

Attachment, Self-Compassion, Empathy, and Subjective Well-Being Among College Students and Community Adults

Meifen Wei, Kelly Yu-Hsin Liao, Tsun-Yao Ku,
and Phillip A. Shaffer

Iowa State University

ABSTRACT Research on subjective well-being suggests that it is only partly a function of environmental circumstances. There may be a personality characteristic or a resilient disposition toward experiencing high levels of well-being even in unfavorable circumstances. Adult attachment may contribute to this resilient disposition. This study examined whether the association between attachment anxiety and subjective well-being was mediated by Neff's (2003a, 2003b) concept of self-compassion. It also examined empathy toward others as a mediator in the association between attachment avoidance and subjective well-being. In Study 1, 195 college students completed self-report surveys. In Study 2, 136 community adults provided a cross-validation of the results. As expected, across these 2 samples, findings suggested that self-compassion mediated the association between attachment anxiety and subjective well-being, and emotional empathy toward others mediated the association between attachment avoidance and subjective well-being.

Subjective well-being is a scientific term for what ordinary people experience as happiness (Seligman & Csikszentmihalyi, 2000). One of the most influential theories of subjective well-being conceptualizes it as

This study was presented at the 117th Annual Convention of the American Psychological Association, Toronto, Canada, August 2009. We thank Angela Kennis, David Kennis, Hima Reddy, Lynn Sando, Joni M. Etheredge, Lauren Slater, Abigail Root, Celeste M. Kruger, Julia Keleher, and Kami Hobbs for their assistance with data collection as well as Brent Mallinckrodt and CariAnn Bergner for their help in the preparation of this article for publication.

Correspondence concerning this article should be addressed to Meifen Wei, Department of Psychology, W112 Lagomarcino Hall, Iowa State University, Ames, IA 50011-3180. Email: wei@iastate.edu.

Journal of Personality 79:1, February 2011

© 2011 The Authors

Journal of Personality © 2011, Wiley Periodicals, Inc.

DOI: 10.1111/j.1467-6494.2010.00677.x

consisting of happiness, life satisfaction, the presence of positive affect, and the relative absence of negative affect (Myers & Diener, 1995). People vary in their experiences of subjective well-being. For example, some individuals experience high levels of subjective well-being despite their adverse living situations. Others, however, experience a low level of well-being despite having certain outward advantages such as wealth, education, and good health (Seligman & Csikszentmihalyi, 2000). Indeed, income, age, gender, education, and race are not associated with subjective well-being (see Myers & Diener, 1995; Robbins & Kliever, 2000, for a summary). So although well-being is influenced by the environment and available resources, there appears to be individual differences in people's dispositional tendencies to experience chronically high or low levels of subjective well-being.

Adult attachment may contribute to individual differences in well-being. Diener and Seligman (2002) found that having close personal relationships with others contributed significantly to happiness. This suggests that the ability to build close personal relationships may have a profound impact on well-being. Attachment theory offers a compelling framework for understanding one's capacity to connect with others and develop supportive relationships as coping resources (Lopez & Brennan, 2000; Mallinckrodt, 2000). The theory states that those who experience inconsistent parenting as children tend to, as adults, hyperactivate their attachment system, which produces exaggerated reactions to distress as a mean to gain others' comfort and support (Mikulincer, Shaver, & Pereg, 2003). Also, these individuals tend to view others as benevolent (positive model of others) but view themselves as flawed and less lovable or deserving of comfort than others (negative model of self; Pietromonaco & Feldman Barrett, 2000). Conversely, children whose parents were unresponsive to their needs would tend to, as adults, deactivate their attachment system in order to repress their emotions and withdraw from intimate relationships (Mikulincer et al., 2003). They view others as untrustworthy or not dependable (negative model of others) and view themselves as either positive or negative (positive or negative model of self; Pietromonaco & Feldman Barrett, 2000). Finally, those with positive views of self and others have a secure attachment (Brennan, Clark, & Shaver, 1998).

A few researchers have provided empirical evidence to support the idea that adult attachment contributes to a sense of well-being. For example, adult attachment security was positively related to positive

affect (Torquati & Raffaelli, 2004) and well-being (La Guardia, Ryan, Couchman, & Deci, 2000). However, adult attachment anxiety and avoidance were negatively correlated with life satisfaction and positively correlated with negative affect (Ling, Jiang, & Xia, 2008; Van Buren & Cooley, 2002; Wearden, Lambertson, Crook, & Walsh, 2005). The current study attempted to go beyond the direct association between attachment and well-being to examine potential mediators (e.g., self-compassion and emotional empathy) of this association.

Self-Compassion as a Mediator

Self-compassion involves being caring and compassionate toward oneself during times of difficulty (Bennett-Goleman, 2001; Brach, 2003). Neff (2003a, 2003b) defined and empirically tested the construct of self-compassion. She postulated that self-compassion consists of three components: self-kindness versus self-judgment, common humanity versus isolation, and mindfulness versus over-identification. The first component entails being emotionally warm and nonjudgmental toward oneself instead of being self-critical. The second component refers to the recognition that life's difficulties are a part of shared human experience and do not just happen to certain individuals only. The third component involves being aware of painful thoughts and feelings (i.e., mindfulness) instead of being completely absorbed in them (i.e., overidentifying).

Theoretically, a positive association between self-compassion and well-being is expected. Gilbert (2005) suggested that self-compassion promotes well-being through helping individuals feel cared for, connected, and emotionally calm. Neff (2003a, 2004) indicated that self-compassion can be viewed as an emotional regulation strategy in which negative feelings are held in awareness with kindness and a sense of shared common humanity. This implies that self-compassion may help ameliorate negative feelings and transform them into positive feelings. Based on this view, it is expected that self-compassion may help individuals cultivate subjective well-being. Empirically, self-compassion was positively associated with life satisfaction (Neff, 2003a), happiness and positive affect (Neff, Rude, & Kirkpatrick, 2007), psychological well-being (Neff, 2004), and social connectedness (Neff & McGehee, 2010).

Neff and McGehee (in press) theorized that family experiences (e.g., maternal support) might play a key role in contributing to the development of self-compassion. In times of suffering or failure, the way people treat themselves may be learned from their parents' modeling. If the caregivers are consistently caring and supportive, they may foster self-compassion within the child. However, because of the inconsistent parenting they had received, those with a higher level of attachment anxiety are likely to develop a negative view of self (Pietromonaco & Feldman Barrett, 2000) and to be self-critical (Cantazaro & Wei, 2010). When people are self-critical, they are less likely to be kind toward themselves. In addition, these individuals tend to have a strong need for validation from others (Wei, Mallinckrodt, Larson, & Zakalik, 2005). When people rely on external sources for validation, they are likely to find it difficult to look for internal resources to generate self-compassion (Neff & McGehee, 2010). Finally, these individuals tend to exaggerate their own distress (Mikulincer et al., 2003), which may result in viewing their negative experiences as only happening to them and being immersed in these painful thoughts and feelings. Empirically, Neff and McGehee found a negative association between preoccupied attachment style (e.g., anxious type of attachment) and self-compassion among adolescents and young adults. From the above theoretical perspectives and empirical evidence, attachment anxiety was expected to be negatively related to self-compassion.

The link between attachment avoidance and self-compassion is complex. For those with high levels of attachment avoidance, their view of themselves can be negative or positive (Pietromonaco & Feldman Barrett, 2000). On the one hand, those with a high level of attachment avoidance may outwardly appear to have a positive model of self. However, some researchers suggest that this outwardly positive stance toward oneself is qualitatively different from the positive stance observed among securely attached persons with low avoidance (Mikulincer & Orbach, 1995). Hence, those with a high level of attachment avoidance may report a high level of self-compassion due to their defensive denial or their hidden inner sense of insecurity. Alternatively, because of their caregivers' rejection and unresponsiveness, they may develop a survival tool of compulsively relying on themselves. In order to ensure their own capacity for self-reliance, they may set up high standards for themselves. Obtaining these high standards may indicate to them that they do not need to

rely on others and hence reduces the risk of rejection from others. Therefore, individuals with high attachment avoidance may be less likely to be kind and compassionate toward themselves. In Neff and McGehee's (in press) study, they found dismissive attachment (e.g., avoidant type of attachment) was not significantly associated with self-compassion. They interpreted that those with a high level of attachment avoidance may lack clarity about themselves. It seems that the association between attachment avoidance and self-compassion can be positive, negative, or not significantly associated. Due to the different possibilities for the association, we did not advance a specific hypothesis about attachment avoidance and self-compassion.

In short, attachment is likely to contribute to the development of self-compassion, which, in turn, is associated with subjective well-being. Specifically, those with attachment anxiety are less likely to be compassionate toward themselves because they are likely to be unkind to themselves (due to their negative working model of self) and view negative experiences as only happening to them (due to their tendency of overexaggerating their distress). Unfortunately, those who lack the capacity for self-compassion are less likely to feel a sense of subjective well-being (e.g., happiness or positive affect). As such, it seems that the lack of self-compassion might help to explain the negative association between attachment anxiety and subjective well-being. Thus, we hypothesized that self-compassion was a significant mediator between attachment anxiety and subjective well-being. Conversely, as we addressed above, those with a higher level of attachment avoidance might or might not be compassionate toward themselves. For this reason, no specific mediation hypothesis was proposed regarding whether self-compassion was a significant mediator between attachment avoidance and subjective well-being (see Figure 1).

Emotional Empathy to Others as a Mediator

Empathy is conceptualized as the ability to “know another person’s inner experience” (Buie, 1981, p. 282) or to “feel (perceive) the feelings (emotions) of other people” (Sawyer, 1975, p. 37). Mehrabian (2000) suggested that empathy toward others enhances emotional well-being, interpersonal relationships, and life success. When people can be empathetic to others, others may feel grateful toward them in

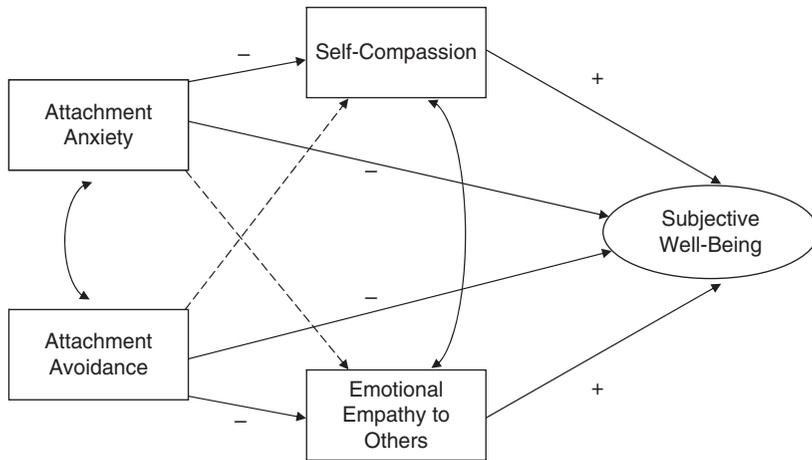


Figure 1

The hypothesized model. *Note.* A dashed line indicates no specific hypothesis for this path.

response. This may help people who are empathetic to feel connected with others and experience happiness and positive affect. Also, people who are empathetic may feel that they are kind toward others and are doing something good for others, both of which may bring these individuals happiness and positive feelings. Therefore, empathy toward others is likely to be associated with increases in one's satisfaction with life, happiness, and positive affect. Empirically, Shanafelt et al. (2005) found that empathy was positively associated with well-being. In an experimental study, Tkach (2006) found that individuals who systematically displayed kindness to others (e.g., empathy to others) reported higher levels of happiness and subjective well-being and lower levels of negative affect than those who did not. Therefore, we expected a positive association between empathy and subjective well-being.

Due to their inclination to keep distance from others and not connect with others, people with higher levels of attachment avoidance may not know the inner experience of specific other people (e.g., they do not ask how their friends are feeling or seek intimacy in that way). Consequently, they may have less empathy for others (Gillath, Shaver, & Mikulincer, 2005; Mikulincer & Shaver, 2005). Empirically, attachment avoidance is negatively correlated with

empathy to others (Britton & Fuendeling, 2005; Joireman, Needham, & Cummings, 2001; Mikulincer et al., 2001; Trusty, Ng, & Watts, 2005). Thus, we expected a negative association between attachment avoidance and emotional empathy to others.

However, the association between attachment anxiety and empathy toward others is not so straightforward. Mikulincer and Shaver (2005) argued that those with higher levels of attachment anxiety are likely to be preoccupied with their own needs and distress, thus rendering them less capable of paying attention to others' needs and offering empathy to them. A negative association between attachment anxiety and empathy has been found (Britton & Fuendeling, 2005; Joireman et al., 2001; Mikulincer et al., 2001). Conversely, Trusty et al. (2005) hypothesized that attachment anxiety would be positively correlated with emotional empathy. They reasoned that people who have experienced difficulties previously (wounded healers) are more likely to understand others' vulnerabilities and have empathy for others. Their hypothesis was confirmed. Due to these two possibilities for the association between attachment anxiety and empathy toward others, we did not propose a specific hypothesis for this association.

Taking into account the above review, because those with a higher level of attachment avoidance tend not to connect with other people, they may have less empathy for others in general. However, as we addressed earlier, the lack of empathy to others is associated with a lower level of happiness and positive affect (i.e., subjective well-being). Hence, it seems that the lack of empathy toward others might help to explain the negative association between attachment avoidance and subjective well-being. For this reason, it was hypothesized that emotional empathy toward others would be a significant mediator between attachment avoidance and subjective well-being (see Figure 1). However, because no agreement existed in the literature regarding the association between attachment anxiety and empathy, the mediating role of empathy for attachment anxiety was explored, but no specific hypothesis was made (see Figure 1).

Finally, in order to increase the generalizability of our results, we also planned to examine whether our hypothetical model could be replicated in a more heterogeneous and older sample. Therefore, we first examined our hypothetical model for the college student sample in Study 1 and then examined whether our hypothetical model could be replicated in a sample of community adults in Study 2.

STUDY 1

The purpose of Study 1 was to conduct an initial examination of the hypothetical model presented in Figure 1 with college students.

Method

Participants

Participants were 195 college students who were currently in a committed relationship or had been in committed relationships before and were enrolled in psychology courses at a large midwestern state university. There were 108 (55%) women and 86 (44%) men (1 person did not report his or her sex), with ages ranging from 18 to 42 years ($M = 20.07$ years; $SD = 2.77$). Two thirds of the participants were sophomores (33%) and freshmen (33%), followed by juniors (20%) and seniors (12%) (one person reported as a graduate student, and two people reported in the “other” category). With regard to ethnicity, the majority of the participants were Caucasians (95.4%), followed by African Americans (1.0%), Asian Americans (1.0%), Hispanic Americans (1.0%), international students (1.0%), and multiracial Americans (0.5%).

Measures

Attachment. The Experiences in Close Relationship Scale (ECR; Brennan, Clark, & Shaver, 1998) was used in the present study to assess participants' attachment dimension. This measure consists of 36 items that were derived from a comprehensive factor analysis of all the major attachment measures available until 1998. The ECR is composed of two subscales: the Anxiety subscale and the Avoidance subscale. The Anxiety subscale (18 items) assesses fear of abandonment and rejection, whereas the Avoidance subscale (18 items) measures avoidance of intimacy, discomfort with closeness, and self-reliance. A sample item for the Anxiety subscale is “I worry about being abandoned,” and a sample item for the Avoidance subscale is “I prefer not to show a partner how I feel deep down.” The items are rated on a 7-point Likert-type scale, ranging from 1 (*disagree strongly*) to 7 (*agree strongly*). Participants were asked to rate how they generally experience relationships. The scores range from 7 to 126, with higher scores indicating higher levels of attachment anxiety and attachment avoidance. The Anxiety and Avoidance subscales have coefficient alphas of .92 and .94, respectively (Brennan et al., 1998). As evidence for the scale's construct validity, the scores on the Anxiety subscale and the Avoidance subscale were positively related to scores on depression and hopelessness (Wei, Mallinckrodt, Russell, & Abraham, 2004) in college students.

Self-compassion. The Self-Compassion Scale (SCS; Neff, 2003a) is a 26-item scale used to measure levels of self-compassion. Participants are directed to rate how often they behave in the manner as indicated by each of the items. A sample item is “I try to be loving towards myself when I’m feeling emotional pain.” The SCS consists of six subscales: Self-Kindness (five items), Self-Judgment (five items), Common Humanity (four items), Isolation (four items), Mindfulness (four items), and Over-Identified (four items). The items are rated on a 5-point Likert-type scale, ranging from 1 (*almost never*) to 5 (*almost always*). In the current study, the total score of the SCS was used in the analysis. A higher score indicated a higher level of self-compassion. The coefficient alpha of the scale was .92 (Neff, 2003a) among college students. Evidence of construct validity for the SCS was provided by significant negative correlations with self-criticism, anxiety, and depression, as well as positive correlations with social connectedness, life satisfaction, and emotional intelligence among college students (Neff, 2003a).

Emotional empathy to others. Emotional empathy to others was measured by the Balanced Emotional Empathy Scale (BEES; Mehrabian, 2000). The BEES is a 30-item (15 positively worded and 15 negatively worded) self-report measure that assesses the tendency to feel and vicariously experience the emotional experiences of others. A sample item is “It upsets me to see someone being mistreated.” Participants are asked to report the extent of their agreement or disagreement with each of the items using a 9-point Likert-type scale that ranges from -4 (*very strongly disagree*) to $+4$ (*very strongly agree*). A higher score indicated a higher level of emotional empathy. A coefficient alpha of .92 was reported for the scale among a sample of undergraduates (Wei & Liao, 2006). Construct validity was evidenced by a positive association with another scale of empathy, and criterion validity was supported by positive associations with happiness and life satisfaction among college students (Wei & Liao, 2006).

Subjective well-being. As we stated earlier, one of the most influential theories on subjective well-being has conceptualized it as happiness, life satisfaction, the presence of positive affect, and the relative absence of negative affect (Myers & Diener, 1995). Therefore, happiness, life satisfaction, positive affect, and negative affect were used as indicators of the latent variable of subjective well-being in the current study.

Happiness was measured with the Oxford Happiness Questionnaire (OHQ; Hills & Argyle, 2002). The OHQ is a 29-item unidimensional measure that assesses overall personal happiness and is derived from the Oxford Happiness Inventory (OHI; Argyle, Martin, & Crossland, 1989).

A sample item is “I find most things amusing.” Participants are asked to rate the degree of their happiness on a 6-point Likert-type scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). The scores range from 29 to 174, with higher scores indicating greater happiness. Hills and Argyle (2002) reported a coefficient alpha of .91 for the scale among undergraduate students. Hills and Argyle also demonstrated the construct validity of the OHQ through its significant positive correlations with extraversion, satisfaction with life, self-esteem, and optimism as well as the criterion validity by its significant association with other scales of happiness, such as the Depression-Happiness Scale, among college students.

Life satisfaction was measured with the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985). The SWLS is a five-item general measure of an individual’s global judgment of life satisfaction. The scale measures the single factor of life satisfaction. A sample item is “I am satisfied with my life.” Participants are asked to indicate the extent to which they agree or disagree that the items reflect how they view their lives by using a 7-point Likert-type scale that ranges from 1 (*strongly disagree*) to 7 (*strongly agree*). Scores can range from 5 to 35, with higher scores indicating greater life satisfaction. The scale has a coefficient alpha of .87 in a sample of college students (Diener et al., 1985). The construct validity for the SWLS was demonstrated by negative correlations of the SWLS with a checklist of clinical symptoms and neuroticism, and the convergent validity was supported by a positive association between the SWLS and happiness (Diener et al., 1985).

Positive affect and negative affect were assessed with the Positive Affect (PA) and Negative Affect (NA) subscales from the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988), which measure distinct dimensions of positive and negative affect. The PA (10 items) subscale assesses the extent to which a person feels active, alert, and enthusiastic. In contrast, the NA (10 items) subscale measures subjective distress and unpleasant mood states, such as anger, contempt, fear, and nervousness. A sample item for positive affect is “excited,” and a sample item for negative affect is “irritable.” Participants are asked to rate on a 5-point Likert-type scale the extent to which they had experienced each mood state in the prior week. The scale ranges from 1 (*very slightly or not at all*) to 5 (*extremely*). Scores range from 10 to 50 for each scale, with higher scores indicating higher levels of positive affect or negative affect. The coefficient alphas of the scale ranged from .86 to .90 for PA and from .84 to .87 for NA in a sample of university students (Watson et al., 1988). Lent et al. (2005) demonstrated the construct validity of the scale through the positive association between PA and life satisfaction. In addition, Watson et al. reported that depression and anxiety were negatively correlated with PA and positively correlated with NA among college students.

Procedure

The survey packets were administered to small groups of 5 to 40 students who signed up for the study. The participants were told that this project examined “the associations among close relationship patterns, interactions with self and others, and quality of life.” The survey took participants approximately 20 to 40 minutes to complete in a designated classroom. No personal identifying information was collected, and participants were assured of the anonymity of their responses. At the end of the study, they were debriefed about the purpose of the study and were rewarded with extra course credits for their participation.

Results and Discussion*Preliminary Analyses*

Means, standard deviations, alphas, and zero-order correlations for the eight observed variables are shown in Table 1. In this study, the maximum likelihood procedure, which requires the normality assumption, was used to test the models. The multivariate normality test was used to examine whether the data of the present study met the normality assumption. The result of the multivariate normality test indicated that the data were not multivariate normal, $\chi^2(2, N = 195) = 76.65, p < .01$. As a consequence, the scaled chi-square statistic developed by Satorra and Bentler (1988) was used to adjust the impact of non-normality on the results. Also, the Satorra-Bentler (SB) scaled chi-square difference test (Satorra & Bentler, 2001) was used to compare the nested models.

Measurement Model

Anderson and Gerbing (1988) suggested conducting a confirmatory factor analysis to examine whether the measurement model provides an acceptable fit to the data. Once an acceptable measurement model is developed, the structural model can be examined. We also followed the recommendation of Holmbeck (1997) to compare our hypothesized partially mediated structural model with a fully mediated structural model to select the best fitting model. These models were estimated using the maximum likelihood method in the LISREL 8.54 program (Joreskog & Sorbom, 2003).

Hu and Bentler (1999, p. 27) recommended a cut-off value close to .95 for comparative fit index (CFI) in combination with a cut-off

Table 1
Means, Standard Deviations, Alphas, and Correlations Among the Variables

	<i>Mean</i>	<i>SD</i>	α	1	2	3	4	5	6	7	8
Study 1: College students (<i>N</i> = 195)											
1. Attachment anxiety	3.43	1.05	.91	—							
2. Attachment avoidance	2.37	0.94	.93	.22**	—						
3. Self-compassion	3.02	0.58	.91	-.38**	-.15*	—					
4. Empathy	1.08	1.04	.92	.08	-.30**	.04	—				
5. Happiness	4.34	0.67	.88	-.35**	-.37**	.48**	.34**	—			
6. Life satisfaction	4.71	1.21	.92	-.23**	-.23**	.43**	.15*	.67**	—		
7. Positive affect	3.51	0.70	.90	-.18*	-.18*	.30**	.12	.62**	.44**	—	
8. Negative affect	2.18	0.74	.89	.39***	.23**	-.45***	-.07	-.48***	-.38***	-.24**	—
Study 2: Community adults (<i>N</i> = 136)											
1. Attachment anxiety	1.33	3.72	.93	—							
2. Attachment avoidance	1.03	3.15	.88	.33**	—						
3. Self-compassion	0.60	3.07	.88	-.38**	-.36**	—					
4. Empathy	1.01	1.03	.88	.06	-.19*	.04	—				
5. Happiness	0.74	3.93	.87	-.39**	-.46**	.51**	.24**	—			
6. Life satisfaction	1.61	3.92	.90	-.33**	-.32**	.27**	-.02	.64**	—		
7. Positive affect	0.78	3.44	.89	-.19*	-.37**	.43**	.26**	.62**	.40**	—	
8. Negative affect	0.89	2.24	.89	.44***	.34***	-.29**	-.07	-.55***	-.45***	-.22**	—

p* < .05. *p* < .01. ****p* < .001.

value close to .08 for standardized root mean squared residual (SRMR) to evaluate model fit.

The result of the measurement model resulted in a good fit to the data, $\chi^2 (14, N = 195) = 41.30, p < .001$, scaled $\chi^2 (14, N = 195) = 32.96, p < .01$, CFI = .95, SRMR = .06. The loadings of the measured variables on the latent variable of subjective well-being were statistically significant at the .001 level. This implied that subjective well-being appears to have been adequately measured by its respective indicators. Furthermore, correlations among two independent variables (i.e., attachment anxiety and attachment avoidance), two mediator variables (i.e., self-compassion and emotional empathy to others), and one dependent variable (i.e., subjective well-being) were all statistically significant ($ps < .05$) with two exceptions (see Table 2). The two exceptions were the association between attachment anxiety and emotional empathy to others and the association between the two mediators (i.e., self-compassion and emotional empathy to others).

Structural Model

The result of the hypothesized partially mediated structural model showed a good fit of the model to the data, $\chi^2 (14, N = 195) = 41.30$,

Table 2
Correlations Among Variables in the Measurement Model

Latent Variable	1	2	3	4	5
Study 1: College students ($N = 195$)					
1. Attachment anxiety	—				
2. Attachment avoidance	.22**	—			
3. Self-compassion	-.38***	-.15*	—		
4. Emotional empathy to others	.08	-.30***	.04	—	
5. Subjective well-being	-.37***	-.37***	.51***	.33***	—
Study 2: Community adults ($N = 136$)					
1. Attachment anxiety	—				
2. Attachment avoidance	.33***	—			
3. Self-compassion	-.38***	-.36***	—		
4. Emotional empathy to others	.06	-.19*	.04	—	
5. Subjective well-being	-.41***	-.48***	.53***	.24**	—

* $p < .05$. ** $p < .01$. *** $p < .001$.

$p < .001$, scaled χ^2 (14, $N = 195$) = 32.96, $p < .01$, CFI = .95, SRMR = .06. Then we tested an alternative model (i.e., fully mediated structural model) by constraining the direct paths from attachment anxiety and attachment avoidance to subjective well-being to zero. The result of this fully mediated structural model showed a good fit to the data, χ^2 (16, $N = 195$) = 64.54, $p < .001$, scaled χ^2 (16, $N = 195$) = 47.62, $p < .001$, CFI = .95, SRMR = .09. However, when these two nested models were compared, a significant corrected scaled chi-square ($\Delta\chi^2$ [2, $N = 195$] = 11.22, $p < .01$) indicated that these two direct paths would significantly contribute to the model. Thus, the partially mediated structural model (see Figure 2) was the best model. As we can see in Figure 2, all the structural paths were significant, except for the path from attachment avoidance to self-compassion ($\beta = -.07$, $p > .05$). The direct paths from attachment (i.e., anxiety and avoidance) to subjective well-being were significant. About 43% of the variance in subjective well-being was explained by attachment anxiety and avoidance, self-compassion, and emotional empathy to others; 15% of the variance in self-compassion was explained by attachment anxiety; 11% of the variance in emotional empathy to others was explained by attachment anxiety and attachment avoidance. Finally, the partially mediated structural model (see

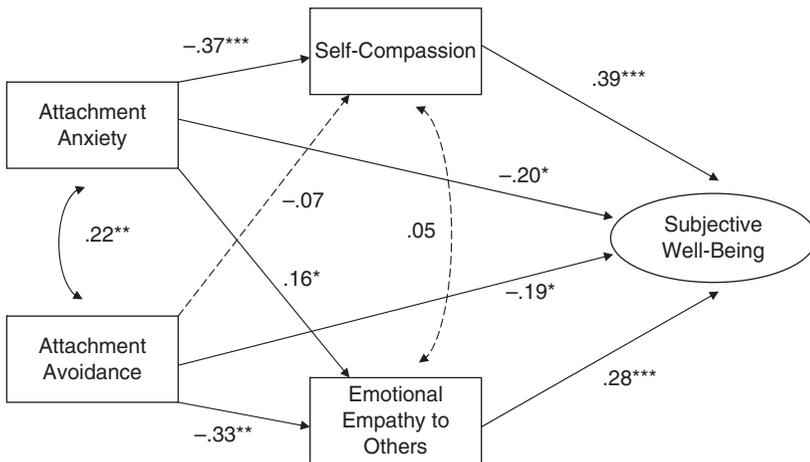


Figure 2

The structural model for college students. Note. $N = 195$. Dashed lines indicate nonsignificant paths. $*p < .05$. $**p < .01$. $***p < .001$.

Figure 2) was used for examining the significance levels of the indirect effects.

The Bootstrap Procedure for Testing the Significance Level of Indirect Effects

Shrout and Bolger (2002) recommended a bootstrap procedure for testing the significance level of indirect effects. Bootstrap methods offer an empirical method of testing the significance of statistical estimates (Efron & Tibshirani, 1993). A total of 1,000 bootstrap samples were used in calculating the indirect effect (Mallinckrodt, Abraham, Wei, & Russell, 2006). According to Shout and Bolger's suggestion, if the 95% CI for the average estimates of these 1,000 indirect effect estimates does not include zero, it can be concluded that the indirect effect is statistically significant at the .05 level. Results shown in Table 3 indicated that the 95% CI for the three indirect effects did not include zero. Thus, these results supported our hypotheses that self-compassion was a significant mediator between attachment anxiety and subjective well-being and that emotional empathy to others was a significant mediator between attachment avoidance and subjective well-being. Also, emotional empathy to others was a significant mediator between attachment anxiety and subjective well-being (see Table 3 and Figure 2).

STUDY 2

Study 1 provided support for our hypothetical model. However, it is unknown whether the findings of Study 1 can be replicated in the community adult sample. In Study 2, our hypothetical model was examined in a community adult sample.

Method

Participants and Procedure

Data were collected from 136 community women (58; 43%) and men (78; 57%) in the Midwest who were currently in a relationship or had been in relationships before and were at least 30 years old ($M = 43.44$, $SD = 10.22$, range = 30–78). With regard to ethnicity, 83% identified

Table 3
Bootstrap Analysis of Magnitude and Statistical Significance of Indirect Effects Among College Students and Community Adults

Indirect Effect	β (Standardized Path Coefficient and Product)	Mean Indirect Effect (<i>b</i>) ^a	SE of Mean ^a	95% CI for Mean Indirect Effect ^a (Lower to Upper)
Study 1: College students (<i>N</i> = 195)				
1. Attachment anxiety → Self-compassion → Well-being	(-.37) × (.39) = -.14	-.1440	.0415	-.23 to -.07*
2. Attachment avoidance → Self-compassion → Well-being	(-.07) × (.39) = -.03	-.0285	.0358	-.10 to .04
3. Attachment anxiety → Emotional empathy to others → Well-being	(.16) × (.28) = .05	.0437	.0220	.00 to .09*
4. Attachment avoidance → Emotional empathy to others → Well-being	(-.33) × (.28) = -.09	-.1009	.0341	-.17 to -.04*
Study 2: Community adults (<i>N</i> = 136)				
1. Attachment anxiety → Self-compassion → Well-being	(-.29) × (.36) = -.10	-.1095	.0798	-.40 to -.04*
2. Attachment avoidance → Self-compassion → Well-being	(-.27) × (.36) = -.10	-.1038	.0404	-.19 to -.04*
3. Attachment anxiety → Emotional empathy to others → Well-being	(.14) × (.19) = .03	.0210	.0244	-.01 to .06
4. Attachment avoidance → Emotional empathy to others → Well-being	(-.24) × (.19) = .05	-.0487	.0413	-.12 to .00*

Note. Well-being = subjective well-being.

^aThese values are based on the unstandardized path coefficients.

**p* < .05.

themselves as Caucasian, followed by African American (5.1%), Asian American (2.9%), Native American (2.2%), Latino/a American (1.4%), and multiracial American (1.4%; seven people did not respond to this item). Regarding socioeconomic status, one third of the participants self-identified themselves as middle class (32%), followed by lower class (27%), lower middle class (26%), upper middle class (10%), and upper class (3%), with one person indicating “other.” Similarly, almost half of the participants reported their annual income as \$25,000 or below (48%), followed by \$35,001 to \$45,000 (12%), \$25,001 to \$35,000 (7%), \$45,001 to \$55,000 (7%), \$65,001 to \$75,000 (7%), \$75,001 to \$85,000 (4%), \$95,001 to \$105,000 (4%), \$55,001 to \$65,000 (3%), and \$85,001 to \$95,000 (2%; 10 people did not report the annual income of their immediate family). In terms of their education level, 40% of participants had a bachelor’s degree, followed by a high school degree (38%), a graduate degree (12%), and a middle school degree (4%); 10 individuals indicated “other” as their response.

Participants were informed that the study examined “the associations among close relationship patterns, interactions with self and others, and quality of life.” The surveys took participants about 20 to 40 minutes to complete. Each participant was paid \$10 after he or she completed the survey. Data were collected from the library, YMCA, mall, and church in the local area.

Measures

All the measures are identical to the measures in Study 1. In order to control for possible order effects, measures were counterbalanced across two forms of surveys, and respondents were randomly given one of the two counterbalanced forms of the surveys.

Results and Discussion

Preliminary Analyses

As in Study 1, means, standard deviations, alphas, and zero-order correlations for the eight observed variables for community adults were presented in Table 1. Also, eight *t* tests were conducted to test the order effect for each of the eight main variables, and a Bonferroni correction for Type 1 errors ($p < .05/8 = .006$) was used. Non-significant results were found, which indicated no order effect occurred between the two forms of packets (all $ps > .01$).

Measurement Model

We first examined the measurement and structural model in community adults alone. Next, we conducted a multiple-group comparison to examine whether the mediation model tested in Study 1 with college students could be cross-validated among community adults.

For community adults alone, the result of the measurement model indicated a good fit to the data, $\chi^2 (14, N = 136) = 41.84, p < .001$, scaled $\chi^2 (14, N = 136) = 39.87, p < .05$, CFI = .94, SRMR = .07. Similar to Study 1, the loadings of the measured variables on the latent variable of subjective well-being were statistically significant at the .001 level. Correlations among the variables were all statistically significant ($ps < .05$) with two exceptions (see Table 2). The two exceptions were the associations between attachment anxiety and emotional empathy to others and between the two mediators (i.e., self-compassion and emotional empathy to others).

Structural Model

The result of the hypothesized, partially mediated structural model in the community adult sample showed a good fit of the model to the data, $\chi^2 (14, N = 136) = 41.84, p < .001$, scaled $\chi^2 (14, N = 136) = 39.87, p < .05$, CFI = .94, SRMR = .07. As in Study 1, we tested an alternative, fully mediated model, and the result indicated a good fit to the data, $\chi^2 (16, N = 136) = 67.47, p < .001$, scaled $\chi^2 (16, N = 136) = 60.78, p < .001$, CFI = .90, SRMR = .13. Also, a significant result from the scaled chi-square difference test between these two models, $\Delta\chi^2 (2, N = 136) = 16.70, p < .001$, indicated the two direct paths would significantly contribute to the model. Similar to Study 1, the partially mediated structural model (see Figure 3) was selected as the best model. As we can see in Figure 3, all the structural paths were significant except the path from attachment anxiety to emotional empathy to others ($\beta = .14, p > .05$). The direct paths from attachment (i.e., anxiety and avoidance) to subjective well-being were significant. About 44% of the variance in subjective well-being was explained by attachment anxiety and attachment avoidance, self-compassion, and emotional empathy to others; 20% of the variance in self-compassion was explained by attachment anxiety and attachment avoidance; 6% of the variance in emotional empathy to others was explained by attachment avoidance. The

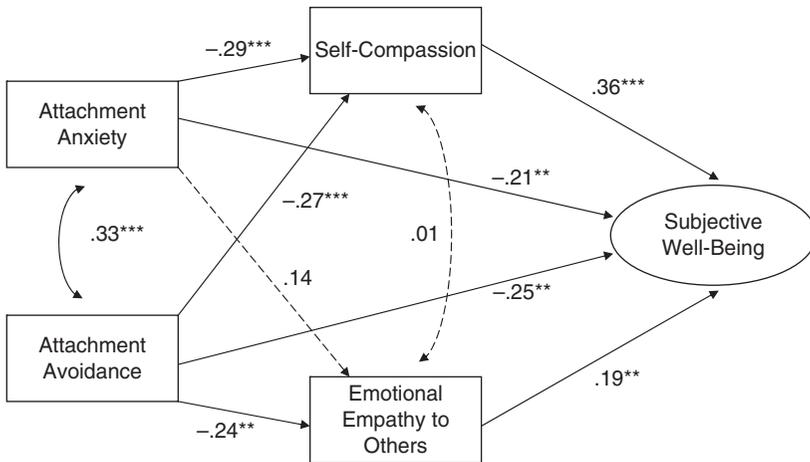


Figure 3

The structural model for community adults. *Note.* $N = 136$. Dashed lines indicate nonsignificant paths. $*p < .05$. $**p < .01$. $***p < .001$.

partially mediated structural model (see Figure 3) was used for examining the significance levels of the indirect effects.

The Bootstrap Procedure for Testing the Significance Level of Indirect Effects

The same bootstrap procedure in Study 1 was used in Study 2. Consistent with the results in Study 1, self-compassion was a significant mediator between attachment anxiety and subjective well-being. Also, emotional empathy to others was a significant mediator between attachment avoidance and subjective well-being. However, contrary to the results in Study 1, self-compassion was a significant mediator between attachment avoidance and subjective well-being, whereas emotional empathy to others was not a significant mediator between attachment anxiety and subjective well-being (see Table 3 and Figure 3) in Study 2.¹

1. We conducted a multiple-group analysis to examine the invariance of the structural paths between the male and female student samples. That is, we conducted one model to freely estimate the structural paths and the other model to constrain the structural paths to be equal. Then, the chi-square difference test was used to examine whether these two models are the same or different.

Multiple-Group Comparison

To determine whether the model developed for the student sample could be cross-validated in a sample of community adults, a multiple-group analysis was conducted to test the invariance of the measurement and structural models between these two samples.

Testing the invariance of factor loadings, variances, and covariances. The multiple-group analysis was conducted. First, the invariance of factor loadings was tested between these two samples through one freely estimated model (i.e., factor loadings were allowed to be different) and one constrained model (i.e., factor loadings were constrained to be equal). The nonsignificant result from the scaled chi-square difference test between these two models, $\Delta\chi^2(8, N = 331) = 13.30, p > .05$, indicated the factor loadings were invariant between these two models. Second, the equivalence of variances and covariances among variables between these two samples was tested through one model with variances and covariances among variables allowed to be different (i.e., a freely estimated model) and the other model with variances and covariances among variables constrained to be equal (i.e., a constrained model). Similarly, the scaled chi-square difference test for these two models, $\Delta\chi^2(10, N = 331) = 7.17, p > .05$, indicated no significant difference between these two models. This implies that the variances and covariances among the variables were not significantly different between the student and community adult samples.

Testing the invariance of the structural paths. In the multiple-group comparison of the mediated model (see Figures 2 and 3), factor loadings were first constrained to be equal to ensure that the same latent construct was being assessed across the two groups. Next, we

The nonsignificant result from the chi-square difference test, $\Delta\chi^2(8, N = 195) = 6.36, p > .05$, implied that the strengths of the structural paths were not significantly different between male and female college students. The same procedure was used to examine whether the strengths of the structural paths were the same or different between male and female community adults. The nonsignificant result from the chi-square difference test, $\Delta\chi^2(8, N = 136) = 14.72, p > .05$, also suggested that the strengths of the structural paths were invariant between male and female community adults. In short, there was no sex effect for either the student sample or the community adult sample.

compared two models, one model with freely estimated structural paths and the other model with structural paths constrained to be equal, between the student and community adult samples. The result from the scaled chi-square difference test between these two models was not significant, $\Delta\chi^2(8, N = 331) = 5.84, p > .05$. This suggests that the structural paths among two independent variables, two mediators, and one dependent variable were not significantly different. Also, this implies that results from the college students in Study 1 can be cross-validated in a sample of community adults in Study 2.²

GENERAL DISCUSSION

The current results indicated that self-compassion was a significant mediator between attachment anxiety and subjective well-being across college students and community adults. Specifically, this result supported the theoretical prediction of a negative association between attachment anxiety and self-compassion. As discussed above, those with a higher level of attachment anxiety are likely to be self-critical (i.e., negative working model of self) and feel overwhelmed by their own distress (i.e., hyperactivation). Therefore, they are likely to be unkind to themselves, exaggerate that their negative experiences only happen to them, and feel overwhelmed by their painful thoughts and feelings (i.e., low levels of self-compassion). Empirically, our finding is consistent with Neff and McGehee's (in press) findings regarding the negative association between attachment anxiety and self-compassion among adolescents and young adults. In addition, a positive association between self-compassion and subjective well-being was found, which is consistent with the

2. Lucas, Diener, and Suh (1996) also revealed that positive affect is related to but distinct from negative affect. Therefore, another alternative model was conducted by dropping the negative affect indicator from the latent variable of subjective well-being. In other words, the latent variable of subjective well-being now only included happiness, life satisfaction, and positive affect. The pattern of the results (i.e., the significance of indirect effects) in this alternative model was identical to those in our final structural model for students (see Figure 2) and community adults (see Figure 3). Also, the pattern of the results from the multiple-group analyses was the same between the two models with or without the negative affect indicator. These results indicated that the inclusion or the exclusion of the negative affect variable in the subjective well-being latent variable did not change the pattern of the results.

theoretical perspective that self-compassion is associated with well-being by helping individuals feel cared for, connected, and emotionally calm (e.g., Gilbert, 2005; Neff, 2003a, 2004). Also, this result is congruent with the previous research findings regarding the positive associations between self-compassion and life satisfaction (Neff, 2003a), social connectedness (Neff & McGehee, 2010), happiness, and positive affect (Neff et al., 2007). More important, our results demonstrated that self-compassion plays a mediator role in the association between attachment anxiety and subjective well-being. This result explains a complex association in which attachment anxiety is not just directly associated with subjective well-being but also that a lack of self-compassion mediates and helps to explain the negative association between attachment anxiety and subjective well-being. Moreover, this result may imply that those who are securely attached (i.e., low levels of attachment anxiety) may be more able than those who are anxiously attached to engage in self-compassion, which contributes to their well-being.

The current study did not propose a specific hypothesis regarding the role of self-compassion in the association between attachment avoidance and subjective well-being. The results indicated that the path between attachment avoidance and self-compassion was significant ($\beta = -.27, p < .001$) in community adults but not significant ($\beta = -.07, p > .05$) among college students. However, the invariance test showed that the magnitudes of these two paths were not significantly different between the two samples. From the observation, the link between attachment avoidance and self-compassion was in a negative direction for both samples. In Neff and McGehee's (in press) study, this association was not significant but was in a positive direction. As we mentioned earlier, the working model of self for those with a higher level of attachment avoidance can be positive or negative. Our inconclusive findings across the samples may reflect a wide range of possibilities regarding capacity for self-compassion among those with higher levels of attachment avoidance. The inauthentic model of self within those with high attachment avoidance may protect them from painful attachment-related feelings or thoughts (Fraley, Davis, & Shaver, 1998). Therefore, they may report high self-compassion due to their defensive denial. Conversely, because of their strong need for compulsive self-reliance, they may set high and harsh standards for themselves so that they can be the best in whatever they do. This may ensure that they do not need to

rely on others in the future and thus avoid future rejections. The cost, however, is that they are less likely to be kind to themselves and have a hard time generating self-compassion. Clearly, these mixed results suggest that it is premature to make any conclusions regarding the role of self-compassion in the association between attachment avoidance and subjective well-being. More research studies are needed.

As expected, the current results indicated that emotional empathy to others was a significant mediator between attachment avoidance and subjective well-being across college students and community adults. Specifically, the negative association between attachment avoidance and emotional empathy to others found in this study is consistent with attachment theory (Mikulincer & Shaver, 2005) and empirical evidence (Britton & Fuendeling, 2005; Joireman et al., 2001; Mikulincer et al., 2001; Trusty et al., 2005). In particular, due to their low emotional investment in others and the tendency to withdraw from people during distressful times (e.g., Simpson, Rholes, & Nelligan, 1992), we expected those with a higher level of attachment avoidance to show low empathy toward others. The present result confirmed our hypothesis and added new empirical evidence to the literature regarding the link between attachment avoidance and empathy (Gillath et al., 2005; Mikulincer & Shaver, 2005). Moreover, a positive relation between being empathetic to others and subjective well-being was found in the current study. This result is consistent with previous research findings that found positive associations between empathy and general emotional well-being and overall life success (Mehrabian, 2000) as well as personal well-being (Shanafelt et al., 2005). This result advances the previous literature by going beyond the linear association between attachment avoidance and subjective well-being to demonstrate the mediating role of empathy in this association. This result implies that a lack of empathy (e.g., providing empathy to others) helps to partially explain the negative association between attachment avoidance and subjective well-being. Also, this result may suggest that those who are securely attached (i.e., low levels of attachment avoidance) may have greater empathy toward others than those who are avoidantly attached, which contributes to their subjective well-being.

Conversely, the results showed that the association between attachment anxiety and emotional empathy toward others was significant ($\beta = .16$, $p < .05$) for college students but not significant

($\beta = .14, p > .05$) for community adults. However, the invariance test between the two samples indicated that these two paths were not significantly different from each other. These mixed results reflect the inconclusive empirical results in the literature. On the one hand, some studies found a negative association between attachment anxiety and emotional empathy to others (Britton & Fuendeling, 2005; Joireman et al., 2001; Mikulincer et al., 2001). A negative association may suggest that those with a higher level of attachment anxiety tend to be occupied with their own distress, which leaves them no room to pay attention to others' needs and provide empathy to others. On the other hand, Trusty et al. (2005) found a positive association between attachment anxiety and emotional empathy to others. They interpreted that those who had experienced vulnerabilities themselves (wounded healers) might be more understanding toward others' vulnerabilities. Thus, perhaps some individuals with a higher level of attachment anxiety may not have the resources to be empathetic to others, whereas others can be empathetic due to their previous vulnerable experiences. From our observation, it is important to note that the link between attachment anxiety and empathy was in the positive direction for both samples. Our results seem more in line with Trusty and colleagues' (2005) finding. However, future research is still needed to further clarify these mixed findings.

In short, as expected, self-compassion mediated the association between attachment anxiety and subjective well-being; conversely, emotional empathy toward others mediated the association between attachment avoidance and subjective well-being across two samples. Also, similar to the mixed results found in the literature, we found inconsistent results from these two samples regarding whether self-compassion mediated the association between attachment avoidance and subjective well-being as well as whether emotional empathy toward others mediated the association between attachment anxiety and subjective well-being.

As seen in Figures 2 and 3, the direct effects between the two dimensions of attachment and subjective well-being were significant over and above the indirect effects. These findings are consistent with the literature that links attachment to several indices of well-being (e.g., La Guardia et al., 2000; Ling et al., 2008; Torquati & Raffaelli, 2004; Van Buren & Cooley, 2002; Wearden et al., 2005). The findings also imply that there may be other mediating variables in addition to self-compassion and empathy to others. Future research can explore

other mediators for the associations between attachment (i.e., anxiety and avoidance) and subjective well-being.

Even though we did not have a specific hypothesis related to self-compassion and empathy, the lack of association between self-compassion and empathy ($r_s = .05$ and $.01$ for the student and community adult samples) may be somewhat counterintuitive for most people. However, this result is consistent with a recent finding (Neff, 2008) that self-compassion was not significantly related to empathetic concern assessed by the Interpersonal Reactivity Index (Davis, 1983). One possible interpretation is that empathy defined by Mehrabian (2000) does not have much overlap with the construct of self-compassion, especially because that definition of empathy does not include the common humanity or mindfulness components of self-compassion (Kristin D. Neff, personal communication, August 23, 2009). From the kindness component perspective, most people who lack self-compassion say that they are much kinder to others than to themselves (Neff, 2003a), while people who are high in self-compassion say that they are equally kind to themselves and others. Thus, people who lack self-compassion are likely to be as empathetic to others as those who are high in self-compassion.³

Limitations, Future Research Directions, and Implications

A number of important limitations in this study should be acknowledged. First of all, due to the self-report nature of the questionnaires, it is unknown whether the current model can be replicated in observational studies where the behaviors of self-compassion or empathy toward others are observed. Second, even though subjective well-being is more appropriately assessed by self-report, it is unknown whether informant data (e.g., reports from friends or family) on well-being, self-compassion, or empathy toward others would produce the same results. Third, it is important to note that the results from the analyses of structural equation models are correlational in nature. Therefore, our results do not provide conclusive evidence of causal relationships among the studied variables. In other words, the current data only demonstrate that a portion of the

3. We appreciate reviewers' helpful suggestions regarding the interpretation of the nonsignificant association between self-compassion and emotional empathy to others.

shared variance between attachment dimensions and subjective well-being is shared by self-compassion and empathy.

Moreover, it is important to acknowledge that several other alternative models cannot be ruled out in our cross-sectional data that also provide a good fit to the data. For example, in one alternative model, we found that attachment anxiety and avoidance were significant mediators for the association between self-compassion and subjective well-being in both the student and community adult samples. Therefore, the mediator roles of attachment and self-compassion appear to be interchangeable. Alternatively, Davila, Burge, and Hammen (1997) indicated that the history of symptomatology (e.g., depression) may make people vulnerable to changes in attachment style. Following this line of reasoning, it is also possible that subjective well-being (i.e., a predictor) may increase empathy and self-compassion (i.e., mediators), which in turn leads to changes in attachment style (i.e., outcomes). Even though we did not collect longitudinal data to examine the changes in attachment style, we further explored these alternative models in our cross-sectional data. The results indicated that self-compassion was a significant mediator between subjective well-being and attachment anxiety (but not attachment avoidance) for college students and community adults. However, empathy was a significant mediator for college students but not for community adults. Therefore, caution is certainly needed when interpreting the current mediation results. Future longitudinal studies may be needed to determine the causal associations among these variables. However, to date, there is very little research in this area regarding self-compassion, empathy, attachment, and well-being. As such, this empirical study is much needed. As a new research area emerges, researchers often collect cross-sectional data first to confirm theoretical relationships before investing time, expenses, and other resources into rigorous longitudinal studies or intervention studies. Our cross-sectional study, at least, can serve as a foundational starting point for future examinations.

There are other directions for future studies in this area in addition to longitudinal studies. First, Mikulincer et al. (2001) conducted a series of experimental studies that involved inducing compassion toward others among individuals with secure attachment. Thus, future research can adopt experimental designs to study whether inducing self-compassion or emotional empathy toward others can increase subjective well-being. Second, it may be worthwhile that

future studies examine the effectiveness of self-compassion and empathy training programs on subjective well-being. Third, future studies can apply the current mediation model to examine how relational trajectories might change or enhance subjective well-being for couples with different (or congruent) attachment dimensions because of their self-compassion and empathy toward their partners.⁴

If future studies can confirm the causal association through longitudinal studies and the effectiveness of self-compassion or empathy as interventions, our findings might suggest some counseling implications. Mallinckrodt (2000) suggested providing countercomplimentary interventions when working with individuals with a higher level of attachment anxiety and avoidance. That is, clinicians can select counseling interventions (e.g., encouraging self-soothing) that are opposite to people's familiar patterns (e.g., engaging in negative self-talk). For example, because those with high levels of attachment anxiety tend to view themselves negatively and have a hyperactivated attachment system, they may pay more attention to external signals to ensure enough care from others, rather than using their inner capacity for self-care. Therefore, the countercomplimentary strategy is to help them learn self-compassion strategies. Again, it is important to note that the above suggestions are tentative until our current results are confirmed by future longitudinal and intervention studies.

Conversely, because of their negative working model of others and deactivated attachment system (e.g., actively keeping distance from others or suppressing emotions), those with a higher level of attachment avoidance may gradually lose touch with others' feelings or thoughts. The countercomplimentary strategy is thus to help them learn new ways to react empathically to others' emotional experiences. Pistole (1989, 1999) used the concept of caregiving from attachment theory as a metaphor for the counseling relationship and process. In particular, counselors can be empathetic to individuals with a higher level of attachment avoidance in order to reparent them. The counselors thus serve as role models for them so they can learn to be empathetic to others. When they increase their empathetic ability, they may experience positive feelings and higher subjective well-being. Finally, we still need to be cautious about the above counseling implications because our correlational data simply

4. We appreciate reviewers' helpful suggestions for these future research directions.

do not make a case for this suggestion. Before pursuing such directions, clear evidence from longitudinal studies for the causal relationships as well as intervention studies for the effectiveness of self-compassion or empathy strategies is strongly needed.

REFERENCES

- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, **103**, 411–423.
- Argyle, M., Martin, M., & Crossland, J. (1989). Happiness as a function of personality and social encounters. In J. P. Forgas & J. M. Innes (Eds.), *Recent advances in social psychology: An international perspective* (pp. 189–203). North-Holland: Elsevier.
- Bennett-Goleman, T. (2001). *Emotional alchemy: How the mind can heal the heart*. New York: Three Rivers Press.
- Brach, T. (2003). *Radical acceptance: Embracing your life with the heart of a Buddha*. New York: Bantam Books.
- Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult attachment: An integrative overview. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 46–76). New York: Guilford Press.
- Britton, P. C., & Fuendeling, J. M. (2005). The relations among varieties of adult attachment and the components of empathy. *Journal of Social Psychology*, **145**, 519–530.
- Buie, D. H. (1981). Empathy: Its nature and limitations. *Journal of the American Psychoanalytic Association*, **29**, 281–307.
- Cantazaro, A. E., & Wei, M. (2010). Adult attachment, dependence, self-criticism, and depressive symptoms: A test of a mediational model. *Journal of Personality*, **78**, 1135–1162.
- Davila, J., Burge, D., & Hammen, C. (1997). Why does attachment style change? *Journal of Personality and Social Psychology*, **73**, 826–838.
- Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology*, **44**, 113–126.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment*, **49**, 71–75.
- Diener, E., & Seligman, M. E. P. (2002). Very happy people. *Psychological Science*, **13**, 81–84.
- Efron, B., & Tibshirani, R. (1993). *An introduction to the bootstrap*. New York: Chapman & Hall/CRC.
- Fraley, R. C., Davis, K. E., & Shaver, P. R. (1998). Dismissing-avoidance and the defensive organization of emotion, cognition and behavior. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 249–279). New York: Guilford Press.

- Gilbert, P. (Ed.). (2005). *Compassion: Conceptualizations, research and use in psychotherapy*. New York: Routledge.
- Gillath, O., Shaver, P. R., & Mikulincer, M. (2005). An attachment-theoretical approach to compassion and altruism. In P. Gilbert (Ed.), *Compassion: Conceptualizations, research and use in psychotherapy* (pp. 121–147). New York: Routledge.
- Hills, P., & Argyle, M. (2002). The Oxford Happiness Questionnaire: A compact scale for the measurement of psychological well-being. *Personality and Individual Differences*, **33**, 1073–1082.
- Holmbeck, G. M. (1997). Toward terminological, conceptual, and statistical clarity in the study of mediators and moderators: Examples from the child-clinical and pediatric psychology literatures. *Journal of Consulting and Clinical Psychology*, **65**, 599–610.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, **6**, 1–55.
- Joireman, J. A., Needham, T. L., & Cummings, A.-L. (2001). Relationships between dimensions of attachment and empathy. *North American Journal of Psychology*, **3**, 63–80.
- Joreskog, K. G., & Sorbom, D. (2003). *LISREL 8.54*. Lincolnwood, IL: Scientific Software International.
- La Guardia, J. G., Ryan, R. M., Couchman, C. E., & Deci, E. L. (2000). Within-person variation in security of attachment: A self-determination theory perspective on attachment, need fulfillment, and well-being. *Journal of Personality and Social Psychology*, **79**, 367–384.
- Lent, R. W., Singley, D., Sheu, H.-B., Gainor, K. A., Brenner, B. R., Treistman, D., et al. (2005). Social cognitive predictors of domain and life satisfaction: Exploring the theoretical precursors of subjective well-being. *Journal of Counseling Psychology*, **52**, 429–442.
- Ling, X., Jiang, G.-R., & Xia, Q. (2008). Relationship between normal university freshmen's adult attachment towards different subjects and subjective well-being. *Chinese Journal of Clinical Psychology*, **16**, 71–73.
- Lopez, F. G., & Brennan, K. A. (2000). Dynamic processes underlying adult attachment organization: Toward an attachment theoretical perspective on the healthy and effective self. *Journal of Counseling Psychology*, **47**, 283–301.
- Lucas, R. E., Diener, E., & Suh, E. (1996). Discrimination validity of well-being measures. *Journal of Personality and Social Psychology*, **74**, 616–628.
- Mallinckrodt, B. (2000). Attachment, social competencies, social support, and interpersonal process in psychotherapy. *Psychotherapy Research*, **10**, 239–266.
- Mallinckrodt, B., Abraham, W. T., Wei, M., & Russell, D. W. (2006). Advances in testing the statistical significance of mediation effects. *Journal of Counseling Psychology*, **53**, 372–378.
- Mehrabian, A. (2000). *Manual for the Balanced Emotional Empathy Scale (BEES)*. (Available from Albert Mehrabian, 1130 Alta Mesa Road, Monterey, CA, USA 93940).

- Mikulincer, M., Gillath, O., Halevy, V., Avihou, N., Avidan, S., & Eshkoli, N. (2001). Attachment theory and reactions to others' needs: Evidence that activation of the sense of attachment security promotes empathetic response. *Journal of Personality and Social Psychology*, **81**, 1205–1224.
- Mikulincer, M., & Orbach, I. (1995). Attachment styles and repressive defensiveness: The accessibility and architecture of affective memories. *Journal of Personality and Social Psychology*, **68**, 917–925.
- Mikulincer, M., & Shaver, P. R. (2005). Attachment security, compassion, and altruism. *Current Directions in Psychological Science*, **14**, 34–38.
- Mikulincer, M., Shaver, P. R., & Pereg, D. (2003). Attachment theory and affect regulation: The dynamic development and cognitive consequences of attachment-related strategies. *Motivation and Emotion*, **27**, 77–102.
- Myers, D. G., & Diener, E. (1995). Who is happy? *Psychological Science*, **6**, 10–18.
- Neff, K. D. (2003a). Development and validation of a scale to measure self-compassion. *Self and Identity*, **2**, 223–250.
- Neff, K. D. (2003b). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity*, **2**, 85–102.
- Neff, K. D. (2004). Self-compassion and psychological well-being. *Constructivism in the Human Sciences*, **9**, 27–37.
- Neff, K. D. (2008, February). *Self-compassion and other-focused responding*. Paper presented at the annual meeting of the Society for Personality and Social Psychology, Albuquerque, NM.
- Neff, K. D., & McGehee, P. (2010). Self-compassion and psychological resilience among adolescents and young adults. *Self and Identity*, **9**, 225–240.
- Neff, K. D., Rude, S. S., & Kirkpatrick, K. L. (2007). An examination of self-compassion in relation to positive psychological functioning and personality traits. *Journal of Research in Personality*, **41**, 908–916.
- Pietromonaco, P. R., & Feldman Barrett, L. (2000). The internal working models concept: What do we really know about the self in relation to others? *Review of General Psychology*, **4**, 155–175.
- Pistole, M. C. (1989). Attachment: Implications for counselors. *Journal of Counseling & Development*, **68**, 190–193.
- Pistole, M. C. (1999). Caregiving in attachment relationships: A perspective for counselors. *Journal of Counseling & Development*, **77**, 437–446.
- Robbins, S. B., & Kliever, W. L. (2000). Advances in theory and research on subjective well-being. In S. D. Brown & R. W. Lent (Eds.), *Handbook of counseling psychology* (3rd ed., pp. 310–345). Hoboken, NJ: John Wiley & Sons.
- Satorra, A., & Bentler, P. M. (1988). Scaling corrections for chi-square statistics in covariance structure analysis. In *American Statistical Association 1988 proceedings of the business and economic section* (pp. 308–313). Alexandria, VA: American Statistical Association.
- Satorra, A., & Bentler, P. M. (2001). A scaled difference chi-square test statistic for moment structure analysis. *Psychometrika*, **66**, 507–514.
- Sawyer, F. H. (1975). A conceptual analysis of empathy. *Annual of Psychoanalysis*, **3**, 27–47.

- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, *55*, 5–14.
- Shanafelt, T. D., West, C., Zhao, X., Novotny, P., Kolars, J., Habermann, T., et al. (2005). Relationship between increased personal well-being and enhanced empathy among internal medicine residents. *Journal of General Internal Medicine*, *20*, 559–564.
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, *7*, 422–445.
- Simpson, J. A., Rholes, W. S., & Nelligan, J. S. (1992). Support seeking and support giving within couples in an anxiety-provoking situation: The role of attachment styles. *Journal of Personality and Social Psychology*, *62*, 434–446.
- Tkach, C. T. (2006). Unlocking the treasury of human kindness: Enduring improvements in mood, happiness, and self-evaluations (Doctoral dissertation, University of California, Riverside, 2006). *Dissertation Abstracts International*, *67*, 603.
- Torquati, J. C., & Raffaelli, M. (2004). Daily experiences of emotions and social contexts of securely and insecurely attached young adults. *Journal of Adolescent Research*, *19*, 740–758.
- Trusty, J., Ng, K.-M., & Watts, R. E. (2005). Model of effects of adult attachment on emotional empathy of counseling students. *Journal of Counseling and Development*, *83*, 66–77.
- Van Buren, A., & Cooley, E. L. (2002). Attachment styles, view of self and negative affect. *North American Journal of Psychology*, *4*, 417–430.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*, 1063–1070.
- Wearden, A. J., Lambertson, N., Crook, N., & Walsh, V. (2005). Adult attachment, alexithymia, and symptom reporting: An extension to the four-category model of attachment. *Journal of Psychosomatic Research*, *58*, 279–288.
- Wei, M., & Liao, K. Y.-H. (2006). *Reliability and validity of the Balanced Emotional Empathy Scale for college students*. Unpublished manuscript.
- Wei, M., Mallinckrodt, B., Larson, L. A., & Zakalik, R. A. (2005). Attachment, depressive symptoms, and validation from self versus others. *Journal of Counseling Psychology*, *52*, 368–377.
- Wei, M., Mallinckrodt, M., Russell, D. W., & Abraham, T. W. (2004). Maladaptive perfectionism as a mediator and moderator between adult attachment and depressive mood. *Journal of Counseling Psychology*, *51*, 201–212.