



Research Article

Self-kindness and Self-Criticism as Unique and Common Predictors of Subjective Well-being Following Positive Psychology Interventions

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Citation: Chafe D and Mongrain M (2024) Self-kindness and Self-Criticism as Unique and Common Predictors of Subjective Well-being Following Positive Psychology Interventions. J Psychiatry Cogn Behav 7: 170. DOI: <https://doi.org/10.29011/2574-7762.000070>

Received Date: 18 February, 2024; **Accepted Date:** 29 February, 2024; **Published Date:** 04 March, 2024

Abstract

The current study examines the self-kindness factor of the Self-Compassion Scale [1] compared to a well validated measure of self-criticism in the context of a longitudinal study measuring the impact of positive psychology interventions on subjective well-being. Results indicated that self-kindness uniquely predicted increases in compassionate and positive affect at the six-month follow-up. Self-criticism uniquely predicted improvements in depression and life satisfaction for up to six months. Both constructs predicted significant improvements in negative affect and happiness. The results suggest that the two constructs represent separate psychological processes that tap into different emotional systems. Being “hard on oneself” relates to depressive affect while being kind relates to compassionate affect, and both can be responsive to positive psychology interventions.

Keywords: Self-compassion; Self-kindness; Self-criticism; Positive psychology; Depression; Subjective well-being.

The concept of self-compassion has long been present in many Eastern traditions but emerged only recently in Western empirical psychology. Neff [1] is credited with the initial operationalized definition and “empirical” understanding of self-compassion. In her original 2003a article, Neff drew from Buddhist teachings on the more traditional definition of compassion, and adapted this definition to fit self-compassion, stating it “involves being touched by and open to one’s own suffering, not avoiding or disconnecting from it, generating the desire to alleviate one’s suffering and to heal oneself with kindness” (p. 87). Her definition also includes viewing your own experiences of pain and suffering without judgement and understanding that these experiences are simply part of the human condition. Since its introduction into the literature, self-compassion has gained considerable attention from both researchers and clinicians and has been linked to various health benefits and psychological well-being [1-4].

In contrast, self-criticism refers to a harsh stance towards

one’s experience and identity. Shahrar [5] writes that self-criticism is marked by an intense and persistent relationship with the self that is characterized by demands for high standards accompanied by hostility and derogation toward the self. The psychologically detrimental aspects of self-criticism involve self-directed hostility and “self-slaming” for the having made “mistakes or failed.” This personality style has long been established as a vulnerability marker for depression as well as other types of psychopathologies [5-9]. Self-criticism has implications for functioning in a wide variety of domains and may put individuals at risk for disturbed relationships [10] and negative life events [11]. Not surprisingly, self-criticism is associated with increased lifetime risk for depression [10,12].

Measurement Issues

The main research tool to measure self-compassion is the Self-Compassion Scale (SCS) by Neff [13]. It consists of 26 items (13 positive and 13 negative) believed to represent one higher-order factor of self-compassion. The SCS has been the principal instrument used in the research on self-compassion, but recent

findings undermine its validity, with controversy regarding its factor structure and what the subscales may actually represent [14-22]. Some claim the measure taps the constructs of both self-compassion and self-criticism, leading to both theoretical and psychometric concerns.

For example, López et al. [19] revisited the SCS's factor structure using a large community sample and found that the 26 items of the SCS are best represented as two factors, one consisting of the positive items, the other consisting of the negative items, rather than the one higher-order factor proposed by Neff [13]. Negative items correlated more strongly to negative affect, depressive symptoms, perceived stress, rumination, and neuroticism. The positive items related more strongly to positive affect. The authors concluded that the positive and negative items of the SCS tap different constructs and recommended against using the full 26 item version of the scale as a unitary measure of self-compassion. The importance of differentiating between self-compassion and self-criticism both theoretically and empirically using the SCS was emphasized [19].

To further investigate the seeming disparity between the positive and negative subscales of the SCS, Muris, van den Broek, Otgaar, Oudenhoven, and Lennartz [23] conducted a series of studies that used survey data to examine the face validity of the SCS items. Their face validity checks revealed that the positive items of the SCS related to healthy functioning, while the negative items related to psychological symptoms such as depression and anxiety. This research suggests that there may be two factors underlying the SCS with unique determinants and correlates.

Similar studies [21] mirror these results, using correlational data to further support the positive relationship between self-compassion and adaptive coping, while the negative or "uncompassionate" and self-judgment items primarily reflect psychopathology. They suggest that the negative items of the SCS artificially inflate the relationship between self-compassion and psychopathology.

The importance of distinguishing between the positive and negative items of the SCS is further corroborated by a recent study conducted by Brophy and colleagues [24] investigating attachment and depression in a very large sample. The association between insecure attachment and quality of life was entirely mediated by the negative items (not the positive items) indicating that self-compassion as measured by the SCS is comprised of factors that operate differently. This study is a recent example of the importance of isolating different self-regulation strategies and their relationship to psychopathology and health.

In contrast to the SCS, reliable measures of self-criticism with excellent psychometric properties have been documented over the last 40 years [5,6,25]. The best-known measure is the

self-criticism factor of the Depressive Experiences Questionnaire (DEQ; [6]). It has acquired validity in several clinical trials, showing high correlations and predictive validity when looking at symptom severity, specific depressive symptomology, and treatment outcome [26-28]. The DEQ self-criticism scale is still commonly used as the golden standard and the most robust measure of self-criticism and was the measure of choice in the current study.

Overview and Current Study

The aim of the current research was threefold: The first goal emerges from the recent empirical studies recommending modifications to the SCS to derive a more valid measure of self-compassion that is not conflated with negative items including self-judgment. In the current study, we present support for the five items of the self-kindness subscale of the SCS (SCS-5) as being a good, short measure of self-compassion which will behave similarly psychometrically to the 13 positive items of Neff's original SCS. Second, empirical findings suggest that the negative items of the SCS represent a construct like self-criticism [19,20]. The current study used a well-validated measure of self-criticism to provide a better contrast with the proposed five-item self-kindness subscale (as the closest proxy to self-compassion). This comparison was intended to isolate and measure more precisely those psychological processes that may predict separate subjective well-being outcomes. Previous studies [19,20,22,23] have provided strong evidence to support the separation of the positive and negative items. The current study looked to further this distinction by comparing the self-kindness scale (SCS-5) to a well-validated measure of self-criticism.

Finally, this study aimed to elucidate the unique contribution of the SCS-5 and DEQ self-criticism measure to long term outcomes following positive psychology exercises. Administered over 1 week, these exercises were followed with assessments of depression, negative affect, compassionate affect, positive affect, happiness, and satisfaction with life over a 6-month follow-up. These methods enrich our findings by making a distinction between two related constructs and determine their unique and incremental contributions to well-being and psychopathology over time.

Hypotheses

1) The abbreviated self-compassion measure was obtained through the lens of expert raters. The raters were made up of five clinically trained researchers and therapists who were familiar with the concept of self-compassion but not with Neff's scale. All 26 items of the SCS were rated for their descriptive and conceptual faithfulness to the construct of self-compassion. Items with perfect inter-rater agreement were selected out. Four of these items overlapped with five existing self-kindness subscale items. The last item of the self-kindness factor, "I'm tolerant of my own flaws and inadequacies" achieved 4/5 inter-rater agreement.

To preserve the structure of the original SCS measure, the five self-kindness items (SCS-5) were retained and tested for their psychometric properties. We hypothesized that the SCS-5 would have high internal consistency and would perform similarly to the full scale psychometrically, with the added value of being brief and representative of the phenomenon of compassion. Further, the SCS-5 was examined as an alternative to the 13 positive item scale due to the other positive items reflecting mindfulness and common humanity.

2) To further validate the SCS-5, construct validity for the new measure was established by examining the pattern of correlations with measures of subjective well-being such as compassionate and positive affect, life satisfaction, and happiness. It was hypothesized that the SCS-5 would have strong positive correlations with these measures of positive psychological well-being, while self-criticism was predicted to correlate more highly with measures of psychopathology, including depression and negative affect.

3) The SCS-5 and DEQ self-criticism scales were hypothesized to predict different patterns of change in subjective well-being over time following the positive psychology interventions. The SCS-5 was predicted to be a stronger predictor of outcomes related to positive well-being including measures of positive and compassionate affect, life satisfaction, and happiness. In contrast, it was hypothesized that the DEQ would be a stronger predictor of changes in depression and negative affect. The hypothesized relationships between self-compassion, self-criticism, and outcome controlled for the effect of the other predictor to determine the unique contribution of each variable.

Method

The current study is a secondary data analysis obtained from Project Hope 1, a large online study that used a community sample to investigate the effects of positive psychology interventions. There were eight active conditions: 3 good things, positive reinterpretation, signature strengths, self-compassion, compassionate action, gratitude, listening to uplifting music, and a letter from your future self. These were matched with two active control conditions called “early memory and early positive memories [29-32]. The control conditions were excluded in the analyses since the interest was in the pattern of change following active interventions over time. A description of the exercises can be obtained from Barnes and Mongrain [33].

The study involved the administration of well-being measures (positive, negative, and compassionate affect, happiness, depression, and satisfaction with life) obtained at baseline, and contrasted to one-week post-test, and at one, three and six months following the intervention period. Several follow up studies have

already reported the outcome of various interventions using different statistical approaches [29,32,30].

Participants

The sample from the original Project Hope Study consisted of 3460 Canadian adults between the ages of 18 and 72 ($M = 33$, $SD = 11$). It was predominantly Caucasian (79%) and female (81%). 94% of participants reported completing high school, and half completed a post-secondary degree (51%). Participants reported baseline depressive symptoms in the mild to moderate range as measured by the CES-D [34] with a mean score of 18.57 ($SD = 13.47$). Lastly, 81% of participants reported having current or past experiences with psychopathology, psychotherapy, or psychopharmacological treatment.

Participants were recruited in Canada between October 2007 and January 2008. Participants had to be 18 years of age or older, have daily access to the internet, and have provided informed consent to participate in the study. Facebook advertising and newspaper ads were utilized for participant recruitment. Compensation of \$30 was offered for the first group of participants ($n = 1168$) once they completed the first post-test assessment. Due to funding constraints, the remaining participants were entered into a draw for \$1000 after completing the post-test assessment and had additional entries to \$1000 draws at each follow-up assessment they completed.

Measures

Self-Compassion Scale (SCS; [1]).

The 26 item self-report measure is comprised of six subfactors with four to five items measuring each factor. These are “self-kindness,” “self-judgement,” “common humanity,” “isolation,” “mindfulness,” and “over-identification.” Items are rated on a 5-point Likert scale ranging from *almost never* (1) to *almost always* (5). The overall SCS scale has shown good internal consistency and in the current sample, achieved a Cronbach’s alpha of .94.

Self-Compassion Scale-5 (SCS-5; adopted from [1]).

This five-item measure was the scale adopted from the full version of the SCS and is comprised of the five “self-kindness” subfactor items. The items include “When I’m going through a very hard time, I give myself the caring and tenderness I need,” “I’m kind to myself when I’m experiencing suffering,” “I try to be understanding and patient towards those aspects of my personality I don’t like,” “I’m tolerant of my own flaws and inadequacies,” and “I try to be loving towards myself when I’m feeling emotional pain.” This scale retains the original anchors of the SCS and are rated from 1 to 5. The SCS-5 demonstrated good internal reliability yielding a Cronbach’s alpha of .85 in the current sample.

Depressive Experiences Questionnaire, Self-Criticism Factor (DEQ-SC; [6]).

This 66-item questionnaire is designed to tap personality vulnerability to depression and contains items that describe feelings and experiences common in those who suffer from depression. The DEQ measures three factors: Self-criticism, dependency, and efficacy. Only the self-criticism factor is relevant to the current study given that the SCS's negative items appear to be informed by an apparent conceptual overlap with self-criticism. The self-critical factor of the DEQ reflects thoughts and concerns about failure and rejection, with an intense focus on achievement and performance [35]. Participants respond to items such as, "If I fail to live up to expectations, I feel unworthy," and "There is a considerable difference between how I am now and how I want to be." Respondents use a 7-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (7). The self-critical subfactor of the DEQ has an adequate Cronbach's alpha of .77, and a five-week test-retest reliability of .83 [36].

Compassionate, Positive, and Negative Affect Scale (C-PANAS).

The C-PANAS was created for Project Hope and is based on the original Positive and Negative Affect Schedule [37]. Seven compassion adjectives (both positively and negatively valenced) were generated by the Project Hope researchers and then added to the original PANAS to assess the participants level of compassionate affect. Examples of compassionate affect include "loving" and "nurtured." Other items for positive affect (PA) included "content" and "joyful" while negative affect (NA) had items such as "frustrated" and "unhappy." The C-PANAS obtained a Cronbach's alpha of .86 for the Compassionate Affect Scale, .91 for the Positive Affect Scale, and .88 for the Negative Affect Scale in the current sample.

Centre for Epidemiological Studies Depression Scale (CES-D; [34]).

The CES-D consists of 20 items and asks about common symptoms of depression that may have been experienced over the past week (e.g., "I thought my life had been a failure") and rate these items on a 4-point Likert scale from 0 (rarely or none of the time, less than 1 day) to 4 (most or all of the time, 5-7 days). The CES-D has demonstrated good internal consistency with a

Cronbach's alpha of .85. Total scores range from 0 to 60, with 16 as the recommended cutoff score for clinically significant depressive symptomatology.

Satisfaction with Life Scale (SWLS; Pavot & Diener, 1993).

This scale measures an individual's global judgment of life satisfaction. Respondents rate their agreement with five statements (e.g., "In most ways my life is close to ideal") on a 7-point Likert scale from *strongly disagree* (1) to *strongly agree* (7). A total score between five and nine suggests extreme dissatisfaction with life, whereas a score above 26 represents satisfaction with life. This scale obtained good internal consistency in this sample with a Cronbach's alpha of .87.

Steen Happiness Index (SHI; Seligman, Steen, Park, & Peterson, 2005 [38]).

This is a 20-item self-report measure of happiness across three domains: Positive emotion, engagement, and meaning in life. For each item, respondents are presented with five statements related to one of the three definitional aspects of happiness. Each statement is assigned a number from 1 to 5. For example, "Question 1: "I dislike my daily routine" (1) to "I enjoy my daily routine so much that I almost hardly ever take breaks from it" (5). The SHI had a Cronbach's alpha of .94 in the current sample.

Results

The SCS-5 demonstrated good internal reliability in the current sample with a Cronbach's alpha of .85. This is comparable to the 13 positive items (Cronbach's alpha = .92) and suggests that the SCS-5 constitutes a viable, short alternative to both the full 26 item, and 13 item positive version of the SCS. To corroborate the validity of the SCS-5, it was directly compared to the remaining positive items of the SCS.

The correlations shown in Table 1 demonstrate that the SCS-5 and the 13 positive items had nearly identical relationships with outcome. In fact, the SCS-5 showed slightly stronger relationships with positive measures of well-being while having weaker relationships with negative affect and depression compared to the other positive items. This suggest that little information is lost by using the short self-kindness subscale and that it performs as well as the 13 positive items of the full self-compassion scale.

Measures	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. SCS-5	1.00										
2. DEQ-SC	-0.54*	1.00									
3. CESD	-0.38*	0.50*	1.00								
4. NA	-0.36*	0.47*	0.77*	1.00							
5. CPANAS	0.40*	-0.43*	-0.57*	-0.54*	1.00						
6. PA	0.41*	-0.45*	-0.64*	-0.58*	0.85*	1.00					
7. SWLS	0.39*	-0.51*	-0.61*	-0.56*	0.59*	0.63*	1.00				
8. SHI	0.50*	-0.58*	-0.70*	-0.64*	0.67*	0.72*	0.74*	1.00			
9. SCS-Positive	0.90*	-0.53*	-0.40*	-0.37*	0.42*	0.43*	0.42*	0.52*	1.00		
10. SCS-Negative	-0.59*	0.72*	0.48*	0.44*	-0.36*	-0.41*	-0.42*	-0.54*	-0.60*	1.00	
11. SCS-8	0.74*	-0.46*	-0.37*	-0.34*	0.39*	0.40*	0.39*	0.48*	0.96*	-0.53*	1.00
Mean	2.77	0.26	18.57	2.13	3.19	3.01	4.17	2.74	2.93	2.62	3.00
Standard Deviation	0.92	1.04	13.47	0.91	0.92	1.06	1.61	0.77	0.82	0.85	0.85

Table 1: Correlation matrix and descriptive statistics for all measures; As measured by the Self-Compassion Scale-5 (SCS-5; adopted from Neff, 2003b), the Depressive Experiences Questionnaire – Self-Criticism Factor (DEQ-SC; Blatt et al., 1976), the Centre for Epidemiological Studies Depression Scale (CESD; Radloff, 1977), the Negative Affect (NA), Compassionate Affect (CPANAS), and Positive Affect (PA) Scales (adopted from Watson, Clark, and Tellegen, 1988), the Satisfaction with Life Scale (SWLS; Pavot & Diener, 1993) and the Steen Happiness Index (SHI; Seligman, Steen, Park & Peterson, 2005), the Self-Compassion Scale’s Positive (SCS-Positive) Negative Items (SCS-Negative), & the Common Humanity and Mindfulness subscales of the SCS (SCS-8), respectively (Neff, 2003b); N = 3460, *p < .001.

The correlational relationship among the study variables is displayed in Table 1. The correlations between self-compassion, self-criticism, and measures of emotional well-being were consistent with our hypotheses. The SCS-5 was negatively related to depression and negative affect while the DEQ self-criticism variable showed a strong positive relationship with negative affect and depression. The correlations between the SCS-5 and measures related to subjective well-being (e.g., C-PANAS, PA, SWLS, SHI) were all positive while the DEQ self-criticism measure showed negative correlations with measures of subjective well-being, as predicted.

Hierarchical linear modeling (HLM) was used to examine the third hypothesis, the unique predictive validity of self-compassion and self-criticism for subjective well-being outcomes following

the positive psychology interventions. The SCS-5 and DEQ self-criticism factor were used to predict changes in depression (CES-D), negative affect (NA), and subjective well-being (e.g., C-PANAS, PA, SWLS, SHI) over the six-month longitudinal study. All participants (N = 3460) in the active conditions with baseline scores were retained in the analyses. Given the correlations between demographic variables and outcome measures, age, gender, income, and participant payment were controlled for in all the longitudinal analyses. The fixed effects were Time, the SCS-5, and self-criticism measures, followed by interaction effects between Time and the personality variables (i.e., Time x SCS-5 and Time x Self-Criticism). The use of HLM in this study allowed us to investigate these interaction effects over time while controlling for the variance accounted for by both the SCS-5 and Self-Criticism in all the models (Table 2 and 3).

Model Effect	Estimate	SE	p
CESD			
Time	-0.52	0.24	0.033
Income	-0.6	0.07	<.001
Paid	-2.23	0.36	<.001
Age	0.09	0.02	<.001
DEQ	5.58	0.21	<.001
SCS-5	-2.54	0.23	<.001
Time*DEQ	-0.26	0.07	<.001
Time*SCS-5	0.13	0.08	0.115
Intercept	24.91	0.86	<.001
NA			
Time	-0.09	0.02	<.001
Income	-0.03	0	<.001
Paid	-0.11	0.02	<.001
Age	0	0	<.001
DEQ	0.34	0.01	<.001
SCS-5	-0.18	0.02	<.001
Time*DEQ	-0.01	0	0.04
Time*SCS-5	0.02	0.01	<.001
Intercept	2.59	0.06	<.001
CPANAS			
Time	0.06	0.02	<.001
Income	0.02	0	<.001
Paid	0.04	0.02	0.134
Age	0	0	0.074
DEQ	-0.27	0.01	<.001
SCS-5	0.27	0.02	<.001
Time*DEQ	0	0.01	0.553
Time*SCS-5	-0.03	0.01	<.001
Intercept	2.51	0.06	<.001
PA			
Time	0.1	0.02	<.001
Income	0.02	0.01	<.001
Paid	0.11	0.03	<.001
Age	0	0	0.007

DEQ	-0.32	0.02	<.001
SCS-5	0.32	0.02	<.001
Time*DEQ	0.01	0.01	0.097
Time*SCS-5	-0.03	0.01	<.001
Intercept	2.16	0.07	<.001
SWLS			
Time	0.1	0.02	<.001
Income	0.1	0.01	<.001
Paid	0.14	0.04	0.002
Age	-0.03	0	<.001
DEQ	-0.63	0.02	<.001
SCS-5	0.36	0.03	<.001
Time*DEQ	0.02	0.01	0.017
Time*SCS-5	-0.02	0.01	0.052
Intercept	3.72	0.1	<.001
SHI			
Time	0.04	0.01	<.001
Income	0.04	0	<.001
Paid	0.08	0.02	<.001
Age	-0.01	0	<.001
DEQ	-0.32	0.01	<.001
SCS-5	0.24	0.01	<.001
Time*DEQ	0.01	0	0.007
Time*SCS-5	-0.01	0	0.02
Intercept	2.13	0.05	<.001

Table 2: Hierarchical linear model tests of psychological well-being and psychopathology; As measured by the Self-Compassion Scale-5 (SCS-5; adopted from Neff, 2003b), the Depressive Experiences Questionnaire (DEQ-SC; Blatt et al., 1976), the Centre for Epidemiological Studies Depression Scale (CESD; Radloff, 1977), the Negative Affect (NA), Compassionate Affect (CPANAS), and Positive Affect (PA) Scales (adopted from Watson, Clark, and Tellegen, 1988), the Satisfaction with Life Scale (SWLS; Pavot & Diener, 1993) and the Steen Happiness Index (SHI; Seligman, Steen, Park & Peterson, 2005), Time = Score change over entire study from baseline to 6-month follow-up, Paid = the first 1168 participants who received direct monetary compensation rather than the remaining participants who were entered in draws; N = 3044.

Condition	Description
3 Good Things	List 3 good things experienced over the past day
Positive Reinterpretation	Find something good about a bad situation
Self-Compassion	Cultivate a self-compassionate attitude
Gratitude	List things to be grateful for
Listening to Music	Listen to uplifting music
Signature Strengths	Identify personal strength and use it in everyday life
Compassionate Action	Act compassionately towards others
Letter from your Future Self	Imagining positive future, giving encouragement to current self

Table 3: Brief descriptions of exercise conditions.

CES-D – Depression.

There were significant main effects for self-compassion and self-criticism on reports of depression, with individuals high on self-compassion showing lower levels overall (Estimate = -2.54, SE = .23, $t = -10.9$, $p < .001$). There was also a significant and negative main effect of self-criticism on depression, with individuals high on self-criticism showing significantly higher levels (Estimate = 5.58, SE = .21, $t = 27.1$, $p < .001$) qualified by a significant interaction with Time (Estimate = -.26, SE = .07, $t = -3.66$, $p < .001$). Inspection of the estimates indicated that self-critical individuals experienced greater decreases in depression from baseline to six-months. In support of our hypotheses, there was no significant interaction between Time and self-compassion in the prediction of change in levels of depression over the 6-month study.

NA – Negative Affect

There were significant main effects for self-compassion and self-criticism on negative affect (SCS-5 Estimate = -.18, SE = .02, $t = -11.3$, $p < .001$; SC Estimate = .34, SE = .01, $t = 24.2$, $p < .001$) qualified by significant interaction effects with Time. Individuals low in self-compassion showed improvement in negative affect following positive interventions ((Estimate = .02, SE = .01, $t = 4.26$, $p < .001$). There was also a significant interaction between Time and Self-Criticism (Estimate = -.01, SE = .01, $t = -2.05$, $p = .04$) with individuals high in self-criticism reporting a greater decrease in negative affect from baseline to six-months. Here, both the SCS-5 and Self-Criticism made unique, incremental contributions to changes in negative affect over time.

C-PANAS – Compassionate Affect

There was a significant main effect of the SCS-5 on compassionate affect, with individuals high on self-compassion showing higher levels of compassionate affect overall (Estimate = .27, SE = .02, $t = 17.4$, $p < .001$). This was qualified by a significant interaction with Time (Estimate = -.03, SE = .01, $t = -4.40$, $p < .001$) indicating that individuals low in self-compassion reported

a greater increase in compassionate affect over the six-month follow-up. As predicted, self-criticism entailed lower levels of compassionate affect at baseline (Estimate = -.27, SE = .02, $t = -19.1$, $p < .001$) but did not relate to changes in compassionate affect over time.

PA – Positive Affect

There were significant main effects for self-compassion and self-criticism on baseline levels of positive affect (SCS-5 Estimate = .32, SE = .02, $t = 17.4$, $p < .001$; SC Estimate = -.32, SE = .02, $t = -19.9$, $p < .001$). Self-compassion (but not self-criticism) interacted with Time in the prediction of PA over the six-month study (Estimate = -.03, SE = .01, $t = -4.27$, $p < .001$). Inspection of the estimates indicated that those scoring lower on the SCS-5 showed greater improvements in positive affect over six-months.

SWLS – Satisfaction with Life

There were significant main effects for self-compassion and self-criticism on levels of life satisfaction at baseline (SCS-5 Estimate = .36, SE = .03, $t = 12.8$, $p < .001$; SC Estimate = -.63, SE = .03, $t = -25.6$, $p < .001$). There was also a significant Time by self-criticism interaction effect (Estimate = .02, SE = .01, $t = 2.4$, $p = .017$) indicating that individuals high in self-criticism experienced an increase in life satisfaction from baseline for up to six-months after the positive psychology interventions. Self-compassion did not relate to changes in life satisfaction over time.

SHI – Happiness

There were significant main effects of both self-compassion and self-criticism on happiness, with individuals high on self-compassion showing higher levels of happiness overall (Estimate = .24, SE = .01, $t = 18.7$, $p < .001$) and those high on self-criticism showing lower levels (Estimate = -.32, SE = .01, $t = -28.6$, $p < .001$). A significant interaction between Time and self-compassion (Estimate = -.01, SE = .00, $t = -42.57$, $p = .018$) also indicated that self-compassion predicted greater improvements in happiness from baseline to six-months. As well, a significant interaction

between Time and Self-Criticism (Estimate = .01, SE = .00, $t = 2.71$, $p = .007$) showed that self-critical individuals reported greater long-term gains in happiness following the positive psychology interventions.

Discussion

The goal of this study was to examine a brief, psychometrically valid measure that represents self-compassion as a unitary construct. This is an important contribution given recent criticisms that the research in this area has been over-reliant on Neff's SCS measure with its inherent conceptualization of self-compassion [39]. The SCS-5 in this study was obtained from the existing self-kindness items of the SCS (Neff, 2003a) [1] chosen for their face validity lack of contamination with negative items of the SCS. The SCS-5 performed well in terms of its psychometric properties showing strong internal reliability and concurrent validity. It represents an important new tool in the assessment of self-compassion that goes beyond the Self Compassion Scale and helps us think more clearly about this complex construct [39].

In terms of its concurrent validity, the SCS-5 was associated with higher compassionate affect, positive affect, life satisfaction, and happiness, and showed weaker, negative correlations with depression and negative affect (Table 1). The SCS-5 compared well to the 13 positive items of the SCS. Given its high face validity and similar correlational pattern, our findings suggest the SCS-5 is a reliable and psychometrically sound alternative to the full scale SCS and may be preferable to the 13 positive items due to its brevity and ease of use. Given that the full scale SCS has been the centre of controversy regarding the measurement of self-compassion, we present findings that suggest the SCS-5 is a viable alternative to the full scale SCS and positive items of the SCS.

It is worth noting the semantic differences between kindness and compassion. The literature in this area makes a distinction between prosocial words that are often used interchangeably, but reflect very different processes [40]. To remain true to the original scale, we utilized the items from the "self-kindness" subscale of the SCS although compassion may be more appropriately reflected in those items rather than kindness. Kindness could be a nice gesture to anyone, such as generosity, whereas compassion has to do with a detection of stress in the other, and motivation to show compassion in response to their suffering. Some of the items of the self-kindness subscale revolve around detecting and responding to stress within. When reviewing these items, there is a flavour of both compassion and kindness in attending to one's internal suffering.

As predicted, the SCS-5 and the self-criticism factor of the DEQ showed different patterns of change in psychological functioning over the six-month study. The SCS-5 uniquely predicted changes in both compassionate and positive affect

following the positive psychology interventions, while self-criticism uniquely predicted changes in depression over the course of the six-month study. These patterns suggest that self-compassion and self-criticism should not be confused as opposite ends of the same spectrum. Rather, they represent separate intra-psychic processes in one's relationship to oneself. One could be warm or contemptuous towards oneself at different moments in time, but these may operate differently and carry separate consequences for affect. Currently, the SCS combines these different processes of self-kindness and self-judgment into a single score. As mentioned by Lopez et al. [19], Muris et al. [23], and Chan et al. [39], the full scale SCS thereby combines elements that may confound its relationship with mental health.

The findings in this study suggest that self-compassion and self-criticism operate differently and should not be viewed as opposite ends of the same spectrum. This is analogous to the research on positive and negative affect conceptualized as orthogonal dimensions rather than opposites [41-43]. The same argument has been made for mental health and mental illness lying on separate continua [43]. There is also an argument from a neuropsychological perspective that self-criticism and self-compassion are supported by different brain regions.

Longe et al. [44] found distinct neural activation patterns in an fMRI study investigating the neural correlates of self-criticism and self-reassurance. Neural activation for self-reassurance was like that of activation patterns seen in the expression of compassion and empathy towards others (left temporal pole and insula activation), whereas self-criticism showed activation patterns in the lateral prefrontal cortex and dorsal anterior cingulate, areas associated with error processing and behavioral inhibition. The two processes showed clear differences in neural activation, and that there may be value in using these distinct patterns of activation in recognizing and characterizing certain mood disorders that are driven by self-critical tendencies.

The overarching finding of this research was the effectiveness of positive psychology interventions in reducing depression over 6-month period for those higher on self-criticism. This improvement along with the increase in life satisfaction and happiness is an important finding given that self-critical populations often have poorer outcomes in therapy [26,27]. The results suggest that distance interventions may be a good intermediate step for self-critical individuals suffering from depression. These methods have shown promise in past studies examining self-criticism and similar online interventions [31,32,45].

Similarly, our findings suggest that individuals lacking in self-compassion could see an improvement in their levels of happiness, compassionate and positive affect through online interventions [46-57]. A lack of warmth and kindness towards the self could be ameliorated through positive psychology interventions and lead

to greater flourishing. Most importantly, the results of the current work warn against confounding self-criticism as an absence of self-compassion and suggests these constructs, and their correlates be assessed separately.

Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Funding and Acknowledgements

The following research was funded with an Ontario Graduate Scholarship to the lead author and a Social Sciences and Humanities Research Council of Canada Institutional Grant (SSHRC; # P2018-0990) to the co-author. The studies presented here were secondary analyses of data collected from the lead author's master's thesis.

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