Self-compassion, attitudes to ageing and indicators of health and well-being among midlife women

**Article** in Aging and Mental Health · July 2015
Impact Factor: 1.75 · DOI: 10.1080/13607863.2015.1060946 · Source: PubMed

**5 authors**, including:

Lydia Brown
University of Melbourne
5 PUBLICATIONS  8 CITATIONS

Valerie M. Brown
University of Melbourne
5 PUBLICATIONS  7 CITATIONS

All in-text references underlined in blue are linked to publications on ResearchGate, letting you access and read them immediately.

Available from: Lydia Brown
Retrieved on: 16 June 2016
Self-compassion, attitudes to ageing and indicators of health and well-being among midlife women

Lydia Brown\textsuperscript{a}, Christina Bryant\textsuperscript{ab}, Valerie Brown\textsuperscript{a}, Bei Bei\textsuperscript{bcd} & Fiona Judd\textsuperscript{cd}

\textsuperscript{a} School of Psychological Sciences, Redmond Barry Building, University of Melbourne, Melbourne, Australia
\textsuperscript{b} Centre for Women's Mental Health, Royal Women's Hospital, Parkville, Australia
\textsuperscript{c} Department of Psychiatry, University of Melbourne, Melbourne, Australia
\textsuperscript{d} School of Psychological Sciences, Monash University, Clayton, Australia

Published online: 06 Jul 2015.

To cite this article: Lydia Brown, Christina Bryant, Valerie Brown, Bei Bei & Fiona Judd (2015): Self-compassion, attitudes to ageing and indicators of health and well-being among midlife women, Aging & Mental Health, DOI: 10.1080/13607863.2015.1060946

To link to this article: http://dx.doi.org/10.1080/13607863.2015.1060946

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms & Conditions of access and use can be found at http://www.tandfonline.com/page/terms-and-conditions
Self-compassion, attitudes to ageing and indicators of health and well-being among midlife women

Lydia Brown*, Christina Bryant, Valerie Brown, Bei Bei and Fiona Judd

School of Psychological Sciences, Redmond Barry Building, University of Melbourne, Melbourne, Australia; Centre for Women’s Mental Health, Royal Women’s Hospital, Parkville, Australia; Department of Psychiatry, University of Melbourne, Melbourne, Australia; School of Psychological Sciences, Monash University, Clayton, Australia

(Received 13 March 2015; accepted 3 June 2015)

Introduction

Attitudes to one’s personal experience of ageing are influential in shaping health and well-being in the second half of life. For example, those with positive attitudes to ageing have been found to live up to 7.5 years longer than those with negative attitudes (Levy, Slade, Kunkel, & Kasl, 2002). Positive attitudes are also associated with decreased cardiac events (Levy, Zonderman, Slade, & Ferrucci, 2009), better engagement with health behaviours (Levy & Myers, 2004) and enhanced well-being among older adults (Bryant et al., 2012). A body of research has helped explain how and why attitudes to ageing exert these powerful effects (Levy, 2009; Wurm, Warner, Ziegelmann, Wolff, & Schuz, 2013), but far less is known about psychological precursors that may help to shape a positive attitude to ageing, which in turn can promote health and well-being in midlife and old age.

An attitude is defined as a belief that has an evaluative component (Bryant et al., 2012). Attitudes towards one’s personal experience of ageing are thought to become salient from midlife onwards, triggered by physical signs of ageing, role transitions, menopause, possible health issues and losses in the parental generation that can trigger people to question their own mortality (Levy et al., 2009; Wurm, Tomasik, & Tesch-Romer, 2010). These life changes that occur between ages 40 and 60, together with negative media representations of the elderly as being forgetful, vulnerable and grumpy (Australian Human Rights Commission, 2013), can cause some people to feel ambivalent — or worse — fearful of the ageing process (Kotter-Grünn, 2015). Negative attitudes, consistent with negative stereotypes of ageing, can then be a self-fulfilling prophecy, prompting people to become less active, have lower confidence, and derive less meaning from life (Levy & Myers, 2004; Wurm et al., 2013).

Alongside potential losses, however, both qualitative and quantitative data indicate that many people acknowledge the psychological maturity, emotional balance and wisdom that come with age (Carstensen & Mikels, 2005; Laidlaw, Power, & Schmidt, 2007). In this way, attitudes to ageing are thought to be multifaceted, with co-occurring gains and losses (Steverink, Westerhof, Bode, & Dittmann-Kohli, 2001). In response to this complexity, the World Health Organization affiliated Attitudes to Aging Questionnaire (AAQ) was developed (Laidlaw et al., 2007). This scale quantifies attitudes to one’s own experience of ageing along three dimensions relating to psychosocial loss, physical change and psychological growth associated with ageing.

Attitudes measured with the AAQ have been found to be associated with a range of health and well-being benefits among midlife and older adults (Bryant et al., 2012; Low, Molzahn, & Schopflocher, 2013). The relationships

Objectives: Attitudes to ageing exert a powerful influence on health and well-being, yet surprisingly little research has examined factors that contribute to the formation of these attitudes. The aim of this study was to consider the potential role of self-compassion in predicting attitudes to ageing, which in turn contribute to positive and negative mental well-being and self-reported health.

Method: This was a cross-sectional study using data from 517 midlife women aged between 40 and 60. Structural equation modelling was used to examine the relationships between self-compassion, three facets of attitudes to ageing and well-being outcomes.

Results: Together, self-compassion and attitudes to ageing explained between 36% and 67% of the variance in well-being. Self-compassion was a strong predictor of attitudes towards psychosocial loss, physical change and psychological growth (β range: .22 –.51). Furthermore, the relationship between self-compassion and well-being outcomes was partially mediated by attitudes to physical change.

Conclusion: Self-compassion may be a modifiable internal resource to promote healthy attitudes to ageing in midlife, when ageing becomes personally relevant. Moreover, attitudes towards physical change may help explain how self-compassion promotes well-being among midlife women.

Keywords: resilience; self-compassion; positive psychology; attitudes; well-being
between attitudes and health outcomes, however, are likely to be bi-directional, and, to date, only one study has identified psychological factors that might explain why some people hold more positive attitudes to ageing than others, based on scores on the AAQ (Bryant et al., 2014). These authors found that self-reported health and personality in earlier life predicted attitudes to ageing among adults aged 60 and over (Bryant et al., 2014). This demonstrates that attitudes to ageing are indeed shaped by psychological and lifestyle factors, and it opens up the possibility that other factors may be relevant as well. Indeed, Miche, Elsässer, Schilling, & Wahl, (2014) demonstrated that attitudes to ageing may be more amenable to change at midlife relative to late life, so identifying modifiable factors that may contribute to positive attitude formation at midlife may be especially helpful to inform targeted early interventions as a means to promote healthy ageing in society.

Self-compassion is a promising modifiable candidate that could potentially contribute to positive attitudes to ageing, in addition to factors, such as health and personality described in prior work (Bryant et. al., 2014; Miche et al., 2014). Self-compassion is defined as a healthy way of relating towards the self when facing difficulty (Neff, 2003). It is comprised of six interrelated facets, three corresponding to positive self-compassion and three corresponding to negative self-compassion. The positive aspects of self-compassion involve adopting self-kindness, a sense of common humanity and mindfulness when facing a challenging situation. The negative aspects are mirror opposites of the positive; they involve self-criticism, a sense of isolation and over-identification when facing difficulty. Given that all six subscales have been found to load onto a general higher order self-compassion factor (Neff, 2003), scores from the negative subscales are reversed, and all subscales summed, to generate an overall measure of self-compassion.

Those with high self-compassion enjoy a host of well-being benefits from at least as early as adolescence, including high levels of emotional balance, satisfaction with life, curiosity and sense of life purpose, and low levels of psychological distress (Neff, Kirkpatrick, & Rude, 2007; Tanaka, Wekerle, Schmuck, & Paglia-Boak, 2011). Importantly, self-compassionate people are also less bothered by a range of potential challenges including public speaking, receiving ambivalent feedback and menopausal hot flushes (Brown, Bryant, Brown, Bei, & Judd, 2014; Leary, Tate, Adams, Baits Allen, & Hancock, 2007). There is also some evidence to suggest that self-compassion might become relevant to age-related issues in the second half of life. Phillips and Ferguson (2013) demonstrated that self-compassion was a strong predictor of emotional well-being among a community sample of adults aged 65 and over. Moreover, self-compassion has been found to predict subjective well-being in the context of poor health among older adults (Allen, Goldwasser & Leary, 2012), and positive responses to age-related events (Allen & Leary, 2014). For example, Allen and Leary (2014) asked older adults to write about a positive, negative or neutral age-related event. The authors found that participants who were high on self-compassion typically interpreted events in a more positive light, expressing self-compassionate thoughts, and a healthy emotional tone in their responses (Allen & Leary, 2014). Thus, given that self-compassion may predict a healthy attitude to specific events associated with age, we hypothesised that self-compassion, may also act as a precursor to positive attitudes to ageing more generally. In the context of ageing, then, self-compassion may have both a direct effect on well-being (Phillips & Ferguson, 2013), and also an indirect effect — through its role in shaping positive attitudes to ageing, which subsequently contribute to health and well-being (Bryant et al., 2012; Levy et al., 2002).

In addition to trait-based individual differences (Pepping, Davis, O’Donovan, & Pal, 2015), self-compassion is also amenable to change. A recent randomised controlled trial has shown that a 6-week self-compassion course can increase self-compassion and well-being, with gains maintained at 12-month follow-up (Neff & Germer, 2013). Therefore, if self-compassion is shown to predict positive attitudes to ageing, then this information could be applied clinically, using self-compassion as a strategy to bolster attitudes to ageing, which would in turn promote health and well-being.

We hypothesised a partial mediation model whereby self-compassion was both a direct predictor of well-being outcomes (Neff et al., 2007), and also an indirect predictor of well-being, through its influence on attitudes to ageing. We expected that those high on self-compassion would report more positive attitudes to ageing in terms of psychosocial loss, physical change and psychological growth, and that these attitudes, in turn, would predict well-being in terms of (1) high levels of self-reported health measured with the short-form health survey and (2) high levels of psychological health (low depressive symptoms and high positive well-being). The hypothesised models are illustrated in Figure 1.

Materials and methods
Participants
Participants included a subset of a larger community sample of men and women aged between 18 and 101 (n = 7, 615), who were randomly recruited from the electoral role (Murray et al., 2004). Because this study was part of broader research into menopause and healthy ageing, men were excluded from data collection. Women aged between 40 and 60 at the time of data collection, and who expressed willingness to be involved in future research (n = 1450) were invited to participate.

Measures
Self-compassion
Self-compassion scale (SCS). The SCS is a 26-item scale measuring six facets of self-compassion: self-kindness, self-judgment, common humanity, isolation, mindfulness and over-identification (Neff, 2003). In factor analysis, these facets are reported to load onto a single higher order
factor of self-compassion (Neff, 2003). Negative items are reversed, and then the grand mean of all items is computed to generate an overall self-compassion score. Participants indicated agreement to statements describing responses to challenging experiences (for example, ‘when I see aspects of my personality that I don’t like, I get down on myself’) on a 5-point Likert scale ranging from 1 ‘Almost never’ to 5 ‘Almost always’. The SCS has good test/retest reliability (α = .93), convergent validity (e.g. self-ratings correlate with therapist ratings), concurrent validity (e.g. correlates with social connectedness) and discriminate validity (e.g. no correlation with social desirability or narcissism) (Neff, 2003). In this study, Cronbach’s α for the full scale was 0.94.

Attitudes to ageing

Attitudes to ageing questionnaire (AAQ). The 24-item AAQ (Laidlaw et al., 2007) includes three subscales of attitudes towards one’s own ageing: psychosocial loss, physical change and psychological growth. The psychosocial loss subscale focuses on psychosocial losses associated with ageing; for example, ‘I feel excluded from things because of my age’. The physical change subscale assesses attitudes towards physical functioning, with an emphasis on health, exercise and the experience of bodily ageing; for example, ‘I have more energy now than I expected for my age’. The psychological growth subscale focuses on the personal growth that comes with ageing; for example, ‘I am more accepting of myself as I have grown older’. The AAQ has been validated for use among midlife adults (Brown et al., in press), with the exception of items 5 (‘there are many pleasant things about growing older’) and 13 (‘my identity is not defined by my age’), which performed poorly in this group. Participants rated each item on a 5-point Likert scale ranging from 1 ‘Not true at all’ to 5 ‘Extremely true’. The physical change and psychological growth domains are positively worded with higher scores indicating more positive attitudes, whereas the psychosocial loss scale is negatively worded, with higher scores indicating a more negative attitude. The subscales demonstrated good reliability in this study, with Cronbach’s α for all three subscales exceeding .75.

Self-reported health

Short form health survey (SF-12). This 12-item scale is designed to assess disability due to physical and mental health issues, and is scored to produce two weighted subscales: physical component summary (SF-12Physical) and mental component summary (SF-12Mental) (Ware, Kosinski, & Keller, 1996). Scores on the composite subscales range from 0 to 100, with higher scores signifying greater freedom from disability. The reliability and validity of the SF-12 has been well documented (Gandek et al., 1998; Ware et al., 1996). Importantly, the SF-12 is known to be a good predictor of objective health outcomes including risk of hospitalisation and mortality, demonstrating that it provides useful information on health (Dorr et al., 2006; Thombs et al., 2008). In this study, Cronbach’s α was 0.84 for SF-12Physical and 0.88 for SF-12Mental.

Psychological functioning

Centre for epidemiological studies depression scale (CES-D). The CES-D is a widely used measure of depressive symptoms, where participants rate symptom experience during the past week on a 4-point scale ranging from 0 (‘rarely’) to 3 (‘most or all of the time’) (Radloff, 1977). In this study, Cronbach’s α was 0.94.

Warwick-Edinburgh mental well-being scale (WEMWBS). The WEMWBS consists of 14 positively worded items that measure mental well-being (Tennant et al., 2007). It captures hedonic (e.g. ‘I’ve been feeling cheerful’) and eudaimonic (e.g. ‘I’ve been feeling useful’) aspects of well-being in a single scale. It demonstrates adequate test–retest reliability in one week (r = 0.83), and evidence of concurrent and convergent validity (Tennant et al., 2007). The WEMWBS demonstrated good reliability in this study (α = 0.95).

Procedure

Participants (n = 1450) were mailed a questionnaire booklet, a plain language statement, a consent form and a prepaid envelope for returning their responses. As a reminder, a second copy of the questionnaire and consent

Figure 1. Hypothesised models of relationships between self-compassion, attitudes to ageing and well-being outcomes, whereby self-compassion both directly and indirectly predicts well-being, through its influence on attitudes to ageing.
form was sent to participants who did not respond within two months. Ethics approval for the study was sought and obtained from the University of Melbourne’s Human Ethics Committee (HERC#1136819.1).

**Data analysis**

Preliminary analyses involved assessment of bivariate associations between study variables, and also confirmatory factor analyses to examine the measurement models for the latent variables self-compassion and attitudes to ageing. Factor structures were based on prior work (Neff, 2003; Brown et al., unpublished manuscript) with theoretically justified modifications to attain acceptable model fit. Based on well-fitted measurement models from preliminary analyses, primary analyses examined the hypothesised models in Figure 1 using structural equation modelling. Health and well-being outcomes were included as observed variables, and age and education were included as covariates. Indirect effects from self-compassion to well-being outcomes via attitudes to ageing were tested to examine the mediating role of attitudes. Models were estimated using Mplus 7.11, and missing data were handled using full information maximum likelihood.

Overall model fit was assessed through multiple fit statistics, with the comparative fit index (CFI) ≥ 0.90, the root means square error of approximation (RMSEA) ≤ 0.06, and the standardised root mean square residual (SRMR) ≤ 0.08, indicating adequate fit (Hu & Bentler, 1999; Schreiber, 2008).

**Results**

**Descriptive results**

Valid consent and questionnaire responses were received from 517 participants, resulting in a response rate of 35.7%. Responders were on average 1.40 years older than non-responders, \( t(1634) = 4.47, p < 0.001 \), and they were more likely to be married at baseline (odds ratio 95% CI: 1.13–2.02), but groups did not differ in terms of baseline education or employment. Descriptive statistics for the study sample are presented in Table 1, and means and standard deviations of study variables are included in Table 2.

**Preliminary analyses**

Intercorrelations between observed study variables (Pearson’s \( r \)) are reported in Table 3. All well-being outcome variables were significantly correlated, with effect sizes ranging from .12 (physical and mental health) to − .81 (positive well-being and depressive symptoms).

The second-order factor structure reported by Neff and colleagues (2003) did not adequately fit the data (CFI = .84; RMSEA = .082; SRMR = .11), echoing the finding of a recent factor validation study of the self-compassion scale (Williams, Dalgleish, Karl & Kuyken, 2014). We next considered the possibility of two higher order factor solution relating to ‘positive self-compassion’ and ‘negative self-compassion’. Phillips and Ferguson (2013) found evidence of a dissociation between the positive and negative aspects of self-compassion among older adults, and a two-factor exploratory factor analysis of the current data-set provided unanimous support for the separation of positive and negatively phrased items in the scale. In this model, self-kindness, common human identity and mindfulness loaded onto ‘positive self-compassion’ and self-judgment, isolation and over identification loaded onto

---

**Table 1.** Demographic characteristics of the sample.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>M = 52.11; SD = 5.49</td>
</tr>
<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>Up to year 10</td>
<td>146 (28.2%)</td>
</tr>
<tr>
<td>Up to year 12</td>
<td>59 (11.5%)</td>
</tr>
<tr>
<td>Apprenticeship</td>
<td>161 (31.3%)</td>
</tr>
<tr>
<td>Undergraduate degree</td>
<td>87 (16.9%)</td>
</tr>
<tr>
<td>Postgraduate degree</td>
<td>51 (9.9%)</td>
</tr>
<tr>
<td>Other</td>
<td>8 (1.6%)</td>
</tr>
<tr>
<td>Missing</td>
<td>5 (1%)</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
</tr>
<tr>
<td>Australian</td>
<td>474 (91.7%)</td>
</tr>
<tr>
<td>Indigenous Australian</td>
<td>7 (1.4%)</td>
</tr>
<tr>
<td>British</td>
<td>12 (2.3%)</td>
</tr>
<tr>
<td>Other</td>
<td>19 (3.7%)</td>
</tr>
<tr>
<td>Missing</td>
<td>5 (1%)</td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
</tr>
<tr>
<td>Working full-time</td>
<td>179 (34.6%)</td>
</tr>
<tr>
<td>Working part-time</td>
<td>230 (44.5%)</td>
</tr>
<tr>
<td>Unemployed</td>
<td>15 (2.9%)</td>
</tr>
<tr>
<td>Full-time house duties</td>
<td>44 (8.5%)</td>
</tr>
<tr>
<td>Retired</td>
<td>24 (4.6%)</td>
</tr>
<tr>
<td>Disability/sickness benefit</td>
<td>24 (4.6%)</td>
</tr>
<tr>
<td>Missing</td>
<td>1 (.2%)</td>
</tr>
<tr>
<td>Relationship status</td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>403 (77.9%)</td>
</tr>
<tr>
<td>Separated/divorced</td>
<td>71 (13.7%)</td>
</tr>
<tr>
<td>Widowed</td>
<td>19 (3.7%)</td>
</tr>
<tr>
<td>Single/never married</td>
<td>13 (2.5%)</td>
</tr>
<tr>
<td>Other</td>
<td>10 (1.9%)</td>
</tr>
<tr>
<td>Missing</td>
<td>1 (.2%)</td>
</tr>
</tbody>
</table>

**Table 2.** Means and standard deviations of study variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-compassion</td>
<td>3.25 (0.69)</td>
</tr>
<tr>
<td>Attitudes to ageing</td>
<td></td>
</tr>
<tr>
<td>Psychosocial loss</td>
<td>18.74 (5.19)</td>
</tr>
<tr>
<td>Physical change</td>
<td>29.68 (4.93)</td>
</tr>
<tr>
<td>Psychological growth</td>
<td>30.18 (4.34)</td>
</tr>
<tr>
<td>SF-12</td>
<td></td>
</tr>
<tr>
<td>Physical health</td>
<td>49.13 (9.66)</td>
</tr>
<tr>
<td>Mental health</td>
<td>50.03 (9.67)</td>
</tr>
<tr>
<td>WEMWBS positive well-being</td>
<td>50.82 (9.90)</td>
</tr>
<tr>
<td>CESD depressive symptoms</td>
<td>12.35 (10.97)</td>
</tr>
</tbody>
</table>

Note: SF-12 = short form health survey –12 items; WEMWBS = Warwick-Edinburgh mental well-being scale; CES-D = centre for epidemiologic studies depression scale.
‘negative self-compassion’. Using CFA, this factor solution improved fit indices, (CFI = .88; RMSEA = .072; SRMR = .097), although fit remained unsatisfactory. Correlating five theoretically linked residuals improved fit to an acceptable level (CFI = .92; RMSEA = .060; SRMR = .089). The CFA factor structure of the AAQ resulted in adequate fit to the data (CFI = .90; RMSEA = .059; SRMR = .050).

**Primary analyses**

**Self-reported health**

The hypothesised model resulted in acceptable for the data (CFI = .90; RMSEA = .043; SRMR = .055). In sum, it explained 36% of the variance in physical health and 38% of the variance in mental health.

Positive and negative self-compassion significantly predicted all three factors of attitudes to ageing, explaining between 25% and 50% of their variance. A Wald test of parameter constraints revealed that negative self-compassion was a significantly stronger predictor of attitudes to ageing than positive self-compassion, \( t(3) = 117.49, p < .001 \).

The physical change subscale of the AAQ was the strongest predictor of both physical (\( \beta = .74, p < .001 \)) and mental (\( \beta = .36, p < .001 \)) health. Negative self-compassion predicted mental (\( \beta = .31, p < .001 \)) but not physical, and positive self-compassion did not directly predict either aspect of health. Significant paths are presented in Figure 2.

Finally, mental health was indirectly predicted by positive and negative self-compassion, mediated through physical change (\( \beta = .078, p = .01 \) and \( \beta = -.12, p = .001 \), respectively). Likewise, physical health was indirectly predicted by positive and negative self-compassion, mediated through both physical change (\( \beta = .16, p = .005 \) and \( \beta = -.23, p < .001 \)) and psychological growth (\( \beta = -.19, p = .011 \) and \( \beta = .14, p = .02 \)).

**Psychological well-being**

The model resulted in reasonable fit to data (CFI = .91; RMSEA = .041; SRMR = .052), and explained 62% of the variance in depressive symptoms and 68% of the variance in positive well-being.

Self-compassion predicted attitudes to ageing latent factors, explaining between 30% and 50% of variance. Negative self-compassion was a significantly stronger predictor of attitudes to ageing than positive self-compassion, \( t(3) = 121.13, p < .001 \).

Negative self-compassion was the strongest predictor of depressive symptoms (\( \beta = .36, p < .001 \)), followed by ageing attitudes about physical change (\( \beta = -.28, p < .001 \)). Physical change was the strongest predictor of positive well-being (\( \beta = .42, p < .001 \)), followed by negative self-compassion (\( \beta = -.24, p < .001 \)). Significant direct paths and their \( \beta \) coefficients are presented in Figure 3.

Indirect effects of both positive and negative self-compassion on depressive symptoms via physical change (\( \beta = -.078, p = .007 \) and \( \beta = .089, p = .002 \), respectively) and psychosocial loss (\( \beta = -.058, p = .04 \) and \( \beta = .13, p = .012 \), respectively) were significant. Positive and negative self-compassion were also indirectly linked to positive well-being, through physical change (\( \beta = .12, p = .001 \) and \( \beta = -.13, p < .001 \), respectively).

**Discussion**

This study aimed to investigate relationships between self-compassion, attitudes to ageing and well-being outcomes among midlife women. Specifically, the potential role of attitudes to ageing as a mediator of the relationship between self-compassion and well-being outcomes was considered. Broadly, results supported the hypothesis that self-compassion may contribute to positive attitudes to ageing, which can in turn influence self-reported physical and mental health.

In both models, positive and negative self-compassion predicted a substantial proportion of variance in attitudes to ageing, with self-compassion having the largest protective influence on psychosocial loss (\( R^2 = .50 \)), and the weakest effect on attitudes towards physical change (mean \( R^2 = .28 \)). Building on data that links self-compassion with well-being indices amongst older adults (Phillips & Ferguson, 2013), our results demonstrate that
self-compassion is relevant to attitudes to ageing. Given that attitudes to ageing are thought to be a core component of healthy ageing (Reichstadt, Sengupta, Depp, Palinkas, & Jeste, 2010), these results advance the notion that self-compassion is a promising candidate to promote healthy ageing in society.

A recent study by Levy and colleagues (2014) has shown that subliminal exposure to positive stereotypes of ageing has a stronger effect on physical functioning amongst older adults compared to both direct exposure to positive age-stereotypes and even a 6-month exercise intervention (Levy, Pilver, Chung, & Slade, 2014). This demonstrates that people’s mental representations of their ageing are changeable and important, but that they are best modified indirectly. In other words, rather than attempting to teach people positive attitudes to ageing through direct exposure and learning (e.g. telling people that they should feel positive about ageing because it is good for their health), using a more nuanced approach may well lead to stronger changes. Our results indicate that self-compassion may be one such means to help indirectly shape age attitudes. Future experimental work investigating the potential of a self-compassion induction or intervention.

Figure 2. Structural equation model of how self-compassion and attitudes to ageing contribute to self-reported health among midlife women. Path coefficients are standardised. Non-significant paths are indicated by a dashed grey line.

Figure 3. Structural equation model of how self-compassion and attitudes to ageing contribute to psychological well-being among midlife women. Path coefficients are standardised. Non-significant paths are indicated by a dashed grey line.
to bolster attitudes to ageing is therefore recommended, in order to test this hypothesis directly.

In agreement with an earlier study of self-compassion among older adults (Phillips & Ferguson, 2013), we found evidence to support a factor structure of the self-compassion scale that delineates positive self-compassion (self-kindness, common humanity and mindfulness) from negative self-compassion (self-judgment, isolation and over-identification). Furthermore, we found that negative self-compassion trumps positive self-compassion in strength of predicting both age-attitudes and well-being. This finding points to the debilitating power of judgment, isolation and over-identification. While training in positive self-compassion is known to directly reduce distressing psychological symptoms (Neff & Germer, 2013), more research is needed to clarify if this is the most efficient and effective way to curb tendencies of negative self-compassion in practice.

A key finding from this study is that attitude towards physical change is the most important facet of attitudes to ageing in predicting self-reported health and psychological well-being in our midlife cohort. This is in contrast to our earlier findings among older adults, where the psychological subscale was the strongest predictor of mental health, depressive symptoms and anxiety (Bryant et al., 2012). One possible explanation is that physical change associated with ageing is typically less pronounced in midlife (Aguiar, Baccaro, Machado, Pinto-Neto & Costa-Paiva, 2015), and so midlife women who do report a lack of physical resilience experience more negative consequences given that their experience is less in keeping with their peers. It is worth noting, however, that comparison of latent factors revealed no mean difference in attitudes to physical change between midlife women and older adults (Brown et al., unpublished manuscript). Therefore, more research is required to help uncover exactly why attitudes to physical change appear to be more important in midlife, relative to late life.

While self-compassion was a weaker predictor of physical change relative to the other subscales of attitudes, we nonetheless found indirect effects of self-compassion on all four well-being outcomes through physical change. Consistent with a mediation effect, this demonstrates that one mechanism by which self-compassion promotes well-being is through its influence in promoting healthy attitudes towards physical functioning. Given self-compassion involves embracing imperfection, and that self-compassionate people are better equipped to persist through a challenge (Breines & Chen, 2012), self-compassion might encourage people to value exercise and independence despite physical barriers that could cause less self-compassionate people to give up. In this way, self-compassion may develop positive attitudes to physical change.

Implications and conclusions

Bolstering attitudes to ageing is recognised as a key public policy objective internationally (Andrews, 2001; Davey & Glasgow, 2006); however, there is currently limited research into strategies that might advance this objective. This study demonstrates that self-compassion might be one avenue by which to shape positive attitudes to aging. In recent years, based on strong documented efficacy (Dolan et al., 2012; Thaler & Sunstein, 2008), UK and US governments have adopted nudge policies, to indirectly and subtly shape attitudes and behaviour of citizens in healthy ways (Lewis, 2008). Nudge policies involve shaping environments in order to encourage people to make decisions that enhance their well-being, thus ‘nudging’ them in an adaptive direction (Thaler & Sunstein, 2008). Based on this principle, public institutions, such as the medical system could introduce training in delivering ‘self-compassionate’ nudges to patients and clients as a means to bolster self-compassion, and thus attitudes to ageing, subtly at the societal level. For example, clinicians could prime patients in self-compassion through inclusion of a simple question such as ‘what do you do to nurture yourself?’ during appointments, or else a similar question could be included in healthcare forms as a reminder for people to take care of themselves.

This was a cross-sectional study, meaning that findings require extension through a longitudinal or experimental design. Furthermore, the study sample was limited to women, who are reported to have lower mean levels of self-compassion relative to men (Neff, 2003), and so investigating if the reported pattern of associations holds among men is a worthy extension of the study. Nonetheless, this is the first study to demonstrate that self-compassion may contribute to positive attitudes to ageing, which in turn promote health and well-being in the second half of life. Given emerging evidence suggests that attitudes to ageing are best shaped indirectly (Levy et al., 2014), our results indicate that self-compassion may be a helpful means to achieve this goal, and thus promote healthy ageing in society at large.

Acknowledgments

We would like to thank the participants for their ongoing interest and involvement in this study.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

This research was partially funded by a small grant available to doctoral researchers at The University of Melbourne.

References


