

Self-kindness when facing stress: The role of self-compassion, goal regulation, and support in college students' well-being

Michelle E. Neely · Diane L. Schallert ·
Sarojanni S. Mohammed · Rochelle M. Roberts ·
Yu-Jung Chen

Published online: 6 January 2009
© Springer Science+Business Media, LLC 2009

Abstract This project brought together the constructs of goal and emotion regulation as a way of understanding college students' well-being, building on previous work that identified the ability to disengage in goal pursuit and to redirect energy toward alternative goals as an important contributor to well-being. In Study 1, we assessed the amount of variance in well-being accounted for by measures of goal management, adding to the regression measures of student stress and self-compassion, the latter defined as a healthy form of self-acceptance and characterized as a tendency to treat oneself kindly in the face of perceived inadequacy. In Study 2, the stress scale was replaced by measures of perceived need and availability of support. Across studies, although factors such as goal management, stress, and need for and availability of support were important predictors of well-being, self-compassion accounted for a significant amount of additional variance in well-being.

Keywords Goal regulation · Well-being ·
Self-compassion · Stress · College students ·
Positive psychology

Introduction

College life is notorious for challenging students' sense of well-being, demanding that they manage competing

academic and social goals as well as their emotional reactions to both success and disappointment. In studying well-being, some theorists have understood it as an individual's pursuit of pleasure, satisfaction with life, experience of positive affect, and absence of negative affect (Diener 2000; Diener et al. 1999; Fredrickson 2001). Others have portrayed well-being as more related to one's sense of purpose in life, self-acceptance, fulfillment of potential, and feelings of mastery (Ryan and Deci 2000; Ryff 1989; Ryff and Keyes 1995; Waterman 1993). In the studies we report here, we used measures representing these various views to construct a single index of well-being. We then predicted scores on this index through hierarchical regression that included the following independent variables: goal regulation for the first step (Wrosch and Heckhausen 2002), students' experience of stress for the second (Insel and Roth 1985; Vedder et al. 2005), and self-compassion (Neff 2003a) for the last. Our question was whether students' self-compassion would contribute to predictions of their well-being over and above their goal regulation and experience of stress.

Goal regulation and well-being

In the context of the college experience, it is important for students to establish, juggle, and achieve valuable, competing goals in their lives, as well as recover from disappointment when goals elude them. In a seminal line of work, Bandura (1997) has argued that the pursuit of meaningful goals and their attainment are important components of adaptive self-regulation that contribute positively to overall health and well-being. However, Wrosch et al. (2003) argued that goal pursuit only provides part of the picture. An important component of goal regulation is the way that people pull away from goals that are

M. E. Neely (✉) · D. L. Schallert · S. S. Mohammed ·
R. M. Roberts
Department of Educational Psychology D5800, University
of Texas, 1 University Station, Austin, TX 78712, USA
e-mail: m.neely@mail.utexas.edu

Y.-J. Chen
Leader University, Tainan City, Taiwan

unachievable or no longer meaningful and redirect their energy toward new, more attainable goals. Goal regulation, Wrosch and colleagues explained, consists of both the ability to disengage from goals that are unattainable and reengage in the pursuit of alternative goals.

The flexibility and ease with which one divests energy from unattainable pursuits and redirects it toward new, more salient ones may reflect a general tendency for goal disengagement and reengagement. In order to assess individuals' management of their goals, Wrosch et al. (2003) developed scales to measure both goal disengagement and goal reengagement. Work using these measures has suggested an important link between goal regulation and various components of well-being. For example, among a general adult population, Wrosch et al. (2007) found that the ease with which individuals disengaged from particular goals and reengaged in alternative goals was predictive of lower levels of perceived stress, and that individuals who reported minimal difficulty in giving up a goal also reported fewer, and less severe, depressive symptoms. This study built on earlier work by Wrosch et al. (2003) who reported that students' abilities to disengage from unattainable goals and to redirect their attention to new goals were key predictors of well-being, contributing to lower levels of perceived stress, intrusive thoughts, and helplessness. The ability to redirect energy towards new goals also contributed significantly to students' life satisfaction. One goal of our project was to replicate studies that suggested the importance of goal regulation in maintaining well-being.

Self-compassion and well-being

Another goal in this project was to understand the role of self-kindness in college students' well-being. In our own roles as college teachers, we had noticed that students were often hard on themselves whenever they fell short of reaching a valued goal. However, what these students often seemed to forget in the moment of ruing their imperfections was the systemic, often competitive, relationship among their goals; in the event of falling short, it was likely that one goal had been compromised by demands students faced from other important goals. Even when students could identify a conflicting goal as worthy, they often seemed extremely unforgiving of their failings. As teachers, we wanted to help our students identify and regulate competing goals and modulate their emotional reactions to stress. As researchers, we wanted to understand the degree to which students' well-being is associated not only with management of their goals but with their emotional responses to stress and challenge.

We turned to the construct of *self-compassion* as a useful conceptualization of emotion regulation. Neff

(2003a, b) defined *self-compassion* as a healthy form of self-acceptance that includes three components. The first is a tendency to treat oneself kindly in the face of perceived inadequacy by engaging in self-soothing and positive self-talk. Another component of self-compassion involves recognizing that one's discomfort is an unavoidable part of the human experience. This recognition of "common humanity" promotes a sense of connection to others even in the face of feelings of isolation and disappointment. Finally, self-compassionate individuals are able to face their own painful thoughts without avoiding or exaggerating them, managing their disappointment and frustration by quelling self-pity and melodrama. In her definition of self-compassion, Neff (2003a) explained that it is closely related to and informed by the construct of mindfulness (Brown and Ryan 2003; Langer 1989, 2005; Wallace and Shapiro 2006). Similar to mindfulness, self-compassion involves turning one's wisdom and awareness inward, thereby promoting a perspective of connectedness and recognition of temporality.

For the purpose of our studies, we were most interested in these active, conscious means by which individuals cope with negative emotions like disappointment. Particularly, we wanted to explore stress management in terms of how individuals regulate their emotions and their reactions to the stress of blocked goals. Neff's (2003a) conceptualization of self-compassion offered us this opportunity because it is an active, approach-oriented view of emotion regulation. Findings using Neff's Self-Compassion scale with college students suggested that it is a strong, unique predictor of well-being, negatively related to depression and anxiety, and positively related to greater life satisfaction (Neff 2003a, b). Further, self-compassion was found to be positively related to wisdom, happiness, optimism, extroversion, and conscientiousness (Neff et al. 2007b), and in the face of academic failure, with mastery-oriented learning goals and emotion-focused, as opposed to avoidance strategies (Neff et al. 2005).

Taken together, our goals for the current project were to replicate the Wrosch et al. (2003) study and to introduce self-compassion as a factor that might contribute to college students' well-being. We conducted two studies to address whether students' well-being would be predicted by self-compassion over and above measures of goal disengagement and reengagement and student stress in the first study, and measures of goal disengagement, goal reengagement, and perceived need and availability of support in the second study.

Study 1

For our first study, we were interested in the degree to which students' abilities to manage their goals, whether

they were able to disengage from unattainable goals and re-engage in alternative goals, predicted their sense of well-being. Thus, our first purpose was to extend the use of Wrosch and Heckhausen's (2002) and Wrosch et al.'s (2003) goal regulation measures to predict students' well-being, assessed by an index we constructed from five well-being measures. In addition, we wanted to determine the relative contribution of self-compassion (Neff 2003a) to students' sense of well-being over and above the contribution of a measure of students' experience of stressful life events. We hypothesized that self-compassion would be as important a contributor, or possibly more important, than the ability to manage and regulate one's goals in the face of life's stresses.

Method

Participants

Participants were 203 undergraduates who were taking one of several undergraduate courses in educational psychology that had a subject pool requirement as part of their syllabi. Of the 141 men and 62 women, 13 were freshmen, 30 sophomores, 33 juniors, and 127 seniors, with 87% younger than 22. The ethnic composition was 6% African-American, 14% Latino/a, 24% Asian, 53% White/European, and 3% mixed descent.

Procedure

In groups of 2–25, students met in small classrooms and responded to a questionnaire packet of scales and instruments. No student took longer than 90 min to fill out the scales. So as to reduce order and fatigue effects, two orders of the scales were randomly assigned to the students.

Measuring well-being

Purpose in life subscale

From the Scales of Psychological Well-Being (Ryff and Keyes 1995), we took the 14-item subscale measuring Purpose in Life. The items are rated on a Likert-type scale (1 = “strongly disagree,” 5 = “strongly agree”). A high score indicates the individual has “goals in life and a sense of directedness, feels there is meaning to present and past life, holds beliefs that give life purpose, has aims and objectives for living” (Ryff 1989, p. 1072). A sample item includes, “I am an active person in carrying out the plans I set for myself.”

Self-mastery (helplessness) subscale

From a scale created by Pearlin and Schooler (1978), seven items measuring the level of control individuals feel they have over their lives were used. Items were rated on a five-point scale, ranging from 1 = “strongly disagree” to 5 = “strongly agree.” A high score on the scale indicates a feeling of helplessness, or low perceived control over one's circumstances. An example item is, “I have little control over the things that happen to me.”

Perceived stress subscale

This 14-item scale was “designed to measure the degree to which situations in one's life are appraised as stressful” (Cohen et al. 1983). Items are rated on a five-point scale, with respondents indicating how often in the past month they have experienced certain feelings or thoughts. An example item is, “In the last month, how often have you felt nervous and stressed?” A high total score represents a high level of perceived stress.

Intrusive thoughts subscale

The Intrusive Thoughts scale (Wrosch and Heckhausen 2002) consists of six items rated on a scale with 1 = “Almost never true of me” and 5 = “Always true of me.” A sample item is “I wake up at night thinking about my problems.” A high score represents a high tendency to experience intrusive thoughts.

Satisfaction with life subscale

Made up of five statements that are rated on a five-point scale, Diener et al. (1985) developed a scale to measure satisfaction with life, or degree of life fulfillment. An example item includes, “In most ways, my life is close to my ideal.”

Overall well-being index

For both theoretical and practical reasons, we combined the five aforementioned scales of well-being into a single index. In so doing, we used the same four measures that Wrosch et al. (2003) had used, and added a measure of satisfaction with life developed by Diener et al. (1985). We chose this last measure because it tapped into individuals' enjoyment of life, as opposed to their sense of accomplishment assessed by Ryff's (1989) scale. In Table 1, we report the correlations (all of which were significant), reliability coefficients, and factor scores among these well-being measures.

We conducted exploratory factor analysis to determine whether all five well-being scales were indeed reflecting a

Table 1 Factor scores, reliability coefficients, and correlations among sub-measures of the well-being index for study 1 and study 2

Scales	Factor scores	Cronbach's α	Correlations ^{a,b}				
			IT	SM	PS	PIL	SWL
Intrusive thoughts (IT)	.67 ^c	.88 ^c	–	.47	.64	–.36	–.40
	.69 ^d	.88 ^d					
Self-mastery (SM)	.78	.81	.35	–	.41	–.57	–.66
	.66	.83					
Perceived stress (PS)	.81	.85	.58	.61	–	–.39	–.72
	.83	.87					
Purpose in life (PIL)	.75	.87	–.32	–.62	–.42	–	.68
	.68	.87					
Satisfaction with life (SWL)	.79	.81	–.39	–.48	–.61	.49	–
	.70	.88					

^a Study 1 correlations below the diagonal; Study 2 above the diagonal

^b All correlations significant at the $p < .05$ level

^c Study 1 factor scores and reliability coefficient on first line

^d Study 2 factor scores and reliability coefficient on second line

single latent factor. Results of this analysis provided strong support for a single factor because the factor was the only solution with an eigenvalue greater than one, and the value for that single factor was over four times larger as that for the two-factor solution. Additionally, each of the scales had a factor loading of greater than .59 on the single factor, which we interpreted to be *well-being* (see column 1 of Table 1 for factor scores of each measure on the overall well-being index). Thus, for each participant, the measure of well-being was represented by a factor score. Across participants, the index of well-being had a mean of 0 and a standard deviation of 1.

Predictor measures

Goal disengagement and goal re-engagement scales

To assess students' ease in engaging and disengaging with goals, we used the two scales from Wrosch et al. (2003), four items for disengagement (e.g., "It was easy for me to reduce my effort toward the goal") and six items for reengagement ("I start working on other new goals"), using five-point ratings (1 = "Almost never true" and 5 = "Always true").

Wrosch et al. (2003) described how they administered the scales by first verbally prompting students to remember a time when they had to stop pursuing an important goal. Next, their participants were told to concentrate particularly on how they had felt at the time of giving up on that goal and then to respond to the scale items with those feelings in mind. To re-create similar effects, we wrote a prompt that asked the students to think of a time in the recent past when they had had to stop pursuing a goal that

was important to them. We asked them to write down that goal, the reasons for stopping their pursuit of that goal, and how they felt. The directions then asked the students to keep that same goal in mind as they answered the items on the Goal Disengagement and Goal Reengagement scales.

Student stress scale

Insel and Roth (1985) based this scale on the Social Readjustment Rating Scale (Holmes and Rahe 1967). It presents students with a list of 35 life events, ranging from "change of major" to "death of close family member." Participants are asked to indicate whether the event has happened to them during the past 6 months or if they anticipate it happening in the next 6 months. Life events are assigned a score value, with the most disruptive receiving higher scores. Thus, "death of a close family member" receives a value of 100; "minor traffic violations" receives a score of 20. Scores above 300 are thought to indicate stress and a greater risk to health.

Self-compassion scale

Neff (2003b) developed a scale to measure the way that individuals are "kind and understanding toward themselves in instances of pain or failure rather than being harshly self-critical" (p. 223). Examples of items include, "I try to see my failings as part of the human condition" and "I'm tolerant of my own flaws and inadequacies." Students responded to these items on five-point rating scales (1 = "Never," 5 = "Very often"). A high score on this scale indicates an emotionally positive self-attitude.

Data analysis

Data were analyzed using hierarchical regression predicting the well-being index from the independent variables in different combinations as explained below. Before conducting the regressions, we examined scatter plots of the data and tested for normality, linearity, and homoscedasticity. Results indicated that the assumptions needed for regression were met. All statistics were tested at an alpha level of .05. (The same approach to data analysis was used in Study 2.)

Results

In Table 2, we report overall means, standard deviations, and the correlations for the measures. Correlations among predictor measures ranged from .01 to .24, with only the relationship between goal reengagement and self-compassion significant. Simple correlations between the well-being index and any one predictor ranged from $-.10$ to $.64$. The well-being index did not correlate significantly with goal disengagement, but had a significant relationship with all of the other scales.

We then constructed three regression models to predict the well-being index scores. For Model 1, we used Goal Reengagement and Disengagement scores to predict scores on the well-being index (see first panel of Table 3). Although the overall regression model (R^2) was significant, goal disengagement was not a significant predictor of the well-being index. This contrasts in part with earlier work by Wrosch et al. (2003) indicating that both goal regulation scales were significant predictors of well-being.

In testing Model 2, we added scores from the Student Stress Scale to predict scores on the well-being index (see second panel of Table 3). Results indicated that the predicted variance in the well-being index was significant, and, as in Model 1, the goal disengagement scores again

Table 3 Study 1: standardized beta coefficients from three regression models predicting well-being from goal reengagement, goal disengagement, student stress, and self-compassion scores

Predictors of well-being index	Beta	R^2	Δ in R^2
Model 1		.10*	–
Goal disengagement	–.11		
Goal reengagement	.31*		
Model 2		.16*	.06*
Goal disengagement	–.12		
Goal reengagement	.33*		
Student stress	–.25*		
Model 3		.47*	.28*
Goal disengagement	–.06		
Goal reengagement	.19*		
Student stress	–.18*		
Self-compassion	.57*		

* $p < .05$

were not significant predictors. Model 2 accounted for significantly more variance in the well-being index compared to Model 1, at least in part because it contained three rather than two predictors. Thus, students' goal reengagement and their experience of life stressors contributed significantly to their sense of well-being.

In Model 3, we predicted scores on the well-being index by adding Self-Compassion to the previously tested predictors of Goal Disengagement, Goal Reengagement, and Student Stress scores (see Table 3, bottom panel). As hypothesized, Self-Compassion was a significant contributor to the regression. With Self-Compassion included, Goal Disengagement again was not a significant predictor in college students' well-being. The difference in variance accounted for by Model 2, with three predictors, and Model 3, with four predictors, was significant, thereby supporting our hypothesis that self-compassion would be an important predictor of well-being over and above previously tested predictors.

Table 2 Study 1: means and standard deviations of measures, reliability coefficients, and correlations between scale scores

Scales	Mean	SD	Cronbach's α	Correlations			
				WBI	GD	GR	SS
Well-being index (WB)	– ^a	– ^a	.75	–			
Goal disengagement (GD)	2.9	0.9	.79	–.10	–		
Goal reengagement (GR) [.94]	3.8	0.9	.94	.31*	.01	–	
Student stress (SS)	309.0	138.5	– ^b	–.21*	–.05	.10	–
Self-compassion (SC)	3.3	0.6	.92	.64*	–.10	.24*	–.10

* $p < .05$

^a The mean for the well-being index was created from an average of standardized scores on five measures of well-being. Therefore, the mean equaled 0 and the standard deviation was close to 1

^b Due to its nature, we did not obtain a measure of reliability of the scale

Study 2

Results of Study 1 suggested that the model containing self-compassion as a predictor of well-being accounted for significantly more variance than the model predicting well-being from only goal disengagement and reengagement, constructs that Wrosch and Heckhausen (2002) had found to be important contributors to well-being. Our goals for Study 2 were to test the conclusions of Study 1 and to understand better how students' self-compassion worked to influence well-being by comparing it to two other predictors: the need for and availability of social support. Our revised design used these new scales to replace the actuarial-type measure of stress (Insel and Roth 1985) because the Student Stress Scale scoring seemed incommensurate with our view of college life. For example, transferring from another college or experiencing a change in living conditions earned few stress points, on par with changes in social activities and with dropping more than one class. Even though the scale has been used productively in previous studies (e.g., Baldwin et al. 2003; Ross et al. 1999), we reconsidered this assessment of stress and its contribution to predicting well-being.

Thus, we looked to the concept of social support as an alternative way to assess students' perceptions of difficulty in college. As Vedder et al. (2005) argued, when students face challenges in life, they may look to parents, peers, and/or teachers as a sources of support. One outcome of their study with middle school students was the finding that family and instructional support in the face of need for support were important contributors to well-being. A second outcome was the creation of scales to measure individuals' perceptions of need for and availability of social resources. We adopted these scales as more nuanced measures of how students could manage the stress of college life, accounting for their perceptions of the need for and availability of social resources.

Therefore, in Study 2, we again tested three models in regression analyses with a new sample of students, first using measures of goal disengagement and goal reengagement to predict well-being as in Study 1. In a second model, we added measures of need for and availability of support. Finally, we tested whether we would again find that Neff's (2003a, b) measure of self-compassion contributed to predictions of well-being over and above the contributions made by the previous set of measures.

Method

Participants

Study 2 took place during a subsequent semester with participants coming from a similar subject pool as

described in Study 1. Of the 271 undergraduates (52 men and 219 women), 2 were freshmen, 13 sophomores, 58 juniors, and 198 seniors, with 84% younger than 22. The ethnic composition was as follows: <1% African-American, 9% Latino/a, 15% Asian, 69% White/European, and 6% mixed descent.

Procedure

Study 2 differed in procedure mainly in that the questionnaires were delivered online. Because we were interested in whether students' responses would differ significantly if they filled out the questionnaires in a supervised setting or if they filled them out on their own time, we randomly assigned half of the students to an "in-lab" condition and asked them to sign up for one of several administrations at a computer lab. Once there, they accessed the survey in an online format. The remaining students were simply given the web address for the survey and fulfilled their participation requirement entirely on their own. For the individuals in the lab, no one took longer than 90 min to finish. To test differences between the students' experiences of completing the online survey in the lab versus at home, we conducted a MANOVA and found no significant differences between the two conditions on any measure. Further analyses simply combined both conditions into a single group. Only one order of the scales was used in Study 2.

Measures

Although now presented in an online format, the same measures of well-being from Study 1 were used in Study 2. As in Study 1, we conducted an exploratory factor analysis to determine whether we could aggregate all measures of well-being into a single index. As in the earlier study, a single factor solution had the highest eigenvalue, and factor loadings for all measures of well-being were above .62. Using the factor scores of the well-being scales (see Table 1), we calculated a single index score for each participant. As for predictor measures, we used the Goal Disengagement, Goal Reengagement, and Self-Compassion scales from Study 1 but eliminated the Student Stress Scale. We added two new scales as described below.

Perceived need of support questionnaire (Vedder et al. 2005)

Ten items asked students to rate the frequency that they experience problems requiring instructional or emotional support. For example, "How often do you have problems with learning in school?" and "How often do you have trouble with homework?" Students rated their frequencies

on a scale of 1–5 (1 = Never, 5 = Very often). A high score indicates a high perceived need for instructional and emotional support.

Student perceived availability of social support questionnaire

This scale assesses the degree to which students feel supported from three sources: Peers, Parents/Family, and Instructors (Vedder et al. 2005). It is comprised of 11 items that present students with either emotional or instructional situations and asks them to rate the degree of support they feel from the three sources. Sample items include: “How often can you count on a peer to encourage you when your performance is weaker than usual?” and “How often can you count on your family to share in your feelings when you are sad?” (1 = Never, 5 = Very often). A high score indicates that students perceive that support is available from their family, peers, and instructors.

Results

Again, we begin by reporting overall means, standard deviations, and the correlations for the measures (see Table 4). Correlations among predictor variables ranged from 0 to $-.30$. As in Study 1, the measure of well-being did not correlate with goal disengagement but was correlated significantly with all other measures. Students’ perceived need for and availability of support both correlated moderately with the well-being index, and self-compassion scores showed a strong correlation with well-being.

Using the same plan as for Study 1, we calculated regressions in three models using the well-being index as the criterion variable (Table 5). First, we entered only the Goal Disengagement and Reengagement scores to predict scores on the well-being index. As in Study 1, this model

Table 5 Study 2: standardized beta coefficients from three regression models predicting well-being from goal reengagement, goal disengagement, perceived need and availability of support, and self-compassion scores

Well-being index	Beta	R^2	Δ in R^2
Model 1		.09*	–
Goal disengagement	.08		
Goal reengagement	.28*		
Model 2		.32*	.27*
Goal disengagement	.04		
Goal reengagement	.19*		
Perceived need of support	.42*		
Perceived availability of support	.25*		
Model 3		.56*	.24*
Goal disengagement	.04		
Goal reengagement	.11*		
Perceived need of support	.29*		
Perceived availability of support	.16*		
Self-compassion	.54*		

* $p < .05$

accounted for significant variation in well-being, but the students’ scores on the Goal Disengagement scale was not a significant predictor in the model.

In Model 2, to the goal management measures, we added the Perceived Need and Perceived Availability of Support scores to predict the well-being index. Results indicated that the R^2 for this model, with four predictors, was significantly different from Model 1, with its two predictors. Again, Goal Disengagement scores did not significantly contribute to predicting well-being in the model.

In the third regression (Model 3), we followed the procedure of Study 1 by adding Self-Compassion to the other predictors of the well-being index. This resulted in a significant difference in the amount of variance accounted for when compared to Model 2. Again, Goal Disengagement was not a significant contributor to this model of

Table 4 Study 2: means (and standard deviations) of measures, reliability coefficients, and correlations between scale scores

Scales	Mean	SD	Cronbach’s α	Correlations				
				WBI	GD	GR	PNS	PAS
Well-being index (WB)	– ^a	– ^a	.73	–				
Goal disengagement (GD)	2.8	.9	.67	.12	–			
Goal reengagement (GR)	3.84	.89	.93	.29*	.15*	–		
Perceived need of support (PNS)	2.9	.46	.73	–.45*	–.13*	.00	–	
Perceived availability of support (PAS)	3.02	.57	.92	.27*	.01	.18*	.02	–
Self-compassion (SC)	3.1	.53	.91	.67*	.20*	.22*	–.30*	.19*

* $p < .05$

^a The mean for the well-being measure was created from an average of standardized scores on five measures of well-being. Therefore, the mean equaled 0 and the standard deviation was close to 1

students' well-being. The total R^2 for this model indicated that more than half of the variance in well-being was accounted for when self-compassion was added to the regression model.

Discussion

Our findings from both studies indicated that college students' well-being could be predicted by Goal Reengagement, but not Goal Disengagement, results which aligned only partially with those of Wrosch et al. (2003). However, we found that adding measures of stress (Study 1), social support (Study 2), and self-compassion enhanced the amount of variance in the well-being index accounted for by the predictors. Self-compassion in particular seemed a reliable correlate of students' reported well-being.

Like the results of Wrosch et al. (2003), our findings emphasize the importance of goal reengagement in maintaining well-being. That goal disengagement was not a significant predictor in our models may be the result of multiple factors. For example, we created a well-being index based on the scales that Wrosch and colleagues used, and their study maintained the well-being scales as separate predicted variables. (In their work, goal disengagement was not a significant predictor of Purpose in Life scores, a scale included in our index.) Additional variation in our findings may also be the result of our assessment of goal regulation. Whereas Wrosch and colleagues verbally prompted students to close their eyes and imagine a time when they had let go of a goal, our procedure did not allow for group participation in this imagery activity. Instead, we had written prompts to precede the goal regulation scales, which may have resulted in students glossing over the written instructions and going directly to the scales. This may have contributed to the relatively low reliability coefficients of the goal disengagement scale in our study, .79 in Study 1 and .67 in Study 2. Finally, the difference in results may be accounted for by the difference in populations. In their study, Wrosch et al. surveyed undergraduates with similar characteristics to our participants; however, their work included students at a private university whereas our participants were from a large public university. Further work assessing socioeconomic indicators and representation of goals may help to explain the difference.

Our findings regarding goal reengagement do align with earlier studies suggesting the importance of engaging in revised, or alternative, goals when current goals become unattainable or devalued. In the second study reported by Wrosch et al. (2003), results indicated that age, combined with goal regulation tendencies, predicted emotional well-being among a community sample of adults. In addition to promoting psychological well-being, healthy goal

management may also contribute to physical health. Recently, Wrosch et al. (2007) reported a significant relationship between goal regulation and physiological components of health, including stress hormone levels, in both undergraduates and adults from large metropolitan communities. Work among adolescent populations, as conducted by Miller and Wrosch (2007), suggested that adolescents who have trouble disengaging from goals also have higher levels of stress hormones. Taken together, earlier findings as well as our own underscore the importance of goal regulation in promoting well-being, including the ability to engage in new salient goals when previous goal pursuit becomes too costly or the goal itself loses value.

Although goal reengagement was a strong predictor of happiness in our findings, stressful life events and the unmet need for support may also take their toll on students. Not surprisingly, our findings indicated that students who had experienced stressful events (financial problems, divorce or death in the family, failing classes, or discord in their personal relationships) in the past 6 months of their lives also reported lower levels of well-being. Similarly, undergraduates who had high perceived need for support tended to have lower well-being. Thus, although stressful life events certainly can hinder individuals' pursuit of happiness, their perception of these events and social support to help them cope is predictive of a positive response to distress (Wethington and Kessler 1986). Our findings are consistent with work by Brissette et al. (2002) who found early-semester assessments of students' optimism and social support predictive of the level of stress students reported at the end of their first semester.

Most notable in our results across both studies was the importance of self-compassion as a predictor of students' well-being. The way that students managed their negative emotions in the face of disappointment was a significant contributor to their well-being, echoing earlier work by Neff et al. (2007a). Along similar lines, work by Leary et al. (2007) indicated that undergraduate students' self-compassion scores predicted their self-evaluations and reactions to real-life events. Gilbert (2005) theorized that the self-soothing features of self-compassionate thoughts serve to promote calm by deactivating neurological "defensive threat systems."

Intervention-style investigations of self-compassion and mindfulness have emphasized that these characteristics are teachable across a variety of contexts. For example, Shapiro et al. (2005) found that a 2 month course using mindfulness to reduce stress increased health care workers' self-compassion and decreased their reported stress. In the context of therapeutic exercises, Neff et al. (2007a, b) found significant changes in undergraduates' self-compassion levels after they participated in a "Gestalt two-chair"

exercise (Greenberg 1983; Wagner-Moore 2004), which involved students voicing self-criticisms and receiving a counselor's guidance to answer these self-disparaging statements. Results indicated that the intervention increased students' self-compassion scores even when initial anxiety was controlled. Further, the improvement in individuals' self-compassion appeared robust over a 3 week period of time.

Another intervention study of mindfulness instruction provided additional evidence that individuals benefit from participating in programs teaching stress reduction and mindfulness. In a controlled investigation involving counseling psychology graduate students, Shapiro et al. (2007) supported the notion that direct instruction in Mindfulness-Based Stress Reduction (MBSR) techniques and practices significantly lowers individuals' reports of stress, worry, and anxiety. Compared to students who did not participate in the 10 week course on MBSR, those in the course enjoyed greater improvements across measures of affect, anxiety, stress, worry, and mindfulness.

Given the multitude of changes and challenges faced by college students, it is difficult to explicate the relationship between their goal regulation, stress, perceived support, and self-compassion solely through quantitative self-report instruments. This, in addition to the cross-sectional nature of our data, represent important limitations in the two studies we reported here. As a follow-up to these studies, our current work focuses on individual students over the course of a semester as we collect qualitative data regarding the ways that they manage their goals and emotions to maintain their well-being. As students progress through school and through life, the ideas that motivate which goals to pursue, and which successes to value, may indeed change. Further, students' self-compassion may also change. The ease with which students divest efforts from stated goals and redirect them toward new, more salient goals may be healthier than tenaciously pursuing a goal at significant physical and psychological cost. Additionally, the ability to bring in self-compassion when facing disappointments may help students enjoy higher levels of well-being.

References

- Baldwin, D. R., Chambliss, L. N., & Towler, K. (2003). Optimism and stress: An African-American college student perspective. *College Student Journal*, *37*, 276–285.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman/Times Books.
- Brissette, I., Scheier, M. F., & Carver, C. S. (2002). The role of optimism in social network development, coping, and psychological adjustment during a life transition. *Journal of Personality and Social Psychology*, *82*, 102–111. doi:10.1037/0022-3514.82.1.102.
- Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, *84*, 822–848. doi:10.1037/0022-3514.84.4.822.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, *24*, 385–396. doi:10.2307/2136404.
- Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *The American Psychologist*, *55*, 34–43. doi:10.1037/0003-066X.55.1.34.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, *49*, 71–75. doi:10.1207/s15327752jpa4901_13.
- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, *125*, 276–302. doi:10.1037/0033-2909.125.2.276.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *The American Psychologist*, *56*, 218–226. doi:10.1037/0003-066X.56.3.218.
- Gilbert, P. (2005). *Compassion: Conceptualisations, research and use in psychotherapy*. London: Routledge.
- Greenberg, L. S. (1983). Toward a task analysis of conflict resolution in Gestalt therapy. *Psychotherapy: Theory, Research, and Practice*, *20*, 190–201. doi:10.1037/h0088490.
- Holmes, R. H., & Rahe, R. H. (1967). The social readjustment rating scale. *Journal of Psychosomatic Research*, *11*, 213–218. doi:10.1016/0022-3999(67)90010-4.
- Insel, P., & Roth, W. (1985). *Core concepts in health* (4th ed.). Palo Alto, CA: Mayfield Publishing.
- Langer, E. (1989). *Mindfulness*. Reading, MA: Addison-Wesley.
- Langer, E. (2005). Well-being: Mindfulness versus positive evaluation. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 214–230). New York: Oxford University Press.
- Leary, M. R., Tate, E. B., Adams, C. E., Batts, A. A., & 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*, 887–904. doi:10.1037/0022-3514.92.5.887.
- Miller, G. E., & Wrosch, C. (2007). You've got to know when to fold 'em: Goal disengagement and systemic inflammation in adolescence. *Psychological Science*, *18*, 773–777. doi:10.1111/j.1467-9280.2007.01977.x.
- Neff, K. D. (2003a). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity*, *2*, 85–101. doi:10.1080/15298860309032.
- Neff, K. D. (2003b). The development and validation of a scale to measure self-compassion. *Self and Identity*, *2*, 223–250. doi:10.1080/15298860309027.
- 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., Kirkpatrick, K. L., & Rude, S. S. (2007a). Self-compassion and adaptive psychological functioning. *Journal of Research in Personality*, *41*, 139–154. doi:10.1016/j.jrp.2006.03.004.
- Neff, K. D., Rude, S. S., & Kirkpatrick, K. L. (2007b). An examination of self-compassion in relation to positive psychological functioning and personality traits. *Journal of Research in Personality*, *41*, 908–916. doi:10.1016/j.jrp.2006.08.002.
- Pearlin, L. I., & Schooler, C. (1978). The structure of coping. *Journal of Health and Social Behavior*, *19*, 2–21. doi:10.2307/2136319.
- Ross, S. E., Neibling, B. C., & Heckert, T. M. (1999). Sources of stress among college students. *College Student Journal*, *33*, 312–317.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-

- being. *The American Psychologist*, 55, 68–78. doi:10.1037/0003-066X.55.1.68.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57, 1069–1080. doi:10.1037/0022-3514.57.6.1069.
- Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, 69, 719–727. doi:10.1037/0022-3514.69.4.719.
- Shapiro, S. L., Astin, J. A., Bishop, S. R., & Cordova, M. (2005). Mindfulness-based stress reduction for health care professionals: Results from a randomized trial. *International Journal of Stress Management*, 12, 164–176. doi:10.1037/1072-5245.12.2.164.
- Shapiro, S. L., Brown, K. W., & Biegel, G. M. (2007). Teaching self-care to caregivers: Effects of mindfulness-based stress reduction on the mental health of therapists in training. *Training and Education in Professional Psychology*, 1, 105–115. doi:10.1037/1931-3918.1.2.105.
- Vedder, P., Boekaerts, M., & Seegers, G. (2005). Perceived social support and well being in school: The role of students' ethnicity. *Journal of Youth and Adolescence*, 34, 269–278. doi:10.1007/s10964-005-4313-4.
- Wagner-Moore, L. E. (2004). Gestalt therapy: Past, present, theory, and research. *Psychotherapy: Theory, Research, Practice, Training (New York, NY)*, 41, 180–189.
- Wallace, A. B., & Shapiro, S. L. (2006). Mental balance and well-being: Building bridges between Buddhism and Western psychology. *The American Psychologist*, 61, 690–701. doi:10.1037/0003-066X.61.7.690.
- Waterman, A. S. (1993). Two conceptions of happiness: Contrasts of personal expressiveness (eudaimonia) and hedonic enjoyment. *Journal of Personality and Social Psychology*, 64, 678–691. doi:10.1037/0022-3514.64.4.678.
- Wethington, E., & Kessler, R. C. (1986). Perceived support, received support, and adjustment to stressful life events. *Journal of Health and Social Behavior*, 27, 78–89. doi:10.2307/2136504.
- Wrosch, C., & Heckhausen, J. (2002). Perceived control of life regrets: Good for young and bad for old adults. *Psychology and Aging*, 17, 340–350. doi:10.1037/0882-7974.17.2.340.
- Wrosch, C., Miller, G. E., Scheier, M. F., & Brun de Pontet, S. B. (2007). Giving up on unattainable goals: Benefits for health? *Personality and Social Psychology Bulletin*, 33, 251–265. doi:10.1177/0146167206294905.
- Wrosch, C., Scheier, M. F., Miller, G. E., Schulz, R., & Carver, C. S. (2003). Adaptive self-regulation of unattainable goals: Goal disengagement, goal reengagement, and subjective well-being. *Personality and Social Psychology Bulletin*, 29, 1494–1508. doi:10.1177/0146167203256921.

Copyright of *Motivation & Emotion* is the property of Springer Science & Business Media B.V. and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.