

Past to Future: Self-Compassion Can Change our Vision

Journal of Positive Psychology and Wellbeing
2018, Volume 2(2): 168–190
www.journalppw.com
ISSN 2587-0130
OPEN ACCESS

Wendy J. Phillips

Abstract

Self-compassion is known to heighten our ability to manage past or present negative life events. This study investigated whether self-compassion also influences future-outlook, by examining its effects on optimism, savouring-anticipating, balanced time perspective, use of future oriented words, and use of positively oriented affective words. Australian students ($M_{age} = 34.81$, $SD = 10.14$) either wrote self-compassionately about a recent negative experience ($n = 169$) or completed a control writing task ($n = 167$). Participants in the self-compassion condition generally reported a brighter future-outlook than control participants, but effects varied according to baseline trait self-compassion. Participants with low trait self-compassion reported a more balanced time perspective and used more positively oriented affective words and future oriented words; whereas participants with high trait self-compassion scored higher only on savouring-anticipating and experienced decrements in balanced time perspective. Unexpectedly, the self-compassion induction did not influence optimism. This study is among the first to demonstrate that self-compassion can influence future-outlook. As future-outlook has been associated with many positive health outcomes, these findings suggest that increases in positive future-outlook may represent another mechanism through which self-compassion conveys its positive effects on well-being.

Keywords

Self-Compassion, balanced time perspective, optimism, savouring, LIWC, and future-outlook.

University of New England, Armidale, Australia

Corresponding Author: Wendy J. Phillips, School of Psychology and Behavioural Sciences, University of New England, Armidale, Australia; Tel: 61 2 6773 3531

Email: wendy.phillips@une.edu.au

Article History: Received: 23 March 2017 | Accepted: : 09 Jun 2018 | Published Online: 13 Jun 2018

Responding to personal suffering, inadequacies, and failures with care, kindness, and understanding is a hallmark of self-compassion (Gilbert, 2009a; Neff, 2003b). According to Neff (2003b), self-compassion involves treating ourselves with self-kindness rather than self-judgement, experiencing suffering as a common human experience that fosters connection with others rather than isolation, and holding negative thoughts and emotions in mindful awareness rather than overidentifying with them. Over the past 15 years, researchers have unveiled an abundance of benefits associated with self-compassion. It has been strongly associated with many aspects of positive subjective well-being (for reviews, see Barnard & Curry, 2011; MacBeth & Gumley, 2012; Zessin, Dickhäuser, & Garbade, 2015), and with diverse positive outcomes, such as health-promoting behaviours (Magnus, Kowalski, & McHugh, 2010) and satisfying interpersonal relationships (Neff & Beretvas, 2012).

A heightened ability to manage negative life events, mistakes, or personal weaknesses is one important benefit of self-compassion. Several experimental studies have shown that induced state self-compassion alleviates maladaptive responses to difficult past or present life experiences (Breines & Chen, 2012; Johnson & O'Brien, 2013; Leary, Tate, Adams, Allen, & Hancock, 2007; Shapira & Mongrain, 2010). For example, Johnson and O'Brien (2013) asked student participants to recall an experience of shame before completing a writing task. Compared to an expressive writing control group, participants who wrote about the experience from a self-compassionate perspective experienced less shame and negative affect afterwards. Further, Breines and Chen (2012) showed that participants induced to feel self-compassion for their weaknesses, failures, and transgressions exhibited greater motivation to try harder to learn, make amends for past harms, and avoid repeating past mistakes. Correlational studies have also found relationships between self-compassion and abilities to negotiate past and present adversity, such as readily engaging with new goals, feeling little fear, using adaptive emotion-focused coping strategies, displaying intrinsic motivation, and adopting mastery goals (Neely, Schallert, Mohammed, Roberts, & Chen, 2009; Neff, Hsieh, & Dejitterat, 2005).

Many of these findings not only show adaptive responses to past or present adversity, but also suggest that self-compassion promotes abilities that may help individuals to negotiate difficult situations in the future. Thus, self-compassion may also influence an individual's future-outlook. Future-outlook may be defined as cognitions about future events, that reflect an assessment of the likelihood and consequences of potential future outcomes (Baumeister, Vohs, & Oettingen, 2016). This assessment process involves creating mental representations of possible futures; considering actions required to attain a desired future and avoid an undesired future (i.e., pragmatic prospection, Baumeister et al., 2016); and identifying obstacles and ways to overcome them. These activities logically entail drawing upon previous experiences. Indeed, envisaging the future and remembering the past involve common brain regions and cognitive processes (Addis, Wong, & Schacter, 2007; Klein, 2013). If past experiences lead an individual to view future obstacles as formidable, they may disengage from their desired future (Oettingen, 2012). Self-compassion may minimise such disengagement by fostering acceptance of past suffering and skills to overcome future obstacles. Yet surprisingly few studies to date have examined a possible association between self-compassion and future-outlook. This study addresses this gap in the literature.

Optimism

Optimism is the only indicator of future-outlook that has previously been investigated in relation to self-compassion. Optimism involves having positive expectations about future events and experiences (Malouff & Schutte, 2017). By fostering contentment, self-efficacy, and adaptive coping strategies (Neff et al., 2005; Smeets, Neff, Alberts, & Peters, 2014), self-compassion may help people to form beliefs about their ability to craft desirable future outcomes. Accordingly, Neff, Rude, and Kirkpatrick (2007) found a large positive correlation between self-compassion and optimism in a sample of undergraduates, that remained after controlling for the effect of self-esteem (Neff & Vonk, 2009). Furthermore, participation in a three-week self-compassion intervention led female students to experience significantly greater increases in optimism compared to participants in a time-management control condition (Smeets et al., 2014). Thus, preliminary evidence indicates that self-compassion is not only associated with an optimistic future-outlook but may also play a causal role in its development. One aim of the current study is to replicate this finding.

Savouring-Anticipating

The ability to derive pleasure from anticipating future positive events may also be influenced by self-compassion. Known as savouring-anticipating, this ability is commonly assessed alongside savouring present moments and savouring reminiscing about the past (Bryant, 2003). One study found a large positive correlation between self-compassion and overall savouring, but a relationship with the savouring-anticipating sub-type was not assessed (Ford, Klibert, Tarantino, & Lamis, 2017).

Highly self-compassionate individuals tend to experience high levels of pleasant or positive emotions (Zessin et al., 2015). Gilbert (2009a) has proposed that self-compassion conveys its effects by deactivating the neurological threat-defence system and activating the social-safeness system, which generates feelings of contentment and signals safety to explore the environment. Research supporting the Broaden-and-Build theory (Fredrickson, 2004) has shown that positive emotions (including love and contentment) facilitate the building of further positive emotions and psychological resources, and prompt individuals to explore, savour, and engage with new experiences. In this way, self-compassion may boost savouring-anticipating.

Balanced Time Perspective

Self-compassion may also change the way we approach the future by altering the relative emphasis we place on the past, present, and future. Zimbardo and Boyd (1999) identified five temporal dimensions: past-negative (aversive view of the past); past-positive (warm, sentimental attitude toward the past); present-hedonistic (risk-taking and pleasure seeking); present-fatalistic (belief that external forces control our lives); and future (striving toward future goals and rewards). A balanced time perspective is an optimal profile in which past, present, and future perspectives flexibly engage, allowing an individual to operate in a temporal mode that meets current demands. It is thought to comprise high levels of past-positive, moderately high levels of future and present-hedonistic, and low levels of past-negative and present-fatalistic time perspectives (Zimbardo & Boyd, 2008). Deviation from the balanced time perspective (DBTP; Stolarski, Bitner, & Zimbardo, 2011) indicates ill-balance in a time perspective profile, where lower scores indicate superior balance.

Although future time perspective may appear to represent an ideal indicator of future-outlook, balanced time perspective is a stronger predictor of current and future subjective wellbeing, including optimism (Stolarski, Matthews, Postek, Zimbardo, & Bitner, 2014; Zhang, Howell, & Stolarski, 2013), and is associated with brain regions involved in episodic memory, self-related processing, theory of mind, and imagining the future (Guo, Chen, & Feng, 2017). These neural regions are highly relevant to the conceptualisation of future-outlook as cognitions about future events (Baumeister et al., 2016) that are intimately associated with remembering the past (Addis et al., 2007; Klein, 2013).

No previous studies have examined the relationship between self-compassion and a balanced time perspective. However, Stolarski, Vowinckel, Jankowski, and Zajenkowski (2016) found that high levels of mindfulness were associated with low DBTP. They reasoned that a balanced time perspective may be facilitated by mindful attention because it can be directed toward objects in the past, present, or future (Dreyfus, 2011) and is associated with attention self-regulation (Bishop et al., 2004), including psychological flexibility (Fledderus, Bohlmeijer, Smit, & Westerhof, 2010) and cognitive-control (Elkins-Brown, Teper, & Inzlicht, 2017). Given that mindfulness is a dimension of self-compassion (Neff, 2003), a similar relationship may exist between self-compassion and balanced time perspective.

Language

Individuals' own words may also provide a quantifiable indication of future-outlook. Words reflect the focus of a person's attention, their thoughts and feelings, and how they organise and analyse their worlds (Tausczik & Pennebaker, 2009). Written passages can be analysed by the Linguistic Inquiry and Word Count (LIWC) text analysis program (Pennebaker, Boyd, Jordan, & Blackburn, 2015), which draws upon an internal dictionary of standardized linguistic categories (e.g., affective processes, time orientations).

LIWC has accurately identified affective processes in language, with high frequencies of positive emotion words (e.g., love, nice, sweet) used in writing about a positive event, and high proportions of negative emotion words (e.g., hurt, ugly, nasty) used in writing about a negative event (Kahn, Tobin, Massey, & Anderson, 2007). A few studies have evaluated the use of emotion words in relation to self-compassion (Baum & Rude, 2013; Imrie & Troop, 2012; Sbarra, Smith, & Mehl, 2012; Troop, Chilcot, Hutchings, & Varnaite, 2013; Zhang & Chen, 2016). One key finding is a negative association between self-compassion and the use of negative emotion words in descriptions of difficult events (Sbarra et al., 2012; Zhang & Chen, 2016). The results of experimental studies have been less clear, with no difference found between experimental and control groups following a self-compassion exercise (Imrie & Troop, 2012; Troop et al., 2013). No prior study has investigated the relationship between self-compassion and use of time orientation words.

Nevertheless, use of emotion and time orientation words has been linked to mindfulness. Teachers who completed a mindfulness and loving-kindness program used more positive emotion words than teachers in a wait-list control group when describing their most challenging student's behaviour (Haimovitz et al., 2011); substance abusers used fewer negative emotion words following a mindfulness-based stress reduction program (Liehr et al., 2010); and greater use of future-tense

words has been longitudinally associated with mindful awareness (Moore & Brody, 2009). As self-compassion includes mindfulness, it may similarly increase the use of words that reflect positive affective processes (high use of positive emotion words and low use of negative emotion words) and a future time orientation (high use of future focussed words and low use of past focussed words).

The Current Study

Having a positive future-outlook has important health implications. Indeed, all indicators of future-outlook assessed in this study have been strongly associated with many positive physical and psychological health outcomes (Bouchard, Carver, Mens, & Scheier, 2018; Bryant, 2003; Drake, Duncan, Sutherland, Abernethy, & Henry, 2008; Tausczik & Pennebaker, 2009). If self-compassion increases positive future-outlook, this may offer another mechanism through which self-compassion conveys its positive effects.

The first aim of this study was to determine whether self-compassion influences five indicators of positive future-outlook. I induced self-compassion in a subset of participants by asking them to write about a negative life event from a self-compassionate perspective (Breines & Chen, 2012; Johnson & O'Brien, 2013; Leary et al., 2007). I hypothesised that, compared to participants who completed a control writing condition, participants who completed the self-compassion condition would report more optimism and savouring-anticipating, exhibit lower DBTP, and use more words that reflect positive affective processes and a future time orientation when describing their anticipated response to a similar negative event in the future.

This study's second aim was to determine whether the effect of induced state self-compassion on future-outlook may be stronger for individuals who are low on trait self-compassion. This enquiry follows findings that brief interventions are most effective for individuals who have a weakness in the trait or ability that is the target of the intervention (Baum & Rude, 2013; Johnson & O'Brien, 2013; Leary et al., 2007; Sergeant & Mongrain, 2015). For instance, Leary et al. (2007) found that participants who were initially low in trait self-compassion reported the greatest increases in perceptions of similarity with others after completing a self-compassionate writing exercise. These results may reflect the fact that individuals with high levels of a specific trait/ability may not have much room for improvement, whereas those who are low on that trait/ability have considerable scope for improvement. Based on previous research, I hypothesised that participation in the self-compassionate induction (compared to the control condition) would interact with baseline levels of trait self-compassion to predict the five future-outlook variables. Specifically, I expected the self-compassionate induction to predict lower DBTP, and greater optimism, savouring-anticipating, and use of words that indicated a positive affective orientation and a future time orientation in participants who were low on self-compassion.

Method

Participants

Predominantly mature-aged undergraduate students at an Australian university took part in return for course credits and an opportunity to enter a raffle to win an AUD50 store voucher. Following the data screening procedure described in the results section, 52 respondents were excluded from the dataset. The final sample comprised 336 participants (82.7% female) aged between 18 and 68 years ($M = 34.83$, $SD = 10.12$, $Median = 34.00$). Experimental and control groups comprised 169 and 167 participants, respectively.

Measures

Self-Compassion. Levels of trait self-compassion were measured by the 12-item Self-Compassion Scale–Short Form (SCS-SF; Raes, Pommier, Neff, & Van Gucht, 2011), which presents statements that describe self-compassionate responses to difficult experiences (e.g., “When something upsets me I try to keep my emotions in balance”). Participants indicated how often they behave in the stated manner on a scale from 1) *almost never* to 5) *almost always*. Total scores were calculated by averaging all items after reverse-scoring negative items. In the current study, the SCS-SF exhibited high internal consistency ($\alpha = .89$).

State Self-Compassion. The 16-item state self-compassion scale (SCS-SF; Breines & Chen, 2013) measured current levels of self-compassion. Participants indicated their agreement with statements regarding the negative experience they had previously described. For example, “Right now ... I’m being understanding towards myself”. Respondents rated each statement from 1 (*strongly disagree*) to 7 (*strongly agree*). Internal consistency was high in the current dataset ($\alpha = .88$).

Balanced Time Perspective. Deviation from the Balanced Time Perspective (DBTP; Stolarski et al., 2011) indicated balanced time perspective (Zhang et al., 2013), where lower scores indicate greater balance. DBTP was calculated from past-positive (PP), past-negative (PN), present-hedonistic (PH), present-fatalistic (PF), and future positive (FU) items of the short form Zimbardo Time Perspective Inventory (ZPTI-Short; Košťál, Klicperová-Baker, Lukavská, & Lukavský, 2015). Participants rated “How true is this of me?” in response to items (e.g., “It gives me pleasure to think about my past”) on a scale from 1) *very untrue* to 5) *very true*. Stolarski et al.’s (2011) DBTP formula was used:

$$\sqrt{(oPN - ePN)^2 + (oPP - ePP)^2 + (oPF - ePF)^2 + (oPH - ePH)^2 + (oFU - eFU)^2}$$

The formula refers to optimal scores on a dimension (e.g., oPN) and empirically determined scores on a dimension (e.g., ePN). As per previous research, the *following optimal scores were applied*: PP (4.60), PH (3.90), FU (4.00), PN (1.95), and PF (1.50), (Stolarski et al., 2011; Stolarski et al., 2016; Zhang et al., 2013). DBTP has previously demonstrated high construct validity (Zhang et al., 2013).

Optimism. The Life Orientation Test-Revised (LOT-R; Scheier, Carver, & Bridges, 1994) comprises 10 statements that assess expectations of favourable future outcomes (e.g., “I’m always

optimistic about my future”). Participants indicated their agreement with each statement on a scale from 0) *strongly disagree* to 4) *strongly agree*. Total scores were calculated by averaging all items after reverse-scoring negatively-worded items. The LOT-R exhibited sound psychometric properties in the current dataset ($\alpha = .81$).

Savouring-Anticipating. The 8 item Anticipating subscale of the Savouring Beliefs Inventory (SAV-ANT; Bryant, 2003) presents statements about pleasure from anticipating future life experiences (e.g., “I get pleasure from looking forward”). Participants indicated how well each statement describes them on a scale ranging from 1) *strongly disagree* to 7) *strongly agree*. Total scores were calculated by averaging item scores after reverse-scoring negatively worded items. The scale demonstrated high internal consistency ($\alpha = .89$).

LIWC Text Analysis. Linguistic Inquiry and Word Count (LIWC; Pennebaker et al., 2015) software was used to analyse participants’ final writing task, in which they described how they would respond if a similar negative experience happened in the future. LIWC calculated percentages of words that expressed affective processes (positive emotions and negative emotions) and time orientation (future focus and past focus). The resulting four word-frequency items loaded on two factors in an exploratory principal components analysis which explained 57.1% of the total variance. After applying Direct Oblimin rotation, positive emotion words loaded positively (.74) and negative emotion words loaded negatively (-.77) on factor 1; and future focus words loaded positively (.67) and past focus words loaded negatively (-.75) on factor 2. No items cross-loaded above .20. Regression scores for the resulting factors were generated to create two LIWC variables. High scores on LIWC-Affect indicated greater use of positive emotion words and low scores indicated greater use of negative emotion words. High scores on LIWC-Time indicated greater use of future focused words and low scores indicated greater use of words that focused on the past.

Procedure

Data were collected via a Qualtrics™ (2017) survey. A link to the survey was provided on psychology learning platforms. After indicating informed consent, participants answered demographics questions; indicated how sad, angry, humiliated, anxious, and happy they were feeling right now on four scales ranging from 0) *not at all* to 9) *extremely*; and completed the SCS-SF. Based on Leary et al. (2007), participants were then asked to “Think of a recent negative event or experience that made you feel badly about yourself—something that involved failure, humiliation, or rejection. Please write about the experience in detail for 5 minutes in the box below.” They were asked to “include details, such as what happened leading up to the experience, who was there, what happened, what you were thinking, and how you felt and behaved during the experience.” An onscreen timer helped participants keep track of time, but there was no forced time limit on writing. Participants then rated their perceptions of the badness, importance, and own responsibility for the recalled negative experience/event on 5-point scales ranging from 1) *not at all* to 5) *extremely* before being randomly assigned to either an experimental condition or a control condition.

Experimental Condition. Participants in the experimental condition were asked to complete an exercise designed to induce self-compassion. First, they viewed a 3-minute video featuring Dr Kristin Neff describing the nature and value of self-compassion¹, which aimed to ensure that

participants understood the concept. They were subsequently asked to write for 3 minutes (using online textboxes) in response to each of three prompts (9 minutes in total) that were based on Leary et al. (2007).

The first prompt addressed the common humanity component of self-compassion. It began by stating that “people often feel like they are the only person who is going through a difficult time, when suffering is really something that we all share” and then asked participants to list ways in which other people may experience similar negative events. The second prompt focussed on the self-kindness component of self-compassion. It opened by stating that “often people treat themselves more harshly than they treat others in the same situation, when they really need and deserve the same amount of kindness”, and subsequently asked participants to write a paragraph expressing understanding, kindness, and concern to themselves in the same way that they would express concern to a close friend in a similar situation. Finally, the third prompt addressed the mindfulness component of self-compassion. It began by noting “we must be aware of our negative experiences to be able to move forward. But people often find it difficult to be aware of their negative experiences in a balanced way that neither ignores, avoids, nor amplifies painful thoughts and emotions.” Participants were then instructed to describe their feelings about the experience/event in an objective and unemotional fashion.

Control Condition. Participants allocated to the control condition were asked to write about the room in which they were currently seated (e.g., the colours, patterns and furnishings) after watching a 2.5-minute video of someone-else describing their room². Describing a room is a neutral and trivial topic that has been used as a control task in previous writing studies (e.g., Burton & King, 2004). Participants were asked to write for around 10 minutes.

Dependent Measures. After completing the control or experimental condition, all participants completed the SCS-ST, followed by the future outcome variable measures presented in randomised order. These included the ZPTI-Short, LOT-R, SAV-ANT, and a writing task from which the LIWC variables were calculated. This question asked participants to “think back to the negative event or experience that you described earlier and imagine that a similar event or experience happened to you again in the future. In the box below, please write for around 3 minutes about the future negative event or experience that you are envisaging.” Participants were prompted to describe their feelings and thoughts/self-talk about the experience, whether it was expected/unexpected, actions taken to address the situation, and the imagined outcome of those actions.

Finally, participants were asked to report how many weeks ago their recalled negative experience last occurred, from 1) *less than 1 week* to 6) *more than 12 weeks*. Participants who wished to enter the prize draw were directed to a separate survey to record their email address.

Results

Data Cleaning

Fifty-two respondents were excluded because; they did not write about a recent negative experience (4 cases); did not complete the dependent variable measures (1); did not complete the experimental or control writing task (6); wrote for less than two minutes in their designated writing task (3); were response-time outliers who took longer than the median time to complete the survey plus 1.5 times

the interquartile range (37) (Höhne & Schlosser, 2018); or represented a multivariate outlier in the dataset (1). The minimum writing time was informed by a literature search which indicated that two minutes is the shortest time that a writing task may produce positive effects (Burton & King, 2008). Long response-time outliers were excluded because they may indicate interruptions or multitasking (Höhne & Schlosser, 2018), which could have had unknown, unquantifiable, and unpredictable impacts on the experimental manipulation (Craik, 2014). There were no short response-time outliers.

Table 1. Correlations, means, and standard deviations

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Age	34.81	10.14								
2. Gender	1.85	0.39	.03							
3. SCS-SF	2.95	0.66	.25***	-.01						
4. SCS-ST	4.88	0.87	.21***	.05	.68***					
5. DBTP	2.59	0.93	-.19**	-.12*	-.50***	-.54***				
6. LOT-R	2.33	0.60	.21***	.04	.75***	.64***	-.60***			
7. SAV-ANT	4.28	0.43	-.06	.12*	.16**	.17**	-.04	.23***		
8. LIWC-Affect ^b	0.00	1.00	.11 [^]	-.08	.10 [^]	.13*	-.13*	.12*	.05	
9. LIWC-Time ^b	0.00	1.00	.12*	-.06	.13*	.05	-.07	.10	.01	.02

Notes: $N = 336$ except for ^b $N = 325$. Gender, Male = 1, Female = 2. SCS-SF, self-compassion; SCS-ST, state self-compassion; DBTP, deviation from balanced time perspective (low scores = greater balance); LOT-R, optimism; SAV-ANT, savouring-anticipating; LIWC-Affect, affective processes in language (negative to positive); LIWC-Time, time orientation in language (past to future). *** $p < .001$, ** $p < .01$, * $p < .05$, [^] $p < .07$.

One missing value on DBTP was imputed by expectation maximisation. Eleven participants who did not respond to the final writing task were excluded from the linguistic text analysis. One low scoring univariate outlier on SCS-ST and two high-scoring outliers on SAV-ANT were recoded to one point beyond the next score on the distribution (Field, 2013). Logarithmic transformations were applied to the LIWC variables to improve normality of the regression residuals. All other assumptions of ANCOVA and multiple regression were met.

Descriptive Statistics

Moderate levels of baseline self-compassion (SCS-SF) were reported by the sample ($M = 2.95$, $SD = 0.66$), which is consistent with previously observed means in undergraduate samples (Neff, 2003a). Before recalling the negative experience, control and experimental groups did not differ on age, gender breakdown, SCS-SF, sadness, anger, humiliation, anxiety, or happiness ($ps = .14$ to $.75$). The groups also did not differ on time to complete the survey ($M_{\text{Self-Comp}} = 32\text{m } 6\text{s}$, $M_{\text{Control}} = 31\text{m } 42\text{s}$, $d = .05$, $p = .65$; Range = 14m 48s to 49m 41s), time spent writing about the negative experience ($M_{\text{Self-Comp}} = 6\text{m } 25\text{s}$, $M_{\text{Control}} = 6\text{m } 17\text{s}$, $d = .09$, $p = .66$), or on the writing exercises ($M_{\text{Self-Comp}} = 8\text{m } 49\text{s}$, $M_{\text{Control}} = 9\text{m } 2\text{s}$, $d = .05$, $p = .41$). Means, standard deviations, and correlations are presented in Table 1.

Mean Differences

A manipulation check confirmed that the self-compassion induction was successful. After the self-compassionate writing task, the experimental group ($M = 4.98$, $SD = 0.89$) scored significantly higher on state self-compassion than the control group ($M = 4.77$, $SD = 0.85$), $t(1,334) = 2.30$, $d = .25$, $p = .02$.

ANCOVAs were then conducted in SPSS 24 to evaluate the hypothesis that the self-compassionate writing exercise would decrease levels of DBTP and increase levels of LOT-R, SAV-ANT, LIWC-Affect, and LIWC-Time. The potential confounding effects of age, perceived badness of the negative experience, and weeks since the experience were partialled out of the analyses. As shown in Table 2, participants in the self-compassionate writing condition reported higher levels of SAV-ANT and LIWC-Time than the control group. Experimental and control participants did not differ on DBTP, LOT-R, and LIWC-Affect.

Table 2. Future-outlook variables: means, SDs and mean differences

Variable	Experimental Group	Control Group	Mean Differences		
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>F</i>	<i>p</i>	<i>d</i>
DBTP	2.58 (0.91)	2.60 (0.95)	0.04	.85	.02
LOT-R	2.34 (0.57)	2.32 (0.63)	0.26	.61	.06
SAV-ANT	4.33 (0.45)	4.24 (0.40)	4.13	.04	.22
LIWC-Affect ^b	0.08 (0.95)	-0.08 (1.05)	2.61	.11	.18
LIWC-Time ^b	0.12 (1.02)	-0.12 (0.97)	5.22	.02	.25

Note. $N = 336$ except for ^b $N = 325$. Mean differences = Bonferroni adjusted two-tailed significance tests after controlling for age, ratings of the badness of the experience, and weeks since the negative experience. DBTP, deviation from balanced time perspective (low scores = greater balance); LOT-R, optimism; SAV-ANT, savouring-anticipating; LIWC- Affect, affective processes in language (negative to positive); LIWC-Time, time orientation in language (past to future).

Moderation Analyses

Using PROCESS (Hayes, 2016), a series of moderated linear regressions were conducted to determine whether the effects of the self-compassionate writing induction on the five future outcome variables varied as a function of baseline trait self-compassion. Each model assessed the prediction of a future outcome variable (DBTP, LOT-R, SAV-ANT, LIWC-Time, or LIWC-Affect) from group membership (Group), trait self-compassion (SCS-SF), and the interaction between them (Group*SCS-SF). In all models, age, perceived badness of the negative experience, and weeks since the negative experience were entered as covariates. PROCESS was instructed to enter Group as a categorical variable and to centre SCS-SF prior to calculating the interaction term. Results are presented in Table 3.

Table 3. Future-outlook variables predicted by the self-compassionate writing exercise, self-compassion, and their interactions

Variables	DBTP			LOT-R			SAV-ANT			LIWC-Affect ^b			LIWC-Time ^b		
	B	SE	p	B	SE	p	B	SE	p	B	SE	p	B	SE	p
Age	-0.01	.00	.07	0.00	.00	.45	0.00	.00	.07	0.01	.01	.07	0.01	.01	.06
Badness	0.10	.04	.005	0.00	.02	.99	-0.01	.02	.74	-0.02	.05	.66	-0.01	.05	.89
Weeks Since	-0.04	.02	.07	0.01	.01	.36	0.01	.01	.48	-0.01	.03	.86	0.02	.03	.50
SCS-SF	-0.88	.10	<.001	0.71	.05	<.001	0.03	.05	.63	0.31	.12	.01	0.32	.12	.01
Groups	0.00	.09	.97	0.02	.04	.70	0.09	.05	.04	0.18	.11	.11	0.25	.11	.02
Groups*SCS-SF	0.42	.13	.002	-0.07	.07	.32	0.16	.07	.02	-0.38	.17	.03	-0.32	.17	.06

Notes: N = 336 except for ^b N = 325. DBTP, deviation from balanced time perspective (low scores = greater balance); LOT-R, optimism; SAV-ANT, savouring-anticipating; LIWC-Affect, affective processes in language (negative to positive); LIWC-Time, time orientation in language (past to future); Badness, badness of recalled negative experience; Weeks Since, weeks since negative experience last occurred.

The first model explained 29.5% of the total variance in DBTP, $R^2 = .30$, $F(6,329) = 22.95$, $p < .001$. The main effects of SCS-SF and Group were qualified by a significant interaction. As displayed in Figure 1a, among individuals with low levels of SCS-SF (1 *SD* below the mean), experimental group members reported lower levels of DBTP than control participants, $B = -0.28$, $p = .02$. In contrast, among those with high SCS-SF (1 *SD* above the mean), participants in the experimental condition reported higher DBTP than control participants, $B = 0.27$, $p = .03$.

The next model accounted for 55.9% of the total variance in LOT-R, $R^2 = .56$, $F(6,329) = 69.58$, $p < .001$. SCS-SF was positively associated with LOT-R, but group membership and the interaction term were not significant predictors.

The SAV-ANT model accounted for 6.3% of the total variance, $R^2 = .06$, $F(6,329) = 3.66$, $p = .002$. The main effects of SCS-SF and group were qualified by a significant interaction. As shown in Figure 1b, among participants with high SCS-SF, members of the experimental group reported higher levels of SAV-ANT than the control group, $B = 0.20$, $p = .002$, but no group difference on SAV-ANT was evident among participants with low SCS-SF, $B = -0.01$, $p = .80$.

The LIWC-Affect model explained 4.0% of the variance in the dataset, $R^2 = .04$, $F(6,318) = 2.27$, $p = .04$. Observed main effects were qualified by a significant interaction. Figure 1c shows that, among individuals with low levels of SCS-SF, participants in the experimental group used more positively oriented affective words than control participants, $B = 0.43$, $p = .006$. However, among high SCS-SF participants, control and experimental groups used similar percentages of positive and negative emotion words, $B = -0.07$, $p = .65$.

The model predicting LIWC-Time accounted for 5.4% of the total variance, $R^2 = .05$, $F(6,318) = 3.00$, $p = .007$. SCS-SF and Group exhibited significant main effects. Although the interaction term did not contribute significantly to the model ($p = .06$), significantly different relationships were observed for low and high SCS-SF participants. As shown in Figure 1d, amongst participants with low SCS-SF, the experimental group used more future oriented words than the control group, $B = 0.47$, $p = .002$, but no difference was observed between experimental and control groups amongst those high on SCS-SF, $B = 0.04$, $p = .78$.

Post Hoc Analyses

Moderated linear regressions explored the unexpected increase in DBTP in individuals with high trait self-compassion. The models assessed SCS-SF, Group, and Group*SCS-SF as predictors of each component of DBTP (PN, PP, PH, PF, and FU) extracted from the DBTP formula, e.g., $(oPN - ePN)^2$, after controlling for the three covariates. Significant interactions in the PN and PP deviation models showed that, compared to control participants, experimental participants with low self-compassion reported smaller deviations from the optimal PN and PP scores than those with high self-compassion. Two subsequent moderation analyses with PN and PP mean scores as dependent

variables determined that high self-compassion participants failed to report the increases in PP and decreases in PN that were reported by low self-compassion participants.

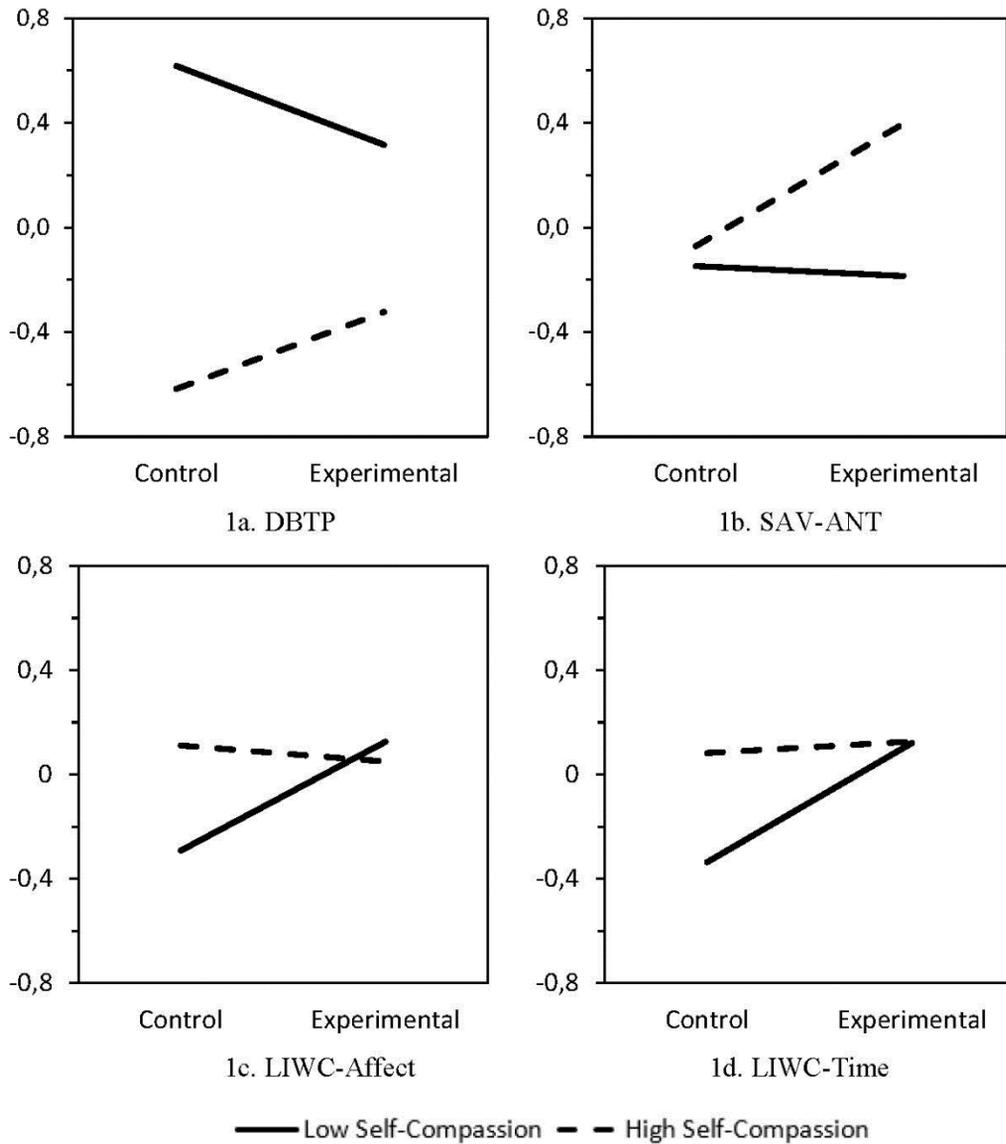


Figure 1. Experimental and control conditions predicting (1a) deviation from balanced time perspective, (1b) savouring-anticipating, (1c) use of positively oriented affective words, and (1d) use of future oriented words at levels of trait self-compassion 1 SD above and 1 SD below the sample mean. Plots depict standardized betas after controlling for age, badness of recalled negative experience, and weeks since negative experience last occurred, where zero indicates the sample mean.

Discussion

Previous research has shown that self-compassion helps individuals to negotiate current and past adverse experiences. This study aimed to determine whether self-compassion also influences how individuals view the future. While less than straightforward, the results indicate that self-compassion can, indeed, change our future vision. As hypothesised, participants whose state self-compassion was increased by writing self-compassionately about a recent negative life event tended to report a more positive vision of the future than participants assigned to a control writing task, but responses varied according to baseline levels of trait self-compassion. Specifically, trait self-compassion moderated post-induction levels of DBTP, savouring-anticipating, and the use of positively oriented affective words and future oriented words. Overall, induced increases in state self-compassion led participants with low trait self-compassion to report a brighter future-outlook on three of the five assessed indicators (DBTP, positively oriented affective words, and future oriented words). However, individuals with high trait self-compassion reported improvement only on savouring-anticipating, and experienced greater ill-balance in their time perspective.

The prevailing finding that self-compassion has the capacity to improve one's future-outlook is consistent with previous findings linking self-compassion with various abilities – such as intrinsic motivation, personal initiative, goal-reengagement, and adaptive coping strategies – that assist individuals to negotiate current and past adverse experiences (Barnard & Curry, 2011; Breines & Chen, 2012; Leary et al., 2007; Neely et al., 2009; Neff et al., 2005; Neff et al., 2007). This enhanced repertoire of adaptive skills, along with increased positive affect (Zessin et al., 2015), higher self-efficacy (Smeets et al., 2014), and lower fear (Neff et al., 2005), is likely to open the way for a brighter view of the future.

Two significant main effects showed that the self-compassionate writing exercise generally increased levels of savouring-anticipating and the use of future oriented words across all members of the experimental group, which is consistent with previous findings (Ford et al., 2017; Haimovitz et al., 2011). However, these main effects were qualified by interactions in the moderation analyses — as were the effects on DBTP and the use of positively oriented affective words. These interactions reveal that the influence of the self-compassion induction on these four indicators of future-outlook varied according to existing levels of trait self-compassion.

As hypothesised, engaging in self-compassionate writing about a recent negative life event led individuals with low trait self-compassion to experience greater balance in their time perspective profile (lower DBTP), and to express a more positive affective orientation and stronger future time orientation in their choice of words. These interactions are consistent with the results of several studies that have observed greater effectiveness of brief interventions for individuals who have a deficit in the target area of the intervention (Baum & Rude, 2013; Johnson & O'Brien, 2013; Leary et al., 2007; Sergeant & Mongrain, 2015). For example, Sergeant and Mongrain (2015) found that individuals who were distressed prior to completing online positive psychology exercises reported greater decreases in depressive symptoms and increases in life satisfaction than participants who were initially non-distressed. One logical explanation for this response pattern is that people have

considerable room for improvement if they are low on a trait or ability that an intervention targets, whereas those who are already high on that trait or ability do not.

Affective processes in the language of low-self-compassion participants indicated that the experimental group described possible future events that were more positive than events described by the control group (Kahn et al., 2007); despite all participants being asked to imagine a future negative event that was like the one they had recalled earlier. This result conflicts with previous findings of no change in the use of emotion words post self-compassion induction (Imrie & Troop, 2012; Troop et al., 2013). However, these studies did not assess whether effects varied according to initial levels of trait self-compassion, so similar effects may have remained undetected. The current study's writing task essentially asked participants to draw from an actual past event to envisage a possible future event, thereby incorporating both past and future time perspectives. Greater use of future oriented words amongst low self-compassion participants following the self-compassion induction indicates that increased state self-compassion helped them to let go of the past and focus on the future.

Predicted decreases in DBTP amongst low self-compassion individuals in the self-compassionate writing condition are likely to reflect a synergy of several effects of the self-compassion induction, such as acquiring a broader perspective on their recalled negative experiences, a greater capacity to accept responsibility for the experiences, and lower negative affect (Leary et al., 2007). The mindfulness component of self-compassion may play a leading role in improving balanced time perspective due to its association with attention self-regulation (Bishop et al., 2004). Although narrower in scope than mindfulness generally, when combined with self-kindness, it enables a present or past experience to be accepted along with a desire to be free from suffering in the future (Neff & Dahm, 2015). In line with contemporary conceptualisations of future-outlook (Baumeister et al., 2016), improvements in past time perspectives are likely to provide positive resources to draw upon when imagining and assessing the viability of possible positive futures.

Surprisingly, the interaction also revealed that highly self-compassionate participants reported a more ill-balanced time perspective following the self-compassion induction, which was due to a failure to exhibit improvements in past time perspectives that were experienced by low self-compassion participants. Yet even with impaired DBTP, high self-compassion participants displayed greater balance than low self-compassion participants in both experimental and control conditions. This raises the possibility that directing their attention to a negative past experience may have upset a typically finely-balanced time perspective. This explanation draws upon the notion of person-activity misfit (Fritz & Lyubomirsky, 2018), which may occur when a positive activity coincidentally elicits negative emotions and thoughts (e.g., Layous et al., 2017). In this way, for highly self-compassionate participants, recounting a negative experience may have had detrimental effects on their past time perspectives that were greater in magnitude than the beneficial effects of the self-compassion induction. Relatedly, several studies have found that increases in well-being are smaller when an individual's goal and the goal of the activity are mismatched (e.g., Brunstein, Schultheiss, & Grassmann, 1998).

Also contrary to hypothesis, compared to control participants, experimental participants with high trait self-compassion reported enhanced levels of savouring-anticipating but those with low trait self-

compassion did not. Further research is needed to investigate this interaction. One avenue of investigation may involve determining whether relatively high baseline levels of positive affect (including contentment and safeness) are required to initiate an expansion into the arena of anticipatory positive affect. This idea is generally consistent with Fredrickson's (2004) Broaden-and-Build theory, which proposes that positive emotions are a resource that may be accessed in stressful situations to facilitate movement toward new activities which, in turn, promote further positive emotions.

One aim of the current study was to replicate Smeets and colleagues' (2014) finding of increased optimism in female undergraduates following a brief self-compassion intervention. However, the current self-compassion induction failed to increase optimism. This result is surprising given the strong bivariate relationship between self-compassion and optimism observed in the current dataset and other samples (Neff et al., 2007; Neff & Vonk, 2009) and may be a product of research methodology. A recent meta-analysis of the effects of various interventions on optimism determined that higher effect sizes were found when studies used an intervention in which participants imagined a positive future, assessed current levels of optimism, and were conducted in-person (Malouff & Schutte, 2017). Thus, the fact that the current study asked participants to review a negative past event, assessed typical levels of optimism, and was conducted on-line may have contributed to the non-significant effect. Future research is needed to closely replicate Smeets and colleagues' methodology with the aim of replicating their finding, and then to investigate why their methodology revealed a possible causal association and the current study's methodology did not.

Limitations

Several limitations should be kept in mind when interpreting this study's results. First, the use of a predominantly female undergraduate sample means that its findings may not necessarily generalize to other populations. Second, collecting data via an online survey prevented me from controlling aspects of participants' environments that may have influenced their responses. I addressed this potential problem by screening written passages and excluding participants who did not respond appropriately or in a reasonable amount of time. Nevertheless, task reliability may have been higher in a controlled experimental setting, and the number of cases excluded due to presumed interruptions or multitasking may have been lower.

Third, the self-compassion induction was, on average, under 9 minutes in duration. It is not known if the observed effects of self-compassion on future-outlook are transient or enduring. Other research has found that positive psychology inductions are most effective when they are practiced over longer periods of time (Khoury et al., 2013). Further research is needed to determine if a similar experimental design using a more comprehensive self-compassion training program (e.g., Compassion-Focused Therapy, Gilbert, 2009b; Mindful Self-Compassion, Neff & Germer, 2013) produces similar effects on future-outlook over an extended period. Similarly, future researchers may investigate whether similar effects are found when control participants write about the self from a different perspective, rather than about their environments.

It should also be noted that effect sizes observed in the current study were small. While this is not surprising given the brevity of the induction exercise, it will be of interest to determine whether

longer self-compassion interventions result in larger improvements in future-outlook. Finally, this study examined only five indicators of future-outlook, and patterns of responses differed across these indicators. Therefore, the generally positive effects of self-compassion on future-outlook observed in this study may not extend to other indicators of future vision.

Conclusion

The current study is among the first to demonstrate that self-compassion can influence positive future-outlook. State self-compassion induced by a self-compassionate writing exercise elicited more savouring-anticipating, a more balanced time perspective, and greater use of words that expressed positive affective processes and a future time orientation when anticipating a future negative event. However, these positive influences on future-outlook were not experienced by all participants who completed the self-compassion induction. Instead, the effects varied according to baseline levels of trait self-compassion, with individuals low in self-compassion experiencing enhanced future-outlook on three assessed indicators while those high in self-compassion experienced improvement on only one indicator and decrements on another. Given that future-outlook has been associated with many positive health outcomes (Bouchard et al., 2018; Bryant, 2003; Drake et al., 2008; Tausczik & Pennebaker, 2009), the current findings raise the possibility that increases in positive future-outlook may represent another mechanism through which self-compassion conveys its positive effects on well-being. Overall, the current findings add to the ever-increasing collection of rich and diverse benefits associated with self-compassion.

Declaration of Conflicting Interests

The author(s) declared no conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Notes

¹Self-compassion video featuring Dr Kristin Neff:

<https://www.youtube.com/watch?v=Tyl6YXp1Y6M>.

²Control video: <https://www.youtube.com/watch?v=hWWbWDnd9Xs> (cued to start at 0:23)

References

- Addis, D. R., Wong, A. T., & Schacter, D. L. (2007). Remembering the past and imagining the future: Common and distinct neural substrates during event construction and elaboration. *Neuropsychologia*, *45*, 1363-1377.
- Barnard, L. K., & Curry, J. F. (2011). Self-compassion: Conceptualizations, correlates, & interventions. *Review of General Psychology*, *15*(4), 289-303. doi:10.1037/a0025754
- Baum, E., & Rude, S. (2013). Acceptance-enhanced expressive writing prevents symptoms in participants with low initial depression. *Cognitive Therapy & Research*, *37*(1), 35-42. doi:10.1007/s10608-012-9435-x
- Baumeister, R. F., Vohs, K. D., & Oettingen, G. (2016). Pragmatic prospection: How and why people think about the future. *Review of General Psychology*, *20*(1), 3-16. doi:10.1037/gpr0000060
- Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Anderson, N., Carmody, J., . . . Devins, G. (2004). Mindfulness: A proposed operational definition. *Clinical Psychology: Science and Practice*, *11*(3), 230-241. doi:10.1093/clipsy.bph077
- Bouchard, L. C., Carver, C. S., Mens, M. G., & Scheier, M. F. (2018). Optimism, health, and well-being. In D. S. Dunn (Ed.), *Positive Psychology: Established and Emerging Issues* (pp. 352). New York, NY: Routledge.
- Breines, J. G., & Chen, S. (2012). Self-Compassion Increases Self-Improvement Motivation. *Personality and Social Psychology Bulletin*, *38*(9), 1133-1143. doi:10.1177/0146167212445599
- Breines, J. G., & Chen, S. (2013). Activating the inner caregiver: The role of support-giving schemas in increasing state self-compassion. *Journal of Experimental Social Psychology*, *49*(1), 58-64. doi:10.1016/j.jesp.2012.07.015
- Brunstein, J. C., Schultheiss, O. C., & Grassmann, R. (1998). Personal goals and emotional well-being: the moderating role of motive dispositions. *Journal of Personality and Social Psychology*, *75*(2), 494-508.
- Bryant, F. (2003). Savoring Beliefs Inventory (SBI): A scale for measuring beliefs about savouring. *Journal of Mental Health*, *12*(2), 175-196. doi:10.1080/0963823031000103489
- Burton, C. M., & King, L. A. (2004). The health benefits of writing about intensely positive experiences. *Journal of Research in Personality*, *38*(2), 150-163. doi:10.1016/S0092-6566(03)00058-8
- Burton, C. M., & King, L. A. (2008). Effects of (very) brief writing on health: The two-minute miracle. *British Journal of Health Psychology*, *13*(1), 9-14. doi:doi:10.1348/135910707X250910
- Craik, F. I. M. (2014). Effects of distraction on memory and cognition: a commentary. *Frontiers in Psychology*, *5*, 841. doi:10.3389/fpsyg.2014.00841
- Drake, L., Duncan, E., Sutherland, F., Abernethy, C., & Henry, C. (2008). Time perspective and correlates of wellbeing. *Time & Society*, *17*(1), 47-61. doi:10.1037/0022-3514.17.1.47
- Dreyfus, G. (2011). Is mindfulness present-centred and non-judgmental? A discussion of the cognitive dimensions of mindfulness. *Contemporary Buddhism*, *12*(1), 41-54. doi:10.1080/14639947.2011.564815

- Elkins-Brown, N., Teper, R., & Inzlicht, M. (2017). How mindfulness enhances self-control. In J. C. Karremans & E. Papies, K. (Eds.), *Mindfulness in Social Psychology* (pp. 65-78). New York, NY: Routledge.
- Field, A. (2013). *Discovering Statistics Using IBM SPSS Statistics* (4th ed.). London, UK: Sage.
- Fledderus, M., Bohlmeijer, E. T., Smit, F., & Westerhof, G. J. (2010). Mental health promotion as a new goal in public mental health care: a randomized controlled trial of an intervention enhancing psychological flexibility. *American journal of public health, 100*(12), 21. doi:10.2105/AJPH.2010.196196
- Ford, J., Klibert, J. J., Tarantino, N., & Lamis, D. A. (2017). Savouring and Self-compassion as Protective Factors for Depression. *Stress and Health, 33*(2), 119-128. doi:10.1002/smi.2687
- Fredrickson, B. L. (2004). The broaden-and-build theory of positive emotions. *Philosophical Transactions of the Royal Society of London. Series B: Biological Sciences, 359*(1449), 1367.
- Fritz, M. M., & Lyubomirsky, S. (2018). Whither Happiness? When, How and Why Might Positive Activities Undermine Well-Being. In J. P. Forgas & R. F. Baumeister (Eds.), *The Social Psychology of Living Well* (pp. 362). New York: Routledge.
- Gilbert, P. (2009a). Compassion and cruelty: A biopsychosocial approach. In P. Gilbert (Ed.), *The compassionate mind: A new approach to life's challenges*. (pp. 9-74). Oakland, CA: New Harbinger.
- Gilbert, P. (2009b). Introducing compassion-focused therapy. *Advances in Psychiatric Treatment, 15*, 199–208. doi:10.1192/apt.bp.107.005264
- Guo, Y., Chen, Z., & Feng, T. (2017). Neural substrates underlying balanced time perspective: A combined voxel-based morphometry and resting-state functional connectivity study. *Behavioural Brain Research, 332*, 237-242. doi:10.1016/j.bbr.2017.06.005
- Haimovitz, K., Carlson, B., Schonert-Reichl, K. A., Jha, A. P., Wilensky, R., Cullen, M., & Roeser, R. W. (2011). *Cultivating Forgiveness and Compassion Through a Mindfulness-based Program for Teachers: Results from Two Field Interventions*. Retrieved from <http://commons.cu-portland.edu/psychfaculty/29>
- Hayes, A. F. (2016). PROCESS (Version 2.16.3). Retrieved from www.processmacro.org
- Höhne, J. K., & Schlosser, S. (2018). Investigating the adequacy of response time outlier definitions in computer-based web surveys using paradata survey focus. *Social Science Computer Review, 36*(3), 369-378. doi:10.1177/0894439317710450
- Imrie, S., & Troop, N. (2012). A pilot study on the effects and feasibility of compassion-focused expressive writing in Day Hospice patients. *Palliative & supportive care, 10*(2), 115-122. doi:10.1017/s1478951512000181
- Johnson, E. A., & O'Brien, K. A. (2013). Self-Compassion soothes the savage EGO-Threat System: Effects on negative affect, shame, rumination, and depressive symptoms. *Journal of Social and Clinical Psychology, 32*(9), 939-963. doi:10.1521/jscp.2013.32.9.939
- Kahn, J. H., Tobin, R. M., Massey, A. E., & Anderson, J. A. (2007). Measuring emotional expression with the Linguistic Inquiry and Word Count. *American Journal of Psychology, 120*(2), 263-286.

- Khoury, B., Lecomte, T., Fortin, G., Masse, M., Therien, P., Bouchard, V., . . . Hofmann, S. G. (2013). Mindfulness-based therapy: A comprehensive meta-analysis. *Clinical Psychology Review, 33*(6), 763-771. doi:10.1016/j.cpr.2013.05.005
- Klein, S. B. (2013). The temporal orientation of memory: It's time for a change of direction. *Journal of Applied Research in Memory and Cognition, 2*(4), 222-234. doi:10.1016/j.jarmac.2013.08.001
- Košťál, J., Klicperová-Baker, M., Lukavská, K., & Lukavský, J. (2015). Short version of the Zimbardo Time Perspective Inventory (ZTPI–short) with and without the Future-Negative scale, verified on nationally representative samples. *Time & Society, 25*(2), 169-192. doi:10.1177/0961463x15577254
- Layous, K., Sweeny, K., Armenta, C., Na, S., Choi, I., & Lyubomirsky, S. (2017). The proximal experience of gratitude. *PLoS One, 12*(7), e0179123. doi:10.1371/journal.pone.0179123
- Leary, M. R., Tate, E. B., Adams, C. E., Allen, A. B., & Hancock, J. (2007). Self-compassion and reactions to unpleasant self-relevant events: The implications of treating oneself kindly. *Journal of Personality and Social Psychology, 92*(5), 887-904. doi:10.1037/0022-3514.92.5.887
- Liehr, P., Marcus, M. T., Carroll, D., Granmayeh, L. K., Cron, S. G., & Pennebaker, J. W. (2010). Linguistic analysis to assess the effect of a mindfulness intervention on self-change for adults in substance use recovery. *Substance Abuse, 31*(2), 79-85. doi:10.1080/08897071003641271
- MacBeth, A., & Gumley, A. (2012). Exploring compassion: A meta-analysis of the association between self-compassion and psychopathology. *Clinical Psychology Review, 32*(6), 545-552. doi:10.1016/j.cpr.2012.06.003
- Magnus, C. M. R., Kowalski, K. C., & McHugh, T.-L. F. (2010). The role of self-compassion in women's self-determined motives to exercise and exercise-related outcomes. *Self and Identity, 9*(4), 363-382. doi:10.1080/15298860903135073
- Malouff, J. M., & Schutte, N. S. (2017). Can psychological interventions increase optimism? A meta-analysis. *The Journal of Positive Psychology, 12*(6), 594-604. doi:10.1080/17439760.2016.1221122
- Moore, S., D., & Brody, L., R. (2009). Linguistic predictors of mindfulness in written self-disclosure narratives. *Journal of Language and Social Psychology, 28*(3), 281-296. doi:10.1177/0261927X09335264
- Neely, M. E., Schallert, D. L., Mohammed, S. S., Roberts, R. M., & Chen, Y. (2009). Self-kindness when facing stress: The role of self-compassion, goal regulation, and support in college students' well-being. *Motivation and Emotion, 33*(1), 88-97. doi:10.1007/s11031-008-9119-8
- Neff, K. D. (2003a). The development and validation of a scale to measure self-compassion. *Self and Identity, 2*(3), 223-250. doi:10.1080/15298860309027
- Neff, K. D. (2003b). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity, 2*, 85-101. doi:10.1080/15298860390129863
- Neff, K. D., & Beretvas, S. N. (2012). The role of self-compassion in romantic relationships. *Self and Identity, 1*-21. doi:10.1080/15298868.2011.639548

- Neff, K. D., & Dahm, K. A. (2015). Self-Compassion: What it is, what it does, and how it relates to mindfulness. In B. D. Ostafin, M. D. Robinson, & B. P. Meier (Eds.), *Handbook of Mindfulness and Self-Regulation* (pp. 121-140). New York: Springer.
- Neff, K. D., & Germer, C. K. (2013). A pilot study and randomized controlled trial of the Mindful Self-Compassion Program. *Journal of Clinical Psychology, 69*(1), 28-44. doi:10.1002/jclp.21923
- Neff, K. D., & Vonk, R. (2009). Self-compassion versus global self-esteem: Two different ways of relating to oneself. *Journal of Personality, 77*(1), 23-50. doi:10.1111/j.1467-6494.2008.00537.x
- Neff, K. D., Hsieh, Y., & Dejitterat, K. (2005). Self-compassion, achievement goals, and coping with academic failure. *Self and Identity, 4*, 263-287. doi:10.1080/13576500444000317
- Neff, K. D., Rude, S. S., & Kirkpatrick, K. L. (2007). An examination of self-compassion in relation to positive psychological functioning and personality traits. *Journal of Research in Personality, 41*(4), 908-916. doi:10.1016/j.jrp.2006.08.002
- Oettingen, G. (2012). Future thought and behaviour change. *European Review of Social Psychology, 23*(1), 1-63. doi:10.1080/10463283.2011.643698
- Pennebaker, J. W., Boyd, R. L., Jordan, K., & Blackburn, K. (2015). *The development and psychometric properties of LIWC2015*. Austin, TX: University of Texas at Austin.
- Raes, F., Pommier, E., Neff, K., & Van Gucht, D. (2011). Construction and factorial validation of a short form of the Self-Compassion Scale. *Clinical Psychology and Psychotherapy, 18*(4), 330-341. doi:10.1002/cpp.702
- Sbarra, D. A., Smith, H. L., & Mehl, M. R. (2012). When leaving your ex, love yourself: observational ratings of self-compassion predict the course of emotional recovery following marital separation. *Psychological Science, 23*(3), 261-269. doi:10.1177/0956797611429466
- Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, mastery, and self-esteem): A re-evaluation of the Life Orientation Test. *Journal of Personality and Social Psychology, 67*, 1063-1078.
- Sergeant, S., & Mongrain, M. (2015). Distressed users report a better response to online positive psychology interventions than nondistressed users. *Canadian Psychology/Psychologie Canadienne, 56*(3), 322-331. doi:10.1037/cap0000034
- Shapira, L. B., & Mongrain, M. (2010). The benefits of self-compassion and optimism exercises for individuals vulnerable to depression. *The Journal of Positive Psychology, 5*(5), 377-389. doi:10.1080/17439760.2010.516763
- Smeets, E., Neff, K. D., Alberts, H., & Peters, M. (2014). Meeting suffering with kindness: Effects of a brief self-compassion intervention for female college students. *Journal of Clinical Psychology, 70*(9), 794-807. doi:10.1002/jclp.22076
- Stolarski, M., Bitner, J., & Zimbardo, P. G. (2011). Time perspective, emotional intelligence and discounting of delayed awards. *Time & Society, 20*(3), 346-363. doi:10.1177/0961463x11414296

- Stolarski, M., Matthews, G., Postek, S., Zimbardo, P. G., & Bitner, J. (2014). How we feel is a matter of time: Relationships between time perspectives and mood. *Journal of Happiness Studies*, 15(4), 809-827. doi:10.1007/s10902-013-9450-y
- Stolarski, M., Vowinckel, J., Jankowski, K. S., & Zajenkowski, M. (2016). Mind the balance, be contented: Balanced time perspective mediates the relationship between mindfulness and life satisfaction. *Personality and Individual Differences*, 93, 27-31. doi:10.1016/j.paid.2015.09.039
- Tausczik, Y., R., & Pennebaker, J., W. . (2009). The psychological meaning of Words: LIWC and computerized text analysis methods. *Journal of Language and Social Psychology*, 29(1), 24-54. doi:10.1177/0261927x09351676
- Troop, N. A., Chilcot, J., Hutchings, L., & Varnaite, G. (2013). Expressive writing, self-criticism, and self-reassurance. *Psychology and Psychotherapy: Theory, Research and Practice*, 86(4), 374-386. doi:10.1111/j.2044-8341.2012.02065.x
- Zessin, U., Dickhäuser, O., & Garbade, S. (2015). The relationship between self-compassion and well-being: A meta-analysis. *Applied Psychology: Health and Well-Being*, 7(3), 340-364. doi:10.1111/aphw.12051
- Zhang, J. W., & Chen, S. (2016). Self-compassion promotes personal improvement from regret experiences via acceptance. *Personality and Social Psychology Bulletin*, 42(2), 244-258. doi:10.1177/0146167215623271
- Zhang, J. W., Howell, R. T., & Stolarski, M. (2013). Comparing Three Methods to Measure a Balanced Time Perspective: The Relationship Between a Balanced Time Perspective and Subjective Well-Being. *Journal of Happiness Studies*, 14(1), 169-184. doi:10.1007/s10902-012-9322-x
- Zimbardo, P. G., & Boyd, J. N. (1999). Putting Time into Perspective. A Valid, Reliable Individual-differences Metric Measurement. *Journal of Personality and Social Psychology*, 77, 1271-1288. doi:10.1037/0022-3514.77.6.1271
- Zimbardo, P. G., & Boyd, J. N. (2008). *The Time Paradox*. New York, NY Free Press.