention. Further, the authors failed to include a measure self-compassion in the study, so the extent to which the intervention improved participant self-compassion remains uncertain. To address these issues of validity, future research should investigate the efficacy of a validated self-compassion-based intervention, such as the Mindful Self-Compassion program (Neff & Germer, 2013), in older adult populations.

Limitations

An important limitation to the reviewed research is that studies used heterogeneous measures of psychological symptoms and well-being, and this could contribute to

between-study variance in results. Recent work by [Lara and colleagues \(2013\)](#) has recommended a list of measures that could act as a phenotype for healthy ageing ([Lara et al., 2013](#)), and future work in the field of self-compassionate ageing could draw on these recommended measures to enable more consistent cross-study comparisons. In the mental health domain, [Lara and colleagues \(2013\)](#) suggest the Positive and Negative Affect Schedule and the Satisfaction with Life Scale as measures of hedonic well-being. The Warwick Edinburgh Mental Well-being Schedule is a recommended measure capturing eudaimonic well-being, and the centre for epidemiological studies depression scale (CES-D) is suggested as a measure of depression. Although the phenotype does not include a measure of anxiety, the 7-item Generalized Anxiety Disorder scale ([Spitzer, Kroenke, Williams, & Löwe, 2006](#)) is a brief and reliable measure of anxiety symptoms that could be used in future research of self-compassion in older cohorts. Adhering to a homogenous list of core outcome measures, or validating a standardized scaling rubric to enable reliable comparisons between measures (e.g., see [Rush et al., 2003](#)), will help to consolidate the emerging field of self-compassionate ageing research.

There was insufficient data to investigate the unique contributions of the six subscales of the self-compassion scale to well-being outcomes. A growing number of studies have found that the negative aspects of self-compassion (overidentification, self-criticism, and a sense of isolation) may be more strongly associated to well-being than the positive aspects of self-compassion (mindfulness, self-kindness, and common humanity) ([Brown, Bryant, Brown, Bei, & Judd, 2016](#); [Muris & Petrocchi, 2017](#); [Wadsworth et al., 2018](#)). Thus, it is plausible that interventions facilitating the reduction of overidentification, self-criticism, and feelings of isolation may be especially potent in improving individual well-being and adjustment to health issues. An important proviso, however, is that there may be construct overlap between negative self-compassion and symptoms of mental illness that may artificially inflate observed relationships, and so rigorous psychometric work is needed to clarify this issue.

Conclusion

This review presents preliminary evidence that self-compassion is a useful construct that may facilitate adaptive adjustment to ageing. Self-compassion is associated with psychological health in older adults, and those high on self-compassion appear to be less psychologically distressed by health issues than those low on self-compassion. Given evidence that self-compassion is a learnable skill ([Neff & Germer, 2013](#)), future research is needed to investigate the potential of self-compassion-based interventions for improving the welfare of older adults in both community and clinical settings. Although larger studies with more uniform outcome measures are required to replicate and

extend the current results, self-compassion appears to be a promising construct in the field of ageing research.

Supplementary Material

Supplementary data are available at *The Gerontologist* online.

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Conflict of Interest

None reported.

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