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Self-Compassion as a Mediator of Maladaptive Perfectionism and Depressive Symptoms in College Students

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ABSTRACT

The purpose of the study was to examine the relationships among maladaptive perfectionism, self-compassion, and depressive symptoms in college students. It was hypothesized that self-compassion would mediate the relationship between maladaptive perfectionism and depressive symptoms, with maladaptive perfectionism related to lower levels of self-compassion, and lower levels of self-compassion related to greater endorsement of depressive symptoms. Results supported partial mediation, indicating that self-compassion partially accounts for the relationship between maladaptive perfectionism and depressive symptoms. Implications for practice and research are discussed.

KEYWORDS

College students; depressive symptoms; maladaptive perfectionism; self-compassion

Perfectionism, defined as "the tendency to hold and pursue unrealistically high goals" (Hewitt, Mittelstaedt, & Wollert, 1989, p. 133), has been extensively studied within existing research literature. Research suggests that perfectionism is a construct of particular concern among college students; for example, in a nonclinical sample, college student participants reported that their perfectionism is distressing to them (Kearney & Baron, 2003). Although perfectionism has historically been conceptualized as pathological in nature (e.g., Burns, 1980; Horney, 1950; Missildine, 1963), Hamachek (1978) proposed an early argument for a distinction between "normal perfectionists" and "neurotic perfectionists," the latter never feeling "good enough" (p. 27). In recent years, there have been more explicit efforts to distinguish the healthy (i.e., adaptive) from the pathological (i.e., maladaptive) aspects of perfectionism, such as via the development of the Almost Perfect Scale—Revised (APS—R; Slaney, Rice, Mobley, Trippi, & Ashby, 2001), as well as other research endeavors by the same authors (e.g., Rice & Ashby, 2007; Rice, Ashby, & Slaney, 1998). Maladaptive perfectionism is characterized by high personal standards, excessive self-criticism, worries about perceived mistakes and failures, dissatisfaction with one's performance, and a general sense of inadequacy. In contrast, while adaptive perfectionism is also characterized by high personal standards, one's failure to meet these standards can be endured without excessive self-criticism or feelings of dissatisfaction (Aldea & Rice, 2006; Rice & Ashby, 2007; Wu & Wei, 2008).

In college student studies that have differentiated between the adaptive and maladaptive aspects of perfectionism, their relationships with psychological distress have varied. While maladaptive perfectionism has been found to be related to aspects of psychological distress in students (Ashby, Rice, & Martin, 2006; Elion, Wang, Slaney, & French, 2012; Rice et al., 1998; Wei, Heppner, Russell, & Young, 2006; Wei, Mallinckrodt, Russell, & Abraham, 2004), adaptive perfectionism has typically been found to either have a negative relationship (Aldea & Rice, 2006; Elion et al., 2012) or a nonrelationship (Rice et al., 1998) with aspects of psychological distress in college students. Overall, the relationship between maladaptive perfectionism and depression in the college student population has been well-established, with higher levels of maladaptive perfectionism related to higher levels of depression (Ashby et al., 2006; Chang & Sanna, 2001; Rice et al., 1998). Additionally, in a study that classified and compared undergraduate students in terms of type of perfectionism, maladaptive perfectionists exhibited the self-critical subtype of depression on the revised Depressive Experiences Questionnaire (Santor, Zuroff, Mongrain, & Fielding, 1997) more than nonperfectionists who, in turn, demonstrated this subtype more than adaptive perfectionists (Grzegorek, Slaney, Franze, & Rice, 2004).

In order to understand the ways in which perfectionism results in particular psychological outcomes, various factors have been investigated and identified as possible mediators in the relationship between perfectionism and depression for college students, including perceived stress (Rice, Leever, Christopher, & Porter, 2006), social connectedness (Rice, Leever, et al., 2006), emotional dysregulation (Aldea & Rice, 2006), the need for validation and approval from others (Wu & Wei, 2008), social problem-solving skills (Chang, 2002), and the ability for selfvalidation/self-reinforcement (Wu & Wei, 2008). In addition, coping style has been found to mediate the relationship between maladaptive perfectionism and depression among college students, with greater use of avoidant coping strategies explaining the higher levels of depressive symptoms of college students who report having maladaptive perfectionism (Noble, Ashby, & Gnilka, 2014). Given the multitude of stressors that college students must cope with adaptively in their academic and personal lives, it is critical for college counselors to identify variables that can help to buffer the relationship between maladaptive perfectionism and depression. A construct of particular interest in the research literature with regard to the relationship between perfectionism and depression is self-esteem. In terms of the college student population, maladaptive perfectionism has consistently been found to be negatively associated with self-esteem (Ashby & Rice, 2002; Ashby et al., 2006; Rice et al., 1998) and self-esteem has been found to buffer the

relationship between maladaptive perfectionism and depression (Ashby et al., 2006; Rice et al., 1998).

One variable that has not been examined in the existing research on college student perfectionism and depression is self-compassion. The focus of the current study was to examine the possible role of self-compassion as a mediator in the relationship between students' maladaptive perfectionism and depressive symptoms. Self-compassion has been defined as "unconditional kindness and comfort while embracing the human experience, difficult as it is" (Neff, 2011, p. 12). According to Neff (2003), self-compassion involves being kind to oneself rather than self-critical, seeing one's experiences as part of the larger human condition, and maintaining awareness of one's painful thoughts and feelings without becoming consumed by them. Overall, it entails acknowledging that flaws and disappointments are part of the human experience and that everyone, including oneself, deserves to receive compassion (Neff, 2003). Although self-compassion and self-esteem have been found to be correlated, the degree of this correlation demonstrates that they are distinct psychological constructs (Neff, 2003). Additionally, while self-esteem has been found to be related to narcissism, self-compassion does not involve a sense of superiority over others (Neff, 2003). Moreover, in a study of undergraduate students, discriminant validity between self-compassion and self-esteem was found in that self-compassion, but not self-esteem, accounted for unique variance in the outcome variables of sadness, anxiety, anger, embarrassment, and negative self-feelings (Leary, Tate, Adams, Allen, & Hancock, 2007).

Various other research studies support a relationship between self-compassion and psychological distress for college students. For instance, Leary and colleagues (2007) conducted a series of studies with undergraduate students and concluded that self-compassion buffers reactions to difficult situations that involve negative emotions such as failure, humiliation, and rejection. In another study that compared self-compassion and mindfulness in a community sample, researchers found that self-compassion was a stronger predictor of symptoms of depression and anxiety and quality of life than mindfulness (Van Dam, Sheppard, Forsyth, Earleywine, 2011). In the relationship between self-compassion and depression, Raes (2010) also identified rumination/brooding as a significant mediating variable for undergraduate students in Belgium. And finally, self-compassion has been found to have a significant negative relationship with depression, and this relationship sustained even when variations in self-esteem were controlled (Neff, 2011).

Self-compassion has been found to be related to additional variables that are of particular importance in the lives of college students, and researchers suggest that it is an adaptive trait for new college students (Hope, Koestner, & Milyavskaya, 2014). For example, self-compassionate college students have been found to have greater levels of focus on mastering new material (intrinsic motivation) versus performance goals, have less fear of failure, and engage in more adaptive (emotion-focused) coping behaviors following academic failure (Neff, Hsieh, Dejitterat, 2005). In addition, self-compassionate college students have been found to report lower levels of homesickness, lower levels of depression, and greater satisfaction with their choice of university during the transition to college (Terry, Leary, & Mehta, 2013).

Given its established relationship with depression, its relationship to the personal and academic functioning of college students, and its distinction from self-esteem and other variables, self-compassion warrants careful consideration as a distinct mediator of the relationship between perfectionism and depressive symptoms for college students. The current study is the first to examine the relationships between maladaptive perfectionism, self-compassion, and depressive symptoms. As indicated previously, a relationship between maladaptive perfectionism and depression has been found (Neff, 2011), as well as between self-compassion and depression (Raes, 2010; Van Dam et al., 2011). Self-compassion has also been found to have a negative relationship with maladaptive perfectionism and to have a nonrelationship with adaptive perfectionism (Neff, 2003). It was hypothesized that self-compassion would mediate (i.e., account for) the relationship between maladaptive perfectionism and depressive symptoms. Specifically, it was hypothesized that maladaptive perfectionism would be related to lower levels of self-compassion, and lower levels of self-compassion related to greater endorsement of depressive symptoms.

Method

Participants

Data were collected from 358 students at two midsize public universities in the Northeastern United States. A multivariate analysis of variance comparing survey responses from students from the two universities revealed no significant differences in terms of demographic characteristics or primary variables (i.e., maladaptive perfectionism, self-compassion, depressive symptoms), so they were combined for the analyses in this study. From this combined sample, 255 (71.2%) participants identified as female, 102 (28.5%) identified as male, and 0% identified as transgender; one participant did not self-identify on gender. Participants identified their ethnicities as follows: 297 (81.3%) Caucasian, 27 (7.5%) African American or Black, 13 (3.7%) Biracial or Multiracial, 10 (2.8%) Hispanic, 7 (2.0%) Asian American or Pacific Islander, and 4 (1.1%) "Other." The average age of participants was 18.8 years (SD = 1.37), with a range of 18 to 32 years. The majority of participants indicated they were in their first (231, 64.5%) or second (84, 23.5%) year of school. 186 participants identified as upper middle class, 102 identified as lower middle class, 63 identified as working class, 5 identified as upper class, and 2 identified as other.



Measures

Demographics

Nine demographic variables were obtained with a researcher-developed measure and later correlated with the study's three primary measures. The demographic variables were gender, funding source for tuition and fees, socioeconomic class, race, country of origin, age, year in school, transfer status, and number of credits completed.

Self-Compassion

The Self-Compassion Scale (SCS; Neff, 2003) is a 26-item scale with six subscales measuring dimensions of global self-compassion: Self-Kindness, Self-Judgment, Common Humanity, Isolation, Mindfulness, and Over-Identification. Items are rated on a 5-point Likert scale indicating how often (1 = almost never to 5 = almost always) participants act toward themselves during difficult times in the way the item describes. Several items are reverse scored and item scores are summed to obtain a global self-compassion score, with higher scores indicating greater self-compassion. Neff (2003) reported good convergent and discriminant validity for the SCS as evidenced by significant negative correlations with measures of self-criticism (-.65) and significant positive correlations with measures of social connectedness (.41) as well as with the Repair (.55) and Clarity (.43) subscales of the Trait Meta-Mood Scale, which assesses emotional intelligence. Test-retest reliability for the SCS was reported as .93 over 3 weeks (Neff, 2003). Internal consistency for the SCS has been reported as .92 (Neff, 2003) and was .91 for the current study.

Maladaptive perfectionism

The APS-R (Slaney et al., 2001) is a 23-item scale that measures the multidimensional construct of perfectionism through three subscales: Standards (7 items), Order (4 items), and Discrepancy (12 items). The Standards subscale is designed to measure personal standards, the Order subscale measures organization and need for order, and the Discrepancy subscale measures distress caused by the discrepancy between performance and standards. Only scores for the Discrepancy subscale, which measures maladaptive perfectionism, were used in the current mediation analysis. Participants indicate their agreement with items using a 7-point Likert-type scale from 1 = strongly disagree to 7 = strongly agree. Items scores are summed for each subscale, with higher scores indicating a greater amount of each perfectionism dimension. Factor analyses of the APS-R have consistently supported the structure of the subscales. Factor loadings for the items ranged from .49 to .86 (Slaney et al., 2001). Convergent and discriminant validity of the subscales with college student samples have been demonstrated by several authors (e.g., Rice & Pence, 2006; Slaney et al., 2001). With a college student sample, Rice, Vergara, and Aldea (2006) reported a high internal consistency coefficient (.93) for the Discrepancy subscale. The internal consistency coefficient for the Discrepancy subscale in the present study was .92.

Depression

The Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) is a 20-item self-report screening measure of depressive symptoms that have occurred within the past week. Respondents indicate how frequently they experience the symptoms using the following scale: 0 (rarely or none of the time, <1 day); 1 (some or little of the time, 1–2 days); 2 (occasionally or a moderate amount of the time, 3-4 days); 3 (most or all of the time, 5-7 days). The scale produces a total score and higher scores indicate greater endorsement of depressive symptoms. A mean score of 16 has been used to indicate the presence of depression and the scale has been found to have good reliability and validity (e.g., Radloff, 1977; Roberts, Andrews, Lewinsohn, & Hops, 1990). The internal consistency coefficient for the present study was .90.

Procedure

The study was approved by the institutional review boards of both participating institutions. Participants were recruited from introductory psychology courses that included mandatory research participation and were able to choose from a range of various studies in which to participate to meet the requirement. There were fewer options available at one of the universities, which may have led to a greater number of students from that university who chose to participate in our study than the other university. Survey administration was conducted via a secured Web site. Each participant indicated their consent to participate after reading an online consent form, after which they were directed to the survey instruments. The sequence of measures was the same for all students. Students received credit toward research requirements for the psychology courses and their survey responses were kept separate from the identification information for extra credit to ensure anonymity of responses. No financial compensation was offered for participation.

Results

Preliminary analyses

The means, standard deviations, and correlations of the primary variables in this study are displayed in Table 1. According to Baron and Kenny (1986), in order to test for mediation in our study, a significant association should occur between (a) the predictor (maladaptive perfectionism) and the mediator (self-compassion), (b)

Table 1. Means, Standard Deviations, and Correlations of Primary Variables (N = 358).

	М	SD	1	2	3
APS-R Discrepancy	48.85	14.20	_		
SCS	74.09	15.35	515*	_	
CES-D	18.87	10.52	.571*	485*	

Note. APS-R = Almost Perfect Scale-Revised; SCS = Self-Compassion Scale; CES-D = Center for Epidemiologic Studies Depression Scale.

the mediator (self-compassion) and the outcome (depressive symptoms), and (c) the predictor (maladaptive perfectionism) and the outcome (depressive symptoms). Maladaptive perfectionism scores had a significant negative correlation with self-compassion, r = -.515, self-compassion scores had a significant negative correlation with depressive symptoms, r = -.485, and maladaptive perfectionism scores had a significant positive correlation with depressive symptoms, r = .571. The skewness and kurtosis values for the Discrepancy scale of the APS-R, the SCS, and the CES-D were all within the acceptable range of -2 to +2 (Lomax, 2001). In order to test for the possible confounding influence of demographic variables on primary variables, a series of multivariate regression analyses were conducted. In each analysis, the demographic variable was the independent variable, while the primary variables were dependent variables. The per comparison alpha level was set to .001 to minimize Type I error, while also keeping a conservative estimate of potential confounding effects. There were no significant relationships found for the primary variables with any of the demographic variables.

Mediation

The mediation model can be viewed in Figure 1, and includes path a (maladaptive perfectionism \rightarrow self-compassion), path **b** (self-compassion \rightarrow depressive symptoms), and path c (maladaptive perfectionism \rightarrow depressive symptoms). A series of multiple regressions were done to determine the strength of association between the relevant variables for the total, direct, and mediated (i.e., indirect) contributions of maladaptive perfectionism to depressive symptoms. The mediated contribution was determined using bootstrapping with 5,000 resamples (Hayes, 2009) and 95% bias-corrected confidence intervals using AMOS 23.0 (Arbuckle, 2015). In order to demonstrate mediation, the strength of the association between the predictor (maladaptive perfectionism) and the outcome (depressive symptoms) must be less after controlling for the mediator (selfcompassion). Given that none of the demographic variables were statistically significant covariates, all participants were combined for these regression analyses.

Significant direct effects were found for all paths described in Figure 1. Specifically, students with higher scores on maladaptive perfectionism reported lower levels of self-compassion than participants with lower levels

^{*}p < .001.

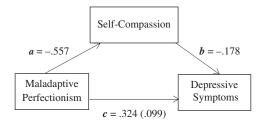


Figure 1. Direct and indirect effects for the relationship between maladaptive perfectionism and depressive symptoms, as mediated by self-compassion. The indirect effect linking maladaptive perfectionism to depressive symptoms via self-compassion (*ab*) is in parentheses. As maladaptive perfectionism increases, so do depressive symptoms; when self-compassion works as a mediator, the relationship is less.

of maladaptive perfectionism (path a) = -.557, 95% CI [-.643, -.467], p < .001. Students with lower scores on self-compassion reported greater endorsement of depressive symptoms than participants with higher levels of self-compassion (path b) = -.178, 95% CI [-.232, -.126], p < .001. Students with higher scores on maladaptive perfectionism reported greater endorsement of depressive symptoms than participants with lower levels of maladaptive perfectionism (path c) = .324, 95% CI [.266, .386], p < .001. Bootstrapping indicated that the indirect path linking maladaptive perfectionism to depressive symptoms via self-compassion (path ab) was = .099, CI [.069, .135], p < .001. The total effect (i.e., combined direct and indirect effects) of maladaptive perfectionism on depressive symptoms was .423, 95% CI [.368, .482], p < .001. Given that the strength of the association between maladaptive perfectionism and depressive symptoms was less, but not zero, after controlling for the mediator of self-compassion, there is support for the hypothesis that self-compassion partially mediates the effect of maladaptive perfectionism on depressive symptoms.

Discussion

This study is the first to examine the relationships among maladaptive perfectionism, self-compassion, and depressive symptoms in the college student population. The results are consistent with previous research demonstrating that higher levels of maladaptive perfectionism are related to higher levels of depression (Ashby et al., 2006; Chang & Sanna, 2001; Rice et al., 1998), and consistent with previous findings on self-compassion, which suggest that it is negatively correlated with depression (Neff, 2011) and maladaptive perfectionism (Neff, 2003). In addition to providing additional evidence for these previously identified relationships, the current study examined self-compassion as a mediator of maladaptive perfectionism and depressive symptoms. Our hypothesis that self-compassion would

mediate the relationship between maladaptive perfectionism and depressive symptoms was supported by the results, which indicated partial mediation. These results provide evidence that self-compassion may be one mechanism through which maladaptive perfectionism affects depressive symptoms. Thus, individuals with high levels of maladaptive perfectionism have high personal standards, are excessively self-critical, worry about perceived mistakes and failures, are dissatisfied with their performance, and have a general sense of inadequacy. Their feelings of inadequacy relate to poor psychological outcomes, including depressive symptoms. Our findings suggest that self-compassion may buffer the influence of such maladaptive perfectionism on depressive symptoms in the college student population.

Implications for practice

The results of this study may have several implications for counseling college students. First, counselors may gain insight into influences on their clients' depressive symptoms by assessing their levels of maladaptive perfectionism. Then, students with high levels of maladaptive perfectionism may benefit from interventions aimed at increasing their levels of self-compassion. Neff (2011) proposes that addressing self-compassion is more beneficial than attempts to enhance self-esteem, because self-compassion does not require viewing oneself as "perfect or as better than others" (p. 8). This proposition appears to make particular sense for individuals who experience maladaptive perfectionism, because attempts to enhance self-esteem could feed into perfectionistic strivings. Additionally, clients would likely find it an easier task to respond to their perceived flaws with a neutrally kind approach (i.e., with self-compassion) rather than attempting to praise or perceive themselves in a solely positive way (i.e., via increasing their self-esteem).

Counselors can help clients who have maladaptive perfectionism approach their perceived limitations with self-compassionate kindness and understanding, as well as reduce their tendency to identify with what they view as their inadequacies. It may help clients to increase awareness of the critical and harsh ways they treat and react to themselves. By becoming increasingly aware of their internal critical voices, clients may recognize the harm that this creates and learn to react to themselves in healthier ways. In this process, clients also may come to recognize the perceived protective functions of selfcriticism (e.g., naming our imperfections and inadequacies before others recognize them and possibly reject us) and identify ways in which their self-criticism may be internalized from external sources of criticism, such as parents (Neff, 2011).

Based on the results of the current study, counselors can assist clients, particularly those who exhibit maladaptive perfectionistic tendencies, to reduce their depressive symptoms by increasing their self-compassion. Specifically,

they can help them explore alternative ways to respond to themselves, such as by extending kindness to themselves when they fall short of their own high standards. If clients struggle with identifying self-compassionate statements, the counselor might invite them to consider what kindness they might be able to express to someone other than themselves, such as a young child, or what a kind person in their lives might say to them.

According to Neff (2003), in order for individuals to experience selfcompassion, they must utilize a mindful approach. Indeed, mindfulness, which has been defined as awareness of one's present experience from an accepting and nonjudgmental perspective (Smalley & Watson, 2010), is in natural alignment with a self-compassionate attitude. Additionally, because of the attention to the present moment, "mindfulness shows us how we relate to our self' (Smalley & Watson, 2010, p. 8), and thus is one pathway to recognizing harsh or critical ways in which we respond to ourselves. One exercise in mindfulness that may be particularly relevant to those with maladaptive perfectionism is the loving-kindness meditation (e.g., Neff, 2003, pp. 203-205; Smalley & Watson, 2010, pp. 146-147; Williams & Penman, 2011, pp. 198-200), which is the practice of extending happiness, peace, health, acceptance, and other kind feelings toward self and others. Similar to a previous recommendation, if clients struggle to extend lovingkindness to themselves, they can be instructed to imagine themselves as when they were young children (Smalley & Watson, 2010). For those students who experience both maladaptive perfectionism and depressive symptoms, the aforementioned interventions may help to increase selfcompassion and so buffer the influence of maladaptive perfectionism on their mood. There is also evidence that self-compassion can be increased via group interventions, such as the Mindful Stress Management college student group utilized by Hindman, Glass, Arnkoff, and Maron (2015).

Clinical vignette

Here is a hypothetical clinical vignette and description of treatment to illustrate this study's implications for practitioners:

Suzy is a 21-year-old female student who presents to the Counseling Center due to low mood, bouts of crying, lack of enjoyment in her life, and social withdrawal. She describes herself as an overachiever who always strives to be the best at everything, especially in her chemistry major. She reports a 3.87 grade point average (GPA) but notes that her classes have gotten increasingly difficult and are especially challenging this semester. She acknowledges that this is the first time that she has really faced disappointment and failure. She is often described by her loved ones as a kind and understanding person, but is also often told by these people that she needs to be easier on herself.

In the beginning stages of therapy, Suzy and her therapist establish a strong alliance and identify therapy goals related to improving her mood and social connectedness. The therapist quickly notices that Suzy talks critically about her recent low mood by saying that she shouldn't feel this way; nothing is wrong and she just needs to get herself together. Suzy easily agrees that she is a perfectionist and notes that this is the reason she does so well academically. Her therapist helps her recognize that while high goals keep her motivated for success, her tendency to beat herself up when she fails to meet her expectations greatly impacts her level of distress. The therapist helps Suzy to become more attuned to the critical voice in her head and recognize how unkindly and harshly she responds to herself across various situations. Suzy admits that while she is viewed as a compassionate person by others, she doesn't show compassion to herself during difficult times. At first, the therapist's suggestion of treating herself with kindness and compassion is odd to her, but she is able to recognize that doing so may minimize the negative consequences of her perfectionism and reduce her level of distress.

Through therapy, Suzy begins to recognize how she has different rules for herself than others, that she believes other people deserve kindness when they struggle, but anything short of perfection is unacceptable for her. The therapist helps her to identify herself as a human being just like other people, and with this insight Suzy is better able to give herself permission to have flaws and make mistakes. She also begins to recognize that she too deserves to be treated with kindness during difficult times, and begins the process of applying self-compassion by saying to herself what she would say to a friend if they were in her situation. With practice, she is able to direct the compassion toward herself. She generates a list of compassionate phrases (e.g., "You're doing the best you can"; "It's OK to struggle sometimes"; "Everyone deserves kindness during difficult times, including yourself") to utilize when she notices her inner critic. She also grounds herself each day by practicing a loving-kindness meditation when she awakens in the morning and immediately before bed at night. Over the course of treatment, Suzy reports ongoing improvement in her mood and greater enjoyment in her life. Her classes remain challenging and she receives lower grades than before, but is able to practice being kind to herself in these moments (e.g., "This is an advanced class with difficult material. You put in a strong effort and it's OK to not get an A"). As she becomes more accepting of her imperfections and vulnerabilities, she also feels able to connect with and reach out for support from the people in her life.

Limitations

Although the sample size of the current study was adequate, the sample was fairly homogenous. Future research should seek to replicate these findings with a more diverse sample in terms of age, racial or ethnic background, and level of education. In addition, while the current study contributed to existing literature by examining self-compassion as a mediator of the relationship between maladaptive perfectionism and depressive symptoms, it would be beneficial in future studies to include additional constructs that have been identified as mediators of this relationship, such as emotional dysregulation (Aldea & Rice, 2006) and the need for validation and approval from others (Wu & Wei, 2008), to determine their relative effects. Finally, our study examined depressive symptoms but did not examine students diagnosed with depressive disorders. Future research could utilize different measures of depression to determine whether the relationships identified in this sample are also evident in clinical samples. Despite these limitations, the present study fills a gap in the literature by providing empirical evidence that self-compassion mediates the relationship between maladaptive perfectionism and depressive symptoms.

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