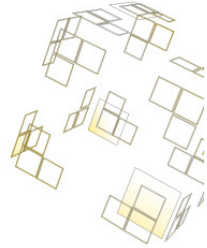




Does Self-Compassion Buffer the Impact of Poor Basic Need Satisfaction on Organismic Well-Being?

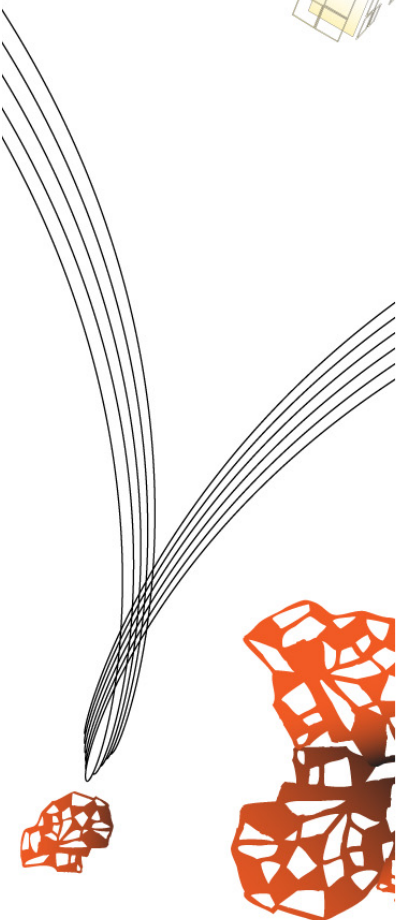
A Cross-Sectional Study on the Relation Between Self-Compassion and Vitality



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Master's Thesis*

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Abstract

In order to explore the effect of self-compassion on organismic well-being, the present study focuses on the relation between self-compassion and vitality, hypothesizing that (1) the two are positively related and that (2) self-compassion acts upon vitality by buffering against the psychological stress arising from an insufficient satisfaction of the basic needs as stated in the self-determination theory (Deci & Ryan, 1991). Although the impact of self-compassion on well-being has been addressed by various studies (Ghorbani, Watson, Chen, & Norballa, 2012; Gilbert, 2005; Neely, Schallert, Mohammed, Roberts, & Chen, 2009; Neff, 2011; Neff, Kirkpatrick, & Rude, 2007; Neff, Rude, & Kirkpatrick, 2007; Shepherd & Cardon, 2009), the current study is breaking new ground in the examination of self-compassion in relation to vitality as a proxy for organismic well-being that embraces body and mind. The data of 423 respondents of an online survey conducted by the University of Twente were analyzed. Relevant diagnostic instruments are the Self-Compassion Scale (SCS-SF; Neff, 2003b), the Subjective Vitality Scale (VS; Ryan & Frederick, 1997), and the Basic Need Satisfaction in General Scale (BNSG-S; Gagné, 2003). The reliability of the instruments was found to be good to excellent. Missing cases were analyzed and subsequently removed by listwise deletion. Hypothesis one was tested by analyses of correlation and regression. Hypothesis two was tested by a moderator analysis. In support of the research hypotheses, it was found that self-compassion was strongly related to vitality and buffered the impact of poor basic need satisfaction on vitality. It is assumed that the power of self-compassion lies in the deactivation of the body's stress reactions (Gilbert, 2005), which consequentially increases vitality and comprehensive well-being. The findings emphasize the potential benefits of self-compassion for the health care system, especially in the treatment of diseases that stress the interplay between psychological and physical factors, such as chronic pain conditions. The study presents encouraging yet preliminary findings that pave the way for future research on the short- and long-term influence of self-compassion on vitality.

Samenvatting

Deze studie richt zich op de relatie tussen zelf-compassie en vitaliteit als een proxy voor welbevinden. Er wordt verondersteld dat zelf-compassie (1) positief gerelateerd is aan vitaliteit en (2) functioneert als een buffer tegen de stress die ontstaat wanneer de psychologische basisbehoeften zoals geformuleerd in de zelfdeterminatie theorie (Deci & Ryan, 1991) onvoldoende bevredigd zijn. Hoewel het effect van zelf-compassie op welbevinden door diverse studies werd onderzocht (Ghorbani, Watson, Chen, & Norballa, 2012; Gilbert, 2005; Neely, Schallert, Mohammed, Roberts, & Chen, 2009; Neff, 2011; Neff, Kirkpatrick, & Rude, 2007; Neff, Rude, & Kirkpatrick, 2007; Shepherd & Cardon, 2009), is dit het eerste onderzoek over de relatie tussen zelf-compassie en vitaliteit. De onderzochte variabelen creëren een integratief en holistisch perspectief op welbevinden door een natuurlijke vereniging van psychologische en somatische factoren. De steekproef bestaat uit 423 respondenten van een online survey opgezet door de Universiteit Twente. Relevante diagnostische instrumenten zijn de Self-Compassion Scale (SCS-SF; Neff, 2003b), de Subjective Vitality Scale (VS; Ryan & Frederick, 1997) en de Basic Need Satisfaction in General Scale (BNSG-S; Gagné, 2003). De betrouwbaarheid van de instrumenten bleek goed tot excellent te zijn. Ontbrekende data werden onderzocht en vervolgens verwijderd door listwise deletion. De eerste hypothese werd getoetst met behulp van correlatie- en regressie analyses. Een moderatie analyse toetste de tweede hypothese. Tot steun van de hypothesen bleek zelf-compassie sterk gerelateerd te zijn aan vitaliteit en de invloed van de bevrediging van de basisbehoeften op vitaliteit te modereren. De kracht van zelf-compassie wordt vermoed in de deactivatie van de stress reacties die ontstaan wanneer de psychologische basisbehoeftes ontoereikend zijn vervuld (Gilbert, 2005). De bevindingen benadrukken de potentiële meerwaarde van zelf-compassie in het gezondheidssysteem, vooral in de behandeling van aandoeningen die psychologische en somatische aspecten verenigen, zoals chronische pijn. De huidige studie maakt een eerste stap in de bestudering van de korte- en lange termijn effecten van zelf-compassie op subjectieve vitaliteit en effent het pad voor toekomstig onderzoek.

Subject of the current study is the relation between self-compassion and subjective vitality, with the aim to further elaborate the effect of self-compassion on organismic well-being and to explore the relevance of self-compassion in therapeutic settings. Self-compassion, a relatively new concept in the Western culture, originates in the Buddhist tradition and describes the ability to be empathic towards pain and sorrow of oneself and others, accompanied by the desire to relieve these unpleasant mental states. Compassion for others and self-compassion mutually reinforce one another and are interconnected (Bohlmeijer, Bolier, Westerhof, & Walburg, 2013). Although the role of self-compassion in well-being has been examined by numerous studies (e.g., Ghorbani, Watson, Chen, & Norballa, 2012; Gilbert, 2005; Neely, Schallert, Mohammed, Roberts, & Chen, 2009; Neff, 2011; Neff, Kirkpatrick, & Rude, 2007; Neff, Rude, & Kirkpatrick, 2007; Shepherd & Cardon, 2009), the current study is breaking new ground in examining the relationship between self-compassion and vitality and proposes a holistic perspective on well-being that integrates psychological and physical factors. A deeper understanding of how self-compassion relates to vitality has the potential to provide valuable insights about how self-compassion influences organismic well-being and has implications for the clinical practice, especially in the treatment of diseases that emphasize the interaction between body and mind, such as chronic pain conditions or physical disabilities.

Self-Compassion

The basic components of self-compassion are self-kindness, common humanity and mindfulness. Self-kindness means to face one's imperfection and suffering with kindness and understanding instead of subjecting it to sharp criticism and judgment. Common humanity is the realization that (psychological) pain is part of human life rather than something isolating and shameful. Finally, the term mindfulness describes a non-judgmental, balanced awareness of emotions. Thoughts and feelings are noted with a certain degree of mental distance, in contrast to over-identifying with them (Neff, 2003a).

The components of self-compassion are assumed to buffer the body's natural stress reactions (Gilbert, 2005). When our body is confronted with stress in the form of physical or psychological danger it activates the so-called threat- and self-protection system that initiates physical processes preparing the body for action and heavily influences our behavior and cognitive processes. The body's reactions to physical danger are fight, flight and freeze

(Gilbert, 2009). When facing psychological stress, for example in the form of an aversive or painful thought or feeling, the body's reactions to physical danger transform into the psychological stress reactions self-judgment (fight), self-isolation (flight) and over-identification (freeze). The basic ingredients of self-compassion are taken to be antidotes to the psychological stress reactions (Gilbert, 2005; Neff, 2003a, 2003b). Self-kindness counteracts disproportionate self-judgment, common humanity prevents an individual from feeling isolated and alone in times of misery and pain, and finally, mindfulness restrains from over-identifying with a specific negative emotional state. In its association with the threat- and self-protection system, self-compassion unites psychological and somatic aspects. It soothes physical and psychological processes induced by the self-protection system and enhances organismic well-being (Neff, 2003a, 2003b). The beneficial effect of self-compassion on well-being has been confirmed by various studies (Ghorbani et al., 2012; Neely et al., 2009; Neff et al., 2007a, 2007b). Shepherd and Cardon (2009) found that self-compassion buffered against the negative emotional reaction to deficits in the satisfaction of psychological needs. Self-compassionate individuals were more likely to learn from failures and more motivated to try again. Furthermore, mindfulness has been shown to improve vitality (Ortner, Kilner, & Zelazo, 2007), which provides promising evidence for the existence of a relation between self-compassion and vitality.

Vitality

In line with previous studies (Ryan & Frederick, 1997; van Dierendonck, Rodríguez-Carvajal, Moreno-Jiménez, & Dijkstra, 2009), the study at hand utilizes vitality as a proxy for well-being in examining the relation between self-compassion and well-being. Serving as a proxy for well-being, vitality has several benefits. First and foremost, vitality provides a broad and holistic perspective on well-being due to an integration of physical and psychological factors. Commonly used conceptions of well-being such as subjective well-being (Campbell, 1976; Diener, 1984), the construct of psychological, emotional and social well-being (WHO, 2005, p. 12), Ryff's (1989) dimensions of psychological well-being, or physical markers of somatic functioning and health generally focus on either psychological or physical aspects of well-being and fail to combine both aspects.

The present examination of vitality, however, suggests that the vivid feeling of aliveness does justice to well-being as a concept that embraces body and mind. As self-compassion, too, emphasizes the interplay between psychological and physical factors, vitality is assumed

to be an appropriate proxy when exploring the relation between self-compassion and organismic well-being. Second, the variable can be measured easily and in any environmental setting, which makes it highly accessible. Finally, the experience of vitality is free of references to external factors of well-being such as economic or social success (Ryan & Frederick, 1997).

Ryan and Frederick (1997) first introduced subjective vitality as a “positive feeling of aliveness and energy” (p. 529). It extends mere physical arousal in that it entails spirit and enthusiasm, accompanied by a sense of autonomy and self-actualization. Rather than being induced by environmental factors or threats, vitality comes from an internal source and represents the positive energy available to the self (Bostic, McGartland Rubio, & Hood, 2000). Vitality has been associated with less distress, more positive and less negative feelings, more life-satisfaction, better resilience to physical and psychological stressors, and a better somatic functioning (Benyamini, Idler, Leventhal, & Leventhal, 2000; Cohen, Alper, Doyle, Treanor, & Turner, 2006; Kasser & Ryan, 1999; Polk, Cohen, Doyle, Skoner, & Kirschbaum, 2005; Rozanski, 2005).

The experience of vitality is taken to be an interaction between physical and psychological factors (Benyamini, et al., 2000; Cohen, et al., 2006; Polk, et al., 2005; Rozanski, 2005; Rozanski, Blumenthal, Davidson, Saab, & Kubzansky, 2005; Ryan & Frederick, 1997). While a healthy body is likely to enhance one’s perceived vitality, health-related stressors represent potential threats for it. Still, good health alone does not ensure subjective vitality, just as illness does not necessarily result in a lack of it, which has been illustrated in a study among pain patients by Ryan and Frederick (1997). They found that the effect of pain on vitality was mediated by how disabling the pain was experienced, suggesting that a sense of personal agency plays a crucial role in subjective vitality.

In its link to personal agency, vitality can be associated with the self-determination theory (SDT; Deci & Ryan, 1991). Deci and Ryan (1991) have identified three basic psychological needs that are critical for self-actualization and well-being: competence, relatedness and autonomy (Ryan, 1995; Ryan & Deci, 2000; Ryan, Huta, & Deci, 2008). Feeling competent is to make use of one’s capacities and talents in order to obtain a sense of mastery and efficacy. Relatedness describes the need for giving and receiving love and care in fostering close social relationships with others. Autonomy is the desire to freely choose activities, behavior and experiences that are in accordance with the integrated self (Bohlmeijer et al., 2013). The satisfaction of these basic needs has been found to play an important role in vitality – not only

is self-determination a precondition for experiencing vitality, it is also facilitated by it (Adie, Duda, & Ntoumanis, 2007; Kasser & Ryan, 1999; Nix, Ryan, Manly, & Deci, 1999; Ryan & Deci, 2008; Ryan & Frederick, 1997). It has been found that a lack of basic need satisfaction results in psychological stress and diminishes vitality (Ryan, 1995; Ryan & Deci, 2000; Ryan et al., 2008).

Self-Compassion and Vitality

In order to examine the relationship between self-compassion and vitality, this study constructs and explores different possibilities of how the two concepts could relate to each other. Figure 1 illustrates which research question addresses which connection between the variables.

1. “What is the direct relation between self-compassion and vitality?”

The first research question explores to what extent self-compassion and vitality are directly related to each other. The two constructs share theoretical grounds in their integration of psychological and somatic aspects and take a holistic perspective on well-being. It is hypothesized that the scores on the scales assessing self-compassion and vitality are systematically and positively related to each other, implying that an increasing score in self-compassion is associated with a higher score in subjective vitality. This corresponds with the finding that self-compassion increases well-being (Neely et al., 2009; Neff, et al., 2007; Ortner et al., 2007a, 2007b;) and that vitality is a proxy for well-being (Ryan & Frederick, 1997; van Dierendonck, et al., 2009). The aforementioned expectation results in the following hypothesis:

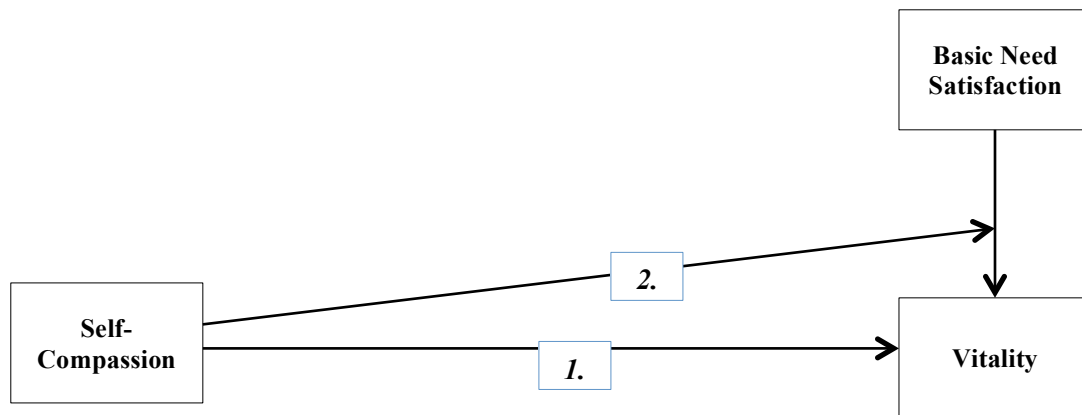
Hypothesis 1: *“Self-compassion and vitality are positively related.”*

2. “How does self-compassion influence the relation between basic need satisfaction and vitality?”

Based on the finding that self-compassion improves well-being by counteracting psychological stress reactions (Neff, 2003a, 2003b) and building upon previous research on the topic (Shepherd & Cardon, 2009), the current study hypothesizes that self-compassion can act as a buffer against the stress arising from poor basic need contentment, thereby weakening the relation between need satisfaction and vitality. This buffering effect is expected to be most

Figure 1

Connections between Self-Compassion, Vitality and Basic Need Satisfaction as Examined by the Research Questions



prevalent in people with insufficiently attained basic psychological needs. It is assumed that if one's basic needs are adequately fulfilled, one might be in smaller need for self-compassion, because of the absence of psychological stress. The abovementioned assumptions lead to the following hypothesis:

Hypothesis 2: *“Self-compassion moderates the relation between basic need satisfaction and subjective vitality, especially in individuals with poor basic need satisfaction.”*

Method

Participants

A total number of 423 subjects participated in the current study. Due to missing data, 100 subjects were removed from the data pool, leaving a total number of 323 subjects, of which 65.6% were female. The youngest participant was 15 years old and the oldest was 65 ($M_{\text{age}} = 32.78$ years; $SD = 13.13$). The cultural background of the subjects was Dutch (73.1%), Turkish (12.7%), mixed (4.6%), Moroccan (.6%), Antillean (.3%), Surinamese (.3%) and other, not explicitly mentioned descents (8.4%). In sum, 50.2% of the participants had differing religious views, while 49.8% indicated having no religious views. The level of education was represented by 7 ordinal categories, with “1” being a lower school and “7”

being a university. The majority of subjects had a relatively high level of education, with the biggest group in level 6 (31.0%). Language proficiency in Dutch was an inclusion criterion.

Sampling

The current study utilizes data of an online survey that was conducted by the University of Twente. In this survey, various students recruited participants that filled in the questionnaires offered by the university. Subjects completed eleven self-report questionnaires that contained a total of 140 questions and answered additional demographic questions about for example gender, cultural background, and education. Participants completed the Flourishing Scale (Diener et al., 2010), the Mental Health Continuum-Short Form (MHC-SF; Lamers, Westerhof, Bohlmeijer, Ten Klooster, & Keyes, 2011), the Warwick-Edinburgh Mental Well-Being Scale (WEMWBS; Tennan, et al., 2007), the Differential Emotions Scale (DES; Akande, 2002), the Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985), the Vitality Scale (VS; Ryan & Frederick, 1997), a Dutch instrument measuring positive mental health (Positieve Geestelijke Gezondheid Schaal, PGGGS; Dierendonck, 2011), the Basic need satisfaction in General Scale (BNSG-S; Deci & Ryan n.d.), the Self-Compassion Scale-Short Form (SCS-SF; Raes, Pommier, Neff, & van Gucht, 2011), the Medical Outcomes Study 12-Item Short Form Health Survey (SF-12; Ware, Kosinski, & Keller, 1996) and the Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983).

The participation in the survey took approximately 20 minutes. The data of three questionnaires are examined in this study: the Vitality Scale (VS), the Basic Need Satisfaction in General Scale (BNSG-S) and the Self-Compassion Scale (SCS-SF). The other questionnaires are subject of further research of the University of Twente.

Measurement

Self-compassion. Neff (2003b) developed the original Self-Compassion Scale in order to estimate an individual's ability to be self-compassionate. It consists of 26 items that measure the components of self-compassion in six subscales: Self-kindness, self-judgment, common humanity, isolation, over-identification and mindfulness. This study utilizes a shorter version developed by Raes et al. (2011) that assesses the same constructs as the long form and

consists of 12 items. The SCS-SF was developed with a Dutch-speaking sample. The items are rated on a 7-point Likert scale ranging from 1 (“Almost never”) to 7 (“Almost always”). The items on the scales self-judgment, isolation and over-identification are reversed coded in order to compute a total self-compassion score by adding up all subscale scores (Raes et al., 2011).

Vitality. The Subjective Vitality Scale (VS; Ryan & Frederick, 1997) measures the sense of spirit and enthusiasm of an individual. The authors hypothesize that the score on the scale reflects physical and psychological well-being. The reliability of the scale was found to be good (Cronbach’s alpha = 0.84; Ryan & Frederick, 1997). The scale consists of seven items that are rated on a seven-point scale from “not at all true” to “very true”. In order to statistically analyze the scale, the score on one item has to be reversed. A high score on the scale has been associated with self-realization, autonomy and self-esteem, while a low score has been related to fear and depression (Salama-Younes, Montazeri, Ismaïl & Roncin, 2009).

Basic need satisfaction. The Basic Need Satisfaction in General Scale (BNSG-S; Gagné, 2003) assesses the fulfillment of the basic needs that are stated in the self-determination theory: autonomy, competence and relatedness. The BNSG-S consists of 21 items that are rated on a Likert-scale from 1 (“Not at all true”) to 5 (“Very true”). In order to statistically analyze the scale, four items have to be reversed scored. The basic needs are represented in three corresponding subscales, with seven items addressing the degree of autonomy, six measuring one’s competence and eight questions assessing the relatedness of an individual. The total score is the sum of all scores, ranging from 21 to 105, with a higher score indicating more need satisfaction. The internal consistency as represented by the Cronbach’s alpha has been shown to vary from good ($\alpha = .84$) to excellent ($\alpha = .90$) in different studies (Johnston & Finney, 2010).

Data Analysis

In order to test the research hypotheses, the data of the Self-Compassion Scale (SCS-SF), the Basic Need Satisfaction in General Scale (BNSG-S) and the Subjective Vitality Scale (VS) were analyzed with the Statistical Program for Social Sciences (SPSS, version 20). The Missing Completely at Random (MCAR) test by Little (1988) examined the distribution of the missing data. After having identified the percentage of missing cases per diagnostic

instrument, the MCAR chi-square test assessed whether the missing values could be assigned to a specific variable or were missing (completely) at random. Subsequently the missing cases were removed from the data set by listwise deletion. The reliability of the questionnaires was measured by determining a coefficient of internal consistency, the Cronbach's alpha, for the instruments and their subscales.

The correlations between all variables were obtained by conducting a correlation analysis and a general rule of thumb for the interpretation of Pearson's r (Moore & McCabe, 2006) was applied, defining the strength of a positive correlation as negligible ($.01 < r < .19$), weak ($.20 < r < .29$), moderate ($.30 < r < .39$), strong ($.40 < r < .69$) or very strong ($r \geq .70$).

A regression analysis was conducted to find out to what extent the score on the SCS-SF accounted for variance in the distribution of the VS scores, while controlling for the effect of the BNSG-S (hypothesis one). Hypothesis two was analyzed by a moderator analysis that examined the interaction between basic need satisfaction and self-compassion and its relation to vitality. First, subtracting the mean scores on the SCS-SF and the BNSG-S from the total scores centered the variables. Second, an interaction term was computed by multiplying the centered scores. Finally, a regression analysis with the interaction term as the independent variable and the score on the VS as the dependent variable was conducted. In order to visualize the moderation effect, a split file data analysis was conducted and a graph was created. The scores on the SCS-SF were grouped into the categories low (total score ranging from 21 to 49), moderate (50 to 77) and high (78 to 105). The graph computed the relation of the BNSG-S and the VS, including separate fit lines for low, moderate or high scores on the SCS-SF.

Results

Table 1 gives an overview of how the subjects scored on the diagnostic instruments employed in the current study. The outcomes of the correlation analysis between all relevant diagnostic instruments are depicted in Table 2.

Missing Data

The Missing Completely at Random test (Little, 1988) resulted in a chi-square = 210.38 ($df = 138$; $p < .001$), which suggests that the missing values were not randomly distributed.

Further inspection revealed that the diagnostic instruments systematically varied in their percentage of missing values. While the demographic item-set included 11.6 % missing data, the VS contained 19.9 %, the BNSG-S 22.5 %, and the SCS-SF 23.6%.

Internal Consistency

The internal consistency of the VS was shown to be excellent (.90). The coefficient of the SCS-SF was found to be good, with a Cronbach's alpha of .86. The coefficients of the subscales of the SCS-SF were good (Over-Identification = .71, Mindfulness = .71, Isolation = .77, Self-Judgment = .79), with the exception of the subscales Common Humanity with an acceptable value (.64) and Self-Kindness with a poor value (.56). The BNSG-S had a good internal consistency (.88). The analysis of its subscales revealed values of .72 (Competence), .75 (Autonomy) and .81 (Relatedness).

Relationship Between Self-Compassion and Vitality

As illustrated in Table 2, the total scores on the VS and the SCS-SF had a strong positive relationship ($r = .46, p < .001$), whereas the subscales of SCS-SF all had a moderate positive relationship with the VS ($.30 < r < .39$), with the exception of the subscale Self-Judgment that showed a small correlation with the VS ($r = .25$).

Table 1

Descriptive Statistics of the Diagnostic Instruments

	Mean	SD	Min	Max
VS	4.73	1.08	1.57	6.86
SCS-SF	52.88	11.28	17	81
Over-identification	8.26	2.95	2	14
Self-kindness	8.86	2.25	3	14
Mindfulness	9.76	2.35	3	14
Isolation	8.36	2.99	2	14
Common humanity	8.91	2.49	2	14
Self-judgment	8.73	2.79	2	14
BNSG-S	79.57	7.88	52	101
Autonomy	26.24	3.16	16	34
Competence	21.99	2.80	14	28
Relatedness	31.34	3.29	20	40

Table 2

Correlations among diagnostic instruments

<i>Variables</i>	<i>1.</i>	<i>2.</i>	<i>2a.</i>	<i>2b.</i>	<i>2c.</i>	<i>2d.</i>	<i>2e.</i>	<i>2f.</i>	<i>3</i>	<i>3a.</i>	<i>3b.</i>	<i>3c.</i>
1. VS	–											
2. SCS-SF	.46	–										
a. Over-identification	.33	.78	–									
b. Self-kindness	.35	.67	.26	–								
c. Mindfulness	.37	.65	.26	.63	–							
d. Isolation	.30	.78	.75	.28	.29	–						
e. Common humanity	.36	.68	.33	.54	.60	.28	–					
f. Self-judgment	.25	.70	.58	.31	.18	.55	.26	–				
3. BNSG-S	.47	.50	.37	.38	.32	.43	.34	.28	–			
a. Autonomy	.31	.43	.35	.32	.22	.39	.27	.25	.87	–		
b. Competence	.52	.47	.35	.37	.32	.37	.33	.26	.82	.57	–	
c. Relatedness	.38	.38	.26	.29	.27	.33	.26	.21	.87	.63	.55	–

Note. All correlations were statistically significant ($p < .005$).

The regression analysis with the VS as criterion variable and the SCS-SF as predictor confirmed the correlational outcomes. The results, as shown in Table 3, suggest that self-compassion and basic need satisfaction both independently affected the degree of vitality. The analysis further revealed that, after controlling for the BNSG-S, the scores on the SCS-SF explained a significant proportion of variance in VS scores, $R^2 = .21$, $F(1, 321) = 83.95$, $p < .001$. Together, the SCS-SF and the BNSG-S accounted for 29% of the variance of the VS, $R^2 = .29$, $F(2, 320) = 63.87$, $p < .001$.

Moderation Effect of Self-Compassion

The moderator analysis indicated that higher scores on both the SCS-SF ($b = .029$, $SEb = .005$, $\beta = .307$, $p < .001$) and the BNSG-S ($b = .039$, $SEb = .008$, $\beta = .285$, $p < .001$) were associated with a higher score on the VS. The interaction between the SCS-SF and the BNSG-S was also significant ($b = -.001$, $SEb = .001$, $\beta = -.120$, $p = .014$), suggesting that self-

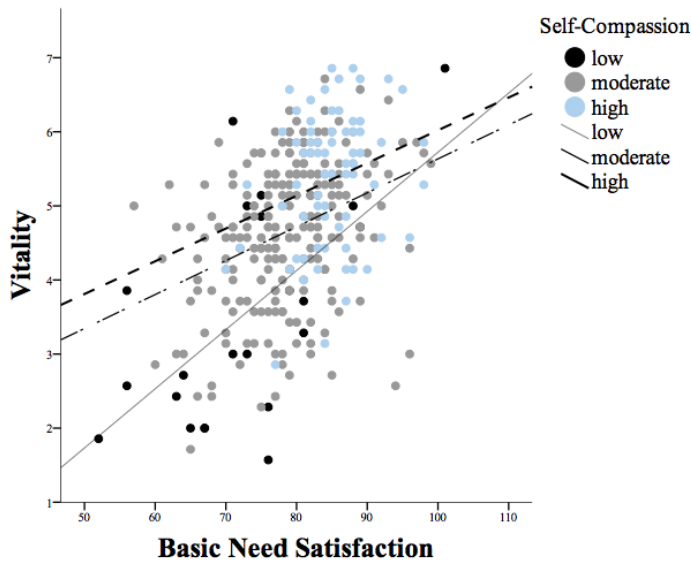
Table 3

Regression analysis with the VS scores as criterion variable

<i>Variables</i>	<i>b</i>	<i>SEb</i>	<i>β</i>	<i>t</i>
SCS-SF	.028	.005	.296	5.43
BNSG-S	.044	.007	.322	5.91

Note. All values were statistically significant ($p < .005$).

Figure 2

Basic Need Satisfaction and Vitality at Varying Degrees of Self-Compassion

compassion affected the relation between basic need satisfaction and vitality. Based on the results of the split file analysis, Figure 2 illustrates the moderation effect. It has been observed that among low scores on basic need satisfaction, the degree of vitality differed significantly among the groups scoring low, moderate, or high on self-compassion. The moderation effect of self-compassion was most distinct in individuals lacking basic need satisfaction and became less prevalent in increasing scores on basic need satisfaction. Among high scores on basic need satisfaction, the differences in vitality between the varying degrees of self-compassion were smaller. Interestingly, among high scores on basic need satisfaction it appears as if the respondents with low self-compassion scores tended to report greater degrees of vitality than the ones associated with a moderate and high level of self-compassion.

Discussion

Topic of the current study is the relation between self-compassion and vitality, with the intention to explore the relevance of self-compassion in the enhancement of well-being and to attain a deeper understanding of well-being in general. It was hypothesized that self-compassion (1) is directly related to vitality and (2) buffers against the adverse consequences of poor basic need satisfaction, thereby moderating the impact of need contentment on

vitality. The results lent support for the presented hypotheses and suggest that there is a notable and compound connection between self-compassion and vitality.

The scores on self-compassion and vitality were highly related and implied that self-compassion positively influenced the experience of vitality. As vitality functions as an index of well-being (Ryan & Frederick, 1997; van Dierendonck, et al., 2009), the observed relationship between self-compassion and vitality emphasizes the role of self-compassion in well-being and corresponds with previous research (Neff et al., 2007a; Neff et al., 2007; Neely et al., 2009). In line with earlier studies, it was further found that basic need satisfaction was strongly related to vitality (Adie, et al., 2007; Deci & Ryan, 2008; Ryan & Deci, 2008). A combination of basic need contentment and self-compassion appeared to be more useful in explaining vitality than need satisfaction and self-compassion on their own. Although self-compassion, basic need satisfaction and vitality have been interconnected, the correlations indicated that the concepts differed thoroughly from each other and did not covertly measure the same construct. Self-compassion explained about the same amount of variety in distribution of the vitality scores as need contentment did, suggesting that the two concepts share comparably strong relations with vitality. Interestingly, the study at hand is the first to approach the relation between self-compassion and vitality, while many studies emphasize the relevance of need satisfaction in the experience of vitality (e.g., Adie, et al., 2007; Kasser & Ryan, 1999; Nix, et al., 1999; Ryan & Deci, 2008; Ryan & Frederick, 1997). The obtained results are breaking new ground and suggest that the role of self-compassion in vitality deserves more attention and further investigation by future research.

The results further indicate that self-compassion influenced the connection between need attainment and vitality. Among individuals with a lack of basic need fulfillment, self-compassion weakened the relation between basic need satisfaction and vitality, making the deficiency less fatal to the experience of vitality. However, when the basic needs were highly satisfied it appeared that self-compassion did not further increase vitality, implying that self-compassion functioned as a buffer against poor basic need contentment. As insufficiently fulfilled basic needs result in increased psychological stress (Adie et al., 2007; Deci & Ryan, 2008; Ghorbani et al., 2012; Ryan & Deci, 2008; Shepherd & Cardon, 2009), it is assumed that the power of self-compassion lies in the deactivation of the body's stress reactions (Gilbert, 2005), which consequentially increases vitality and comprehensive well-being. People with highly satisfied psychological needs may be in smaller need for self-compassion,

because they are likely to experience less psychological stress and more self-actualization, personal growth and well-being (Ryan, 1995; Ryan & Deci, 2000; Ryan et al., 2008a, 2008b). The aforementioned findings suggest that self-compassion relates to vitality in various ways. On the one hand, a direct and strong positive connection between self-compassion and vitality implied that, generally, higher degrees of self-compassion are associated with greater levels of vitality. On the other hand, self-compassion indirectly affected vitality by acting as a buffer against the negative effects of insufficiently attained basic needs.

However, Figure 2 implies that the lowest group of self-compassion scores was associated with the highest vitality rates among those whose basic needs were adequately attained. The observation does not only suggest that self-compassion keeps vitality on a certain ground level by buffering against stressful conditions, but it also connotes that self-compassion prevents extremely high degrees of vitality, raising questions about the universal benefit of self-compassion for vitality, and consequentially, well-being. One implication of this finding is that self-compassion does not categorically add value to basic need satisfaction in the improvement of vitality but namely enhances vitality in those whose basic needs are at stake. Further, the discovery suggests that the psychological stress resulting from a lack of basic need contentment is not inherently adverse or harmful. From a psychoanalytic point of view, coping with negative experiences, emotions and psychological stress is essential for identity formation and the growth of resilience and moral character (Craib, 2002; Fineman, 2006). According to Lazarus (2003), positive and negative emotions are mutually informative and cannot be separated. He states: “we need the bad, which is part of life, to fully appreciate the good” (p. 94). Although it has been found that psychological stress diminishes well-being (Adie et al., 2007; Deci & Ryan, 2008; Ghorbani et al., 2012; Ryan, 1995; Ryan & Deci, 2000; Ryan & Deci, 2008; Shepherd & Cardon, 2009), this deficiency is assumed to inherit the potential to be eventually transformed into personal and social development and thriving (Fineman, 2006). The current study does not aim to promote an avoidance or suppression of psychological stress and unpleasant feelings. Instead, the long-term consequences and potentials of psychological hardship reach beyond the focus of the current study that addresses the general relationship between self-compassion and vitality and hypothesizes that self-compassion modulates the relation between basic need attainment and vitality. The results at hand can be regarded as encouraging yet preliminary findings that pave the way for future research on the short- and long-term influence of self-compassion on vitality.

Validity and Limitations of the Findings

During the preparation of the analysis it was found that 100 subjects did not fill in all items of the survey. The data revealed that the proportion of missing values increased in the course of the survey, which suggests that the subjects in question dropped out before finishing the survey. Generally, the missing data could affect the strength of the study design (reliability) and the validity of the conclusions (McKnight, McKnight, Sidani, & Figueredo, 2007). Presenting the questionnaires in a random order to the respondents offers a potential solution for the problematic distribution of the missing data.

As the respondents filled in all diagnostic instruments at the same time, the data set is cross-sectional. As a consequence, the findings describe the strength of the relationship between self-compassion and vitality rather than telling us whether self-compassion predicted vitality. In order to increase the predictive value of the data it is necessary to collect the data at different points in time by deploying a longitudinal research design.

The internal consistency of all relevant scales was found to be good to excellent, which implies that the items of the scales adequately measure the same construct. The sample possessed a considerable variety with respect to demographic aspects, which implies that the external validity, or generalizability, of the findings is good. However, it should be noted that there was a nearly two-thirds majority of women in the subject group and a relatively high overall educational level, which affects the representativeness of the sample for the general population and may therefore be a threat the external validity of the study. The reason for the homogeneity of education levels is presumably the respondents being recruited by university students.

Practical Implications

The findings emphasize the potential benefits of self-compassion for the health care system by demonstrating the positive relation of self-compassion to a holistic conception of well-being and its function as a buffer against psychological stress. As the proposed perspective on well-being effectively integrates psychological and physical factors, self-compassion is taken to be especially relevant for the treatment of diseases that affect both body and mind. For example, self-compassion is likely to increase organismic well-being in patients with chronic pain by helping them to face their emotional and physical pain with

kindness, regard their pain with balanced awareness and by preventing them from over-identifying with their pain and limitations.

Conclusion

In emphasizing the interconnectedness between self-compassion, basic need fulfillment and vitality, the present study proposes an innovative model of well-being. The employment of vitality as a proxy for well-being in the examination of the holistic conception of self-compassion does justice to well-being as a comprehensive construct that naturally incorporates psychological and somatic factors. While the link between the basic needs and vitality has been elaborated in previous research (e.g., Ryan & Frederick, 1997; Kasser & Ryan, 1999; Nix, et al., 1999; Adie, et al., 2007; Ryan & Deci, 2008), the introduction of self-compassion as a relevant influence on vitality offers new insights about self-compassion and promotes the relevance of self-compassion for organismic well-being. The function of self-compassion as a buffer against psychological stress reactions has been identified as a potential underlying cause for the effect of self-compassion on vitality.

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