

科技部補助專題研究計畫報告

自我疼惜對大學生學習倦怠的緩解效果之探究

報告類別：成果報告
計畫類別：個別型計畫
計畫編號：MOST 108-2410-H-004-094-SSS
執行期間：108年08月01日至109年07月31日
執行單位：國立政治大學師資培育中心

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本研究具有政策應用參考價值：☒否 ☐是，建議提供機關
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本研究具影響公共利益之重大發現：☐否 ☐是

中 華 民 國 109 年 09 月 28 日

中文摘要：本研究主要探討國內大學生的自我能力知覺，對於自我疼惜的每一成分（自我友善、共同人性以及正念）與工作投入及學習倦怠間關係之調節效應。此外，研究亦同時檢視大學生自我疼惜三個成分、能力知覺、完美主義傾向、工作投入以及學習倦怠彼此間之關係。研究對象為504位北部地區前段國立大學三、四年級學生，以問卷調查方式，填答上述研究變項相關量表。調節分析之結果顯示：學生的能力知覺，在自我疼惜各成分與工作投入及學習倦怠之關係中，扮演調節的角色。再者，階層迴歸分析結果則顯示：自我疼惜的各成分，與學生的完美主義傾向、工作投入及學習倦怠等變項各自間關係，存在著差異。本研究同時亦支持完美主義的二因子模式：自我疼惜與能力知覺對兩種不同類型的完美主義傾向之效應，剛好相反。此外，努力型完美主義正向預測工作投入，而掛慮型完美主義則正向預測學習倦怠。根據上述研究結果，本報告提出對實務工作與未來相關研究之建議。

中文關鍵詞：自我疼惜、能力知覺、完美主義、學習倦怠、工作投入

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英文關鍵詞：self-compassion, perceived competence, perfectionism, academic burnout, work engagement

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本研究主要探討國內大學生的自我能力知覺，對於自我疼惜的每一成分（自我友善、共同人性以及正念）與工作投入及學習倦怠間關係之調節效應。此外，研究亦同時檢視大學生自我疼惜三個成分、能力知覺、完美主義傾向、工作投入以及學習倦怠彼此間之關係。研究對象為 504 位北部地區前段國立大學三、四年級學生，以問卷調查方式，填答上述研究變項相關量表。調節分析之結果顯示：學生的能力知覺，在自我疼惜各成分與工作投入及學習倦怠之關係中，扮演調節的角色。再者，階層迴歸分析結果則顯示：自我疼惜的各成分，與學生的完美主義傾向、工作投入及學習倦怠等變項各自間關係，存在著差異。本研究同時亦支持完美主義的二因子模式：自我疼惜與能力知覺對兩種不同類型的完美主義傾向之效應，剛好相反。此外，努力型完美主義正向預測工作投入，而掛慮型完美主義則正向預測學習倦怠。根據上述研究結果，本報告提出對實務工作與未來相關研究之建議。

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An Examination of the Soothing Effects of Self-Compassion on University Students'
Academic Burnout

Abstract

The present study attempted to explore the moderating effects of Taiwanese university students' perceived competence on the relationships of each component of self-compassion (i.e., self-kindness, common humanity, and mindfulness) to work engagement and academic burnout. Also, this study examined the interrelationships between the three components of university students' self-compassion, perceived competence, perfectionistic tendencies, work engagement, and academic burnout. Five hundred and four Taiwanese undergraduate students enrolled in top ranking universities completed a self-reported survey assessing the variables described above. Findings of moderation analyses indicated that perceived competence played the moderating role in the relationships of the components of self-compassion to work engagement and academic burnout. Additionally, hierarchical regression analyses suggested that there existed differences in the relationships of each component of self-compassion to students' perfectionistic tendencies, work engagement, and academic burnout. Results from this study also lent support to the two-factor model of perfectionism. The effects of self-compassion and perceived competence on the two types of perfectionism were contrary. Further, perfectionistic strivings positively predicted work engagement, whereas perfectionistic concerns were positively associated with academic burnout. Implications for practices and future research are discussed.

Keywords: self-compassion, perceived competence, perfectionism, academic burnout, work engagement

The period of university study is normally marked with many changes and challenges. During this transitional period, university students experience changes in responsibilities, identity, life styles, social systems, and sometimes living arrangements. On top of all these changes, they need to accomplish coursework to get a degree for a brighter future (Gunnell, Mosewich, McEwen, Eklund, & Crocker, 2017; Stolker & Lafrenere, 2015). Accordingly, students may feel immense pressures and stress at university level. In terms of academic stress, the most common stressors reported by university students include exams, overload of academic tasks and the limited time for doing them, as well as lack of competence for their training (Garcia-Izquierdo, Rios-Risquez, Carrillo-Garcia, & Sabuco-Tebar, 2018). If students have difficulty coping with the pressures and sources of stress, they may experience academic burnout. Student burnout often results from a high imbalance between perceived demands and personal resources (Salmela-Aro & Upadyaya, 2014). It is noteworthy that even high-achieving and motivated students have been found to be vulnerable to burnout (Tuominen-Soini & Salmela-Aro, 2014). Academic burnout appears to have become more prevalent among university students (Lin & Huang, 2012; Stolker & Lafreniere, 2015). Most of the research in this regard has thus far been conducted in a Western context (Barnett & Flores, 2016). There is a shortage of studies on university students' academic burnout in the non-Western setting. To address this shortage, the present study attempted to examine how factors including self-compassion, perceived competence, and perfectionism may be related to Taiwanese university students' academic burnout. Students enrolled in Tier 1 National Universities were recruited as participants in the present study, so that a unique profile of these high-achieving university students' experiences concerning burnout and resilience could be acquired.

Academic Burnout and Engagement

Previous research on burnout focused primarily on the person's response to chronic job stress (Maslach, Schaufeli, & Leiter, 2001). In recent years, this line of research has extended to student samples (e.g., Barnet & Flores, 2016; Schaufeli, Martinez, Marques-Pinto, Salanova, & Bakker, 2002; Stolker, & Lafrenere, 2015). Researchers have hence reconceptualized the notion of burnout in order for relating it more closely to the educational field (Stolker, & Lafrenere, 2015). Academic burnout refers to one's response to his or her inability to cope with academic pressures and course loads. This construct consists of three dimensions: emotional exhaustion due to school-related demands, cynicism and detached attitude toward schooling, and feelings of inadequacy as a student (Parker & Salmela-Aro, 2011). Emotional exhaustion includes chronic fatigue, rumination, and strain, namely, symptoms of stress and anxiety. School-related cynicism can be defined as lower interest and a distant attitude toward coursework. Feelings of inadequacy refer to the feelings of not accomplishing the task properly and a lack of efficacy in a school context (Barnett & Flores, 2016). Academic burnout has been found to increase over time and to be associated with a range of negative outcomes. Students who experienced academic burnout also reported decreased academic engagement and achievement, somatic complications, anxiety, depression symptoms, and even school dropout (Bask & Salmela-Aro, 2013; Murberg & Bru, 2007; Vasalampi, Salmela-Aro, & Nurmi, 2009). To prevent these problems from arising, it is critical to identify factors that have the potential to ease university students' academic burnout, and even further, to foster their work engagement.

Work engagement is a key component of academic success. Students need to engage in their coursework in order to do well and achieve at the university level (Stolker & Lafreniere, 2015). Academic engagement is defined as the individual's motivation and mental engagement in schoolwork. It is characterized by vigor,

dedication, and absorption (Schaufeli et al., 2002). Vigor refers to high levels of energy and resilience, the student's willingness and ability to invest in work and persistence when facing difficulties. Dedication refers to one's strong involvement in work, accompanied by a sense of significance, enthusiasm, pride, and inspiration. Finally, absorption refers to an individual's pleasant state of total immersion in work. In such a state, the student may be unable to detach from the work of study. In their research using a university student sample, Schaufeli et al. (2002) found that higher academic engagement was associated with lower levels of burnout. That is, burnout and engagement can be viewed as two opposite constructs. Prior findings indicated that self-compassion enabled one to change his or her view of a stressful situation in order to see it in a more positive light. Self-compassion is a relatively new concept in Western psychology. It has been documented as a positive quality to facilitate mental well-being (Zhang, Luo, Che, Duan, 2016). Being self-compassionate is likely to buffer against the harmful influence of academic stress (Allen & Leary, 2010; Zhang, et al., 2016). Therefore, self-compassion may be a prospective way to reduce burnout and heighten engagement in the academic context.

Self-Compassion and Perceived Competence

As an important human strength, self-compassion refers to a warm-hearted, caring, empathic, and nonjudgmental orientation toward oneself that one conveys toward loved ones during times of suffering and failure (Gilbert, 2009; Neff, 2003a). Theoretically, self-compassion is a multi-dimensional construct with three bipolar qualities: self-kindness vs. self-judgment, common humanity vs. isolation, and mindfulness vs. over-identification (Allen & Leary, 2010; Neff, 2003a, 2009; Trompetter, de Kleine, & Bohlmeijer, 2017). Self-kindness refers to the ability to be friendly and understanding toward oneself when encountering difficult life circumstances or personal failures as opposed to being overly self-critical. Individuals

with self-kindness are more apt to accept painful experiences with sympathy and calmness, rather than with self-criticism. Common humanity refers to the ability to recognize that all human are imperfect and vulnerable and that suffering is part of the common, shared human experience, as opposed to seeing suffering as personal and isolated. People with a strong sense of common humanity view their imperfections as normal occurrences and thus experience less frustration. The third component, mindfulness, refers to the ability to observe difficult feelings and events in the present moment without exaggerating or avoiding them, as opposed to over-identification and fusion with the self. Over-identification is a process by which people are carried away with thoughts and emotions, which can lead them to lose perspective on situations (Manavipour & Saeedian, 2016). Mindful individuals are able to maintain perspective in the face of stress and take an open and nonjudgmental stance toward their negative thoughts and feeling. Neff (2003a, 2003b, 2009) demonstrated that the bipolar features of self-compassion were highly intercorrelated and could be explained by a single overarching factor of self-compassion.

Self-compassion has been found to be positively related to desired outcomes and negatively associated with undesired outcomes. For instance, self-compassion was associated with factors related to positive mental health such as life satisfaction, social connectedness, wisdom, optimism, happiness, and personal growth (Barnard & Curry, 2011; Neff, 2009, 2011; Neff, Rude, & Kirkpatrick, 2007). Also, self-compassion was negatively related to depression, anxiety, negative affect, and stress (Neff, Hseih, & Dejitthirat, 2005; Ehret, Joormann, & Berking, 2018; Muris & Petrocchi, 2017). In the educational context, students with higher levels of self-compassion showed greater intrinsic motivation and perceived competence, as well as less fear of failure, academic worry, and procrastination tendency (Neff et al., 2005; Williams, Stark, & Foster, 2008). Further, existing literature suggested that self-compassion buffered

against the negative effects of academic stress on academic performance and emotional well-being in undergraduates (Neff et al., 2005; Kyeong, 2013; Hope, 2014). It was thus speculated that self-compassion would enable university students to adequately cope with academic stress, so that academic burnout might be alleviated.

There is an increasing focus on resilience in higher education. Resilience can be viewed as a dynamic process in which individuals capitalize on personal and contextual resources to deal with difficult challenges and to work toward adaptive functioning (McArthur et al. 2017). Self-compassion has been identified as one of the personal protective resources associated with the ability to “bounce back” from setbacks and adversity (Neff et al., 2005). We need to know more of the working mechanisms by which self-compassion enacts its potential as a resilience resource. Such an understanding is thought to inform college educators to develop effective intervention strategies that help students successfully cope with academic burnout. The vast majority of the research on self-comparison tended to explore the very construct as a whole. The three components of self-compassion (i.e., self-kindness, common humanity, and mindfulness) are, however, conceptually distinct and are experienced differently (Wong & Mak, 2013). In other words, each component of self-compassion may have different effects on the outcomes of interest. The present research was intended to examine the relationships between each component of self-compassion and college students’ academic burnout and engagement. In doing so, it was hoped that the unique contributions of each component to their academic experiences could be precisely detected and compared.

In addition to self-compassion, the individual’s perceived competence can also be considered as a psychological resource that may promote resilience and engagement (Korhonen, Tapola, Linnanmaki, & Aunio, 2016). Perceived academic competence refers to students’ perceptions of their abilities to succeed with academic

tasks (Deci & Ryan, 2002). It has been identified as a fundamental motivational resource that is significantly linked to positive educational outcomes such as academic engagement and achievement over time (Guay, Marsh, & Boivin, 2003; Wong, Wiest, & Cusick, 2002). Moreover, previous findings suggested a reciprocal developmental relationship between achievement, perceived competence, and interest, with a growing tendency during the school years (Möller, Retelsdorf, Köller, & Marsh, 2011). When students perceive a lack of ability to master the coursework and to accomplish positive and desired outcomes, they are likely to lose interest in their study and experience burnout. Perceptions of academic competence may not only offset academic stress and setbacks, the well-documented triggers of burnout, but lead to higher persistence and expectation for attaining academic goals (Manavipour & Saeenian, 2016; Martin & Kennett, 2018). To obtain a comprehensive understanding of the factors related to university students' academic burnout and engagement, the effects of perceived competence together with self-compassion would be explored. Moreover, it has been suggested that perceived competence might also exert moderation effects on the relationships between motivational beliefs and educational outcomes (Eccles, 2009). On the basis of the very findings, the present research was devised to examine whether students' perceived competence would play the moderating role in the relationships of each component of self-compassion to academic burnout and engagement. Results regarding the interacting effects of perceived competence and self-compassion were expected to enlighten us the most potent ways to ameliorate student burnout and foster engagement. On top of these motivational factors, perfectionism as a personality trait was also included in the current study.

Perfectionism

Perfectionism refers to a personality disposition characterized by setting exceedingly high standards of performance accompanied by an overly critical evaluation of the self in pursuit of these standards (Stoeber, 2019). This personality disposition pervades all areas of life, particularly work and educational activities (e.g., university). Research in personality and individual differences indicated that perfectionism is a multidimensional construct that has a variety of aspects (Frost, Marten, Lahart, & Rosenblate, 1990; Hewitt & Flett, 1991). Frost et al. (1990) proposed a model comprised of six dimensions of perfectionism. The first dimension has been described as the central feature of perfectionism, namely, the setting of high standards of performance. Another major dimension is concern over mistakes. This dimension captures individuals' fear about making mistakes and the negative self-evaluation as a result of the mistakes. The third dimension, doubts about actions, is a tendency to doubt the quality of performance. The fourth and fifth dimensions assess the theorized root of perfectionism. Parental expectations and parental criticism refer to perfectionists' perceptions that their parents expect them to be perfect and are critical if they fail to meet the expectations. The sixth dimension, organization, refers to a tendency to be organized and value order and neatness (Frost, Heimberg, Holt, Mattia, & Neubauer, 1993; Stoeber, 2018).

Among these dimensions of perfectionism, researchers (Frost et al., 1993; Stoeber & Otto, 2006) found two higher order latent factors sustain the differentiation between perfectionistic strivings and perfectionistic concerns. Perfectionistic strivings refer to self-oriented strivings for perfection, whereas perfectionistic concerns capture aspects of perfectionism reflecting concern over mistakes and doubts about actions. The two-factor model of perfectionism represents a framework for understanding how perfectionism can be adaptive and maladaptive (Stoeber, 2018). Perfectionistic strivings have been found to be positively associated with characteristics and

outcomes that are considered adaptive (e.g., conscientiousness, active coping, positive affect) and negatively related to depression and perceived hassles. In contrast, perfectionistic concerns have been consistently linked to such undesirable characteristics and outcomes as neuroticism, avoidant coping, and negative affect (Ferrari, Yap, Scott, Einstein, Ciarrochi, 2018; Stoeber, 2019).

According to the two-factor model of perfectionism, perfectionistic strivings mainly show positive relationships with approach-oriented aspects of achievement motivation, which may lead students to be actively engaged in schoolwork. Conversely, perfectionistic concerns that involve self-criticism, concerns about making mistakes, and fear of negative evaluation may potentially exacerbate academic stress and create a vulnerability to burnout. The current research attempted to investigate the relationships between university students' perfectionistic tendencies and academic engagement versus burnout to determine whether the two-factor model of perfectionism would be corroborated in this respect. Also, the influences of self-compassion on one's perfectionistic tendencies deserve more attention. Self-compassion may encourage individuals to hold caring, empathic, and nonjudgmental views of themselves during times of failure (Zhang et al., 2018). Such healthy ways of relating to oneself were expected to buffer against the development of perfectionistic concerns. The effects of each component of self-compassion on students' perfectionistic tendencies (i.e., perfectionistic strivings versus perfectionistic concerns), nevertheless, remained to be examined.

The Present Study

In accordance with the rationale above, the present study aimed to (a) explore the moderating effects of university students' perceived competence on the relationships of each component of self-compassion (i.e., self-kindness, common humanity, and mindfulness) to work engagement and academic burnout, when the other two self-

compassion components were controlled for; and (b) examine the interrelationships between the three components of university students' self-compassion, perceived competence, perfectionistic tendencies, work engagement, and academic burnout. Based on the empirical findings noted above, the following hypotheses were proposed:

- (1) Students' perceived competence would moderate the relationships between each component of self-compassion and work engagement, when the other two self-compassion components were controlled for.
- (2) Students' perceived competence would moderate the relationships between each component of self-compassion and academic burnout, when the other two self-compassion components were controlled for.
- (3) The three components of students' self-compassion and perceived competence would be associated with their perfectionistic tendencies (i.e., perfectionistic strivings and perfectionistic concerns).
- (4) The three components of students' self-compassion, perceived competence, and perfectionistic tendencies would be associated with their work engagement.
- (5) The three components of students' self-compassion, perceived competence, perfectionistic tendencies, and work engagement would be associated with their academic burnout.

Up to now, there has been little research that examines the different effects of each component of self-compassion on academic-related outcomes among university students in the non-Western context such as Taiwan. Findings from the present study were expected to provide insights into how to help students more effectively manage academic stressors, which would better their educational experiences.

Participants

The participants were 504 Taiwanese undergraduate students (215 men, 289 women) enrolled in four top ranking universities in the northern part of Taiwan. All students were recruited from colleges of liberal arts (20%), engineering (18.5%), commerce (50.8%), and social sciences (10.7%) and offered an NT\$ 100 gift card for completing the survey. The vast majority of participating students were in their third or fourth year of study. The participants had a mean age of 21.67 years ($SD = 1.47$ years), with ranges from 19.5 to 30.5 years. Participants were all full-time students. Guidelines for the proper treatment of human subjects were followed (APA, 2010).

Procedure

The data were collected at the beginning of the fall semester of the 2019 academic year. Permission for students' participation was obtained from the instructors of relevant classes. All participants took part in the study voluntarily. Students were invited to fill out a survey (described in detail below) at the end of the class meetings. It took participants about 15 minutes to complete the questionnaire. There were two research assistants in each class for the data collection. Prior to administration of the survey, the participants were briefed about the purpose of the study. Completion of the questionnaire was anonymous and there was a guarantee of confidentiality.

Measures

Participants were instructed to respond to all items using a six-point Likert scales, ranging from 1 (strongly disagree) to 6 (strongly agree). A Chinese language version of this self-report survey was used. All measures utilized in the present study were translated into Chinese and then back-translated into English. To ensure adequate translation, guidelines of the International Test Commission (Hambleton, 1994) were followed. Information on each scale used in the present study is detailed below.

Self-compassion. The Self-Compassion Scale (SCS, Neff, 2003b) was developed to explicitly represent the thoughts, emotions, and behaviors associated with the various components of self-compassion. The 26-item scale assesses the three main components of self-compassion, self-kindness (vs. self-judgment), common humanity (vs. isolation), and mindfulness (vs. over-identification), using both positive and negative scored items for each component subscale. The six subscales include self-kindness (e.g., “I’m kind to myself when I’m experiencing suffering”; items; $\alpha = .77$), self-judgment (e.g., “When I see aspects of myself that I don’t like, I get down on myself”; items; $\alpha = .70$), common humanity (e.g., “I try to see my failings as part of the human condition”; items; $\alpha = .77$), isolation (e.g., “When I fail at something that’s important to me, I tend to feel alone in my failure”; items; $\alpha = .76$), mindfulness (e.g., “When something painful happens, I try to take a balanced view of the situation”; items; $\alpha = .73$), and over-identification (e.g., “When something upsets me, I get carried away with my feelings”; items; $\alpha = .82$).

The SCS has been used among Chinese in Taiwan (Neff, Pisitsungkagarn, & Hsieh, 2008) and Mainland China (Kwan, Kuang, & Hui, 2009) and has been found to show good internal consistency, construct-related validity, and factor structure. Given that the present study was intended to examine the protective factors against academic burnout, the subscales of positive self-compassion components (i.e., self-kindness, common humanity, and mindfulness) were employed. Higher scores represent higher trait levels of self-compassion.

Perceived competence. Students’ perceptions of their competence in learning were assessed by Perceived Competence Scale (PCS, Williams & Deci, 1996). This scale consists of 4 items that measure students’ feelings of competence about mastering the materials in college courses or undertaking the challenges of learning. Higher scores indicate that students perceive higher levels of their competence in

learning. Example items include "I am able to achieve my goals in the courses I take" and "I feel able to meet the challenge of performing well in the courses I take." This scale demonstrated acceptable reliability with a Cronbach's α of .88.

Academic burnout. Students' academic burnout was assessed by the scale adapted from the Maslach Burnout Inventory-Student Survey (MBI-SS; Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002). The adapted survey consists of three subscales: exhaustion (e.g., "I feel emotionally drained by my studies"; 5 items; $\alpha = .84$), cynicism (e.g., "I doubt the significance of my studies"; 4 items; $\alpha = .83$), and lack of efficacy (e.g., "I can effectively solve the problems that arise in my studies"; 4 items; $\alpha = .73$). The items measuring efficacy were reverse scored. The composite mean was calculated for all items from each subscale. Higher scores indicate higher levels of academic burnout. The internal consistency (Cronbach's α) of the whole scale was .80.

Work engagement. Students' engagement in their coursework was assessed by the questionnaire adapted from the Utrecht Work Engagement Scale-Student (UWES-S; Schaufeli et al., 2002). This scale was constructed to measure the three underlying dimensions of work engagement: vigor (e.g., When studying I feel strong and vigorous, 4 items, $\alpha = .78$), dedication (e.g., I am enthusiastic about my studies, 5 items, $\alpha = .84$), and Absorption (e.g., I can get carried away by my studies, 4 items, $\alpha = .81$). The composite mean was calculated for all items from each subscale. Higher scores indicate higher levels of work engagement. The whole scale demonstrated good reliability with a Cronbach's α of .92.

Perfectionism. Students' perfectionistic tendencies were assessed by the scale adapted from the Multidimensional Perfectionism Scale (MPS; Frost et al., 1990). This scale measures perfectionism across six dimensions including personal standards (e.g., "I set higher goals than most people"; 4 items; $\alpha = .81$), organization (e.g., "I try

to be an organized person”; 5 items; $\alpha = .85$), concern over mistakes (e.g., “People will probably think less of me if I make a mistake”; 4 items; $\alpha = .82$), doubts about actions (e.g., “I usually have doubts about the simple everyday things I do”; 4 items; $\alpha = .65$), parental expectations (e.g., “My parents set very high standards for me”; 5 items; $\alpha = .86$), and parental criticism (e.g., “My parents never tried to understand my mistakes”; 4 items; $\alpha = .73$). The subscales of personal standards, organization, concern over mistakes, and doubts about actions were used in the current study to measure perfectionistic expectations the student has for him- or herself. Next, according to Frost et al.’s study (1993), subscales assessing personal standards and organization were combined to create the measure of perfectionistic strivings ($r = .55$, $p < .001$; $\alpha = .87$). Also, scores for concern over mistakes and doubts about actions were averaged to form a composite of perfectionistic concerns ($r = .62$, $p < .001$; $\alpha = .84$). Higher scores represent higher levels of perfectionistic strivings or perfectionistic concerns.

Results

Statistical Analyses

Descriptive information and correlations for study variables are shown in Table 1. One of the primary purposes of the current study was to determine whether the interactions between perceived competence and the components of self-compassion predicted students’ work engagement and academic burnout. Results from moderation analyses are thus presented first using perceived competence as the moderator. In addition to moderation analyses, the data were analyzed in hierarchical multiple regressions in which students’ perfectionistic tendencies, work engagement, and academic burnout were used as outcome variables. In the hierarchical regression analyses predicting perfectionistic strivings and concerns, the three components of self-compassion were entered in Step 1. In Step 2, perceived competence was entered

in the regression models. For the outcome regarding work engagement, the three components of self-compassion were included in the first regression model. In Step 2, perceived competence and perfectionistic tendencies were entered. As for the predictors of academic burnout, the three components of self-compassion were entered in the first step. Perceived competence and perfectionistic tendencies were added in Step 2. Students' work engagement was included in the final regression model. In the preliminary analysis, gender was entered in regression models. It turned out that gender failed to predict any outcome variable of interest. Therefore, gender was not included as a predicting variable in the current research.

Moderation Analyses

To examine whether the relationships of the three components of self-compassion to students' work engagement and academic burnout changed as a function of perceived competence (the moderator), moderation analyses were conducted. The predictor and moderator variables were centered before computing the interaction terms to reduce multicollinearity (Howell, 2013). Six parallel hierarchical regression analyses were performed. Each examined the interaction effects between perceived competence and a component of self-compassion (i.e., self-kindness, common humanity, and mindfulness) on the outcome variables (i.e., work engagement and academic burnout). In the first step, the covariates (the other two self-compassion components that were not examined in the interaction term) were entered. The independent variable and moderator were then entered in the second step. Finally, the interaction term was entered in the regression model. The results are presented in Table 2.

In line with our hypotheses, significant interaction effects on work engagement were found between perceived competence and self-kindness, $\beta = .13, p = .001$, between perceived competence and common humanity, $\beta = .12, p < .01$, and between

perceived competence and mindfulness, $\beta = .13, p = .001$. To probe the significant interactions, simple slope tests were then conducted as recommended by Aiken and West (1991). A series of simple regression analyses were run to compare the effects of self-kindness, common humanity, and mindfulness on work engagement between students with high (1 *SD* above the mean) perceived competence and students with low (1 *SD* below the mean) perceived competence. As shown in Figure 1, the positive association between self-kindness and work engagement was stronger among students with high perceived competence ($\beta = .19, p < .001$) than it was with students with low perceived competence ($\beta = -.02, p > .05$). In Figure 2, there was a stronger positive relationship between common humanity and work engagement for individuals with high perceived competence ($\beta = .16, p < .01$) compared to those who had low perceived competence ($\beta = -.02, p > .05$). Also, for students with high perceived competence, the positive association between mindfulness and work engagement was stronger ($\beta = .23, p < .001$) than for those with low perceived competence ($\beta = .03, p > .05$) (see Figure 3).

As for the interaction effects between perceived competence and the three components of self-compassion on academic burnout, significant effects were found between perceived competence and self-kindness, $\beta = -.09, p = .01$, and between perceived competence and mindfulness, $\beta = -.10, p < .01$. Simple slope tests were also performed to compare the effects of self-kindness and mindfulness on academic burnout between students with high (1 *SD* above the mean) perceived competence and students with low (1 *SD* below the mean) perceived competence. Figure 4 shows that for the group with high perceived competence scores, the negative association between self-kindness and academic burnout was stronger ($\beta = -.14, p < .01$) than for those with low scores on perceived competence ($\beta = .02, p > .05$). Similarly, in Figure 5, the negative relationship between mindfulness and academic burnout was stronger

($\beta = -.12, p = .01$) among students with high perceived competence than it was among students with low perceived competence ($\beta = .04, p > .05$).

Hierarchical Regressions Predicting Students' Perfectionistic Strivings and Concerns

Perfectionistic strivings. Results of regression analyses predicting students' perfectionistic strivings and concerns are displayed in Table 3. Self-kindness, common humanity, and mindfulness were entered in the first regression model and accounted for a significant amount of the variance (7%) in perfectionistic strivings, $F(3, 500) = 11.79, p < .001$. Mindfulness was positively associated with perfectionistic strivings, $\beta = .28, p < .001$. In Step 2, students' perceived competence was included in the model. Adding perceived competence increased the amount of the variance explained for perfectionistic strivings by 8%, $F(4, 499) = 21.50, p < .001$. Results from this step suggested that when other predictors were controlled for, both mindfulness as well as perceived competence positively predicted perfectionistic strivings, $\beta = .20, p < .001$ and $\beta = .31, p < .001$, respectively.

Perfectionistic concerns. Variables entered in Step 1 (i.e., self-kindness, common humanity, and mindfulness) predicted a significant amount of the variance (15%) in perfectionistic concerns, $F(3, 500) = 29.40, p < .001$. Self-kindness was negatively related to perfectionistic concerns, $\beta = -.37, p < .001$. Results from Step 2 indicated that adding perceived competence increased the amount of the variance explained by 2% for perfectionistic concerns, $F(4, 499) = 26.01, p < .001$. When other variables were controlled for, perceived competence was negatively correlated with perfectionistic concerns, $\beta = -.16, p < .001$. Self-kindness remained to be a negative predictor, $\beta = -.34, p < .001$.

Hierarchical Regressions Predicting Students' Work Engagement and Academic Burnout

Work engagement. Table 4 presents results of hierarchical regressions predicting students' work engagement and academic burnout. The amount of the variance (9%) explained by the three components of self-compassion (i.e., self-kindness, common humanity, and mindfulness) in the first step of the analysis was significant for students' work engagement, $F(3, 500) = 16.37, p < .001$. Mindfulness was positively related to university students' work engagement, $\beta = .23, p < .001$. Adding perceived competence, perfectionistic strivings, and perfectionistic concerns in the second step increased the amount of the variance explained for work engagement by 18%, $F(6, 497) = 30.72, p < .001$. When other variables were taken into account, both perceived competence and perfectionistic strivings positively predicted work engagement, $\beta = .35, p < .001$ and $\beta = .21, p < .001$, respectively. The effects of mindfulness were however no longer significant, $\beta = .08, p > .05$.

Academic burnout. Self-kindness, common humanity, and mindfulness were entered in the first regression model and accounted for a significant amount of the variance (8%) in students' academic burnout, $F(3, 500) = 14.56, p < .001$. Both self-kindness and mindfulness negatively predicted academic burnout, $\beta = -.18, p < .001$ and $\beta = -.17, p < .001$, respectively. In Step 2, perceived competence along with perfectionistic tendencies were included in the model. Adding these variables increased the amount of the variance explained for academic burnout by 33%, $F(6, 497) = 58.05, p < .001$. When other predictors were controlled for, perceived competence and perfectionistic strivings were negatively associated with academic burnout, $\beta = -.43, p < .001$ and $\beta = -.23, p < .001$, respectively. Conversely, perfectionistic concerns emerged as a positive predictor, $\beta = .31, p < .001$. In Step 3, students' work engagement was entered. Adding this variable increased the amount of the variance explained for academic burnout by 17%, $F(7, 496) = 97.62, p < .001$. When other predictors were accounted for, work engagement was negatively related

to academic burnout, $\beta = -.48, p < .001$. Perceived competence ($\beta = -.27, p < .001$), perfectionistic strivings ($\beta = -.13, p < .001$), and perfectionistic concerns ($\beta = .31, p < .001$) remained to be significant predictors.

Discussion

Findings of the present study further the understanding of factors related to Taiwanese university students' academic burnout and engagement. This line of research has primarily been confined to college students samples in a Western context. The present findings inform us of high-achieving university students' educational experiences in the Taiwanese context. Moreover, this study adds to the existing literature in several ways. First, researchers have yet to examine whether students' perceived competence plays the moderating role in the relationships between self-compassion and academic burnout versus work engagement. The present findings indicate that the relationships of the components of self-compassion to work engagement versus academic burnout vary as a function of perceived competence. Second, the current research sheds light on the relationships of each component of self-compassion to students' perfectionistic tendencies, work engagement, and academic burnout. Hierarchical regression analyses suggest that there exist differences in the effects of each component of self-compassion on these outcomes of interest. Third, findings of this study also lend support to the two-factor model of perfectionism. The effects of self-compassion and perceived competence on the two types of perfectionism are contrary. Further, perfectionistic strivings positively predict work engagement, whereas perfectionistic concerns are positively associated with academic burnout. Below, several important findings are discussed in more detail.

Moderating Effects of Perceived Competence

An important finding of the present study is that students' perceived competence plays the moderating role in the relationships between each component of self-

compassion and work engagement. The effects of self-kindness, common humanity, and mindfulness on work engagement are stronger among students with higher levels of perceived competence. Put differently, the facilitative effects of different components of self-compassion on students' motivation and mental engagement in coursework are even more powerful when students perceive that they are able to successfully master the academic tasks. With respect to the relationships between the components of self-compassion and academic burnout, results of the current study indicate that perceived competence also functions as a moderator. The negative effects of self-kindness and mindfulness on academic burnout are stronger for students with higher levels of perceived competence. When students feel that they can handle academic tasks well, being understanding toward oneself and maintaining perspective in the face of stress and difficulties (i.e., self-kindness and mindfulness) are linked to lower levels of academic burnout. Previous studies (Ferrai, Yap, Scott, Einstein, & Ciarrochi, 2018; Kueong, 2013; Martin, R. D., & Kennett, 2018; Trompetter et al., 2016; Wong & Mak, 2013) have consistently focused on exploring the effects of self-compassion as a moderator on mental health outcomes. To our knowledge, this study is the first one to investigate the moderating role of perceived competence in the relationships of the components of self-compassion to work engagement and academic burnout. Clearly, the effects of the components of self-compassion on engagement and burnout are reinforced in particular when these high-achieving students have higher levels of perceptions of their abilities to succeed with coursework. These findings suggest that in addition to self-compassion, perceived competence may be another crucial resilience factor for university students' educational aspirations. Higher levels of perceived academic competence may help boost the effects of self-compassion on both promoting engagement and decreasing academic burnout.

Predictors of Perfectionism

Results of the current study show that the three components of self-compassion are differently related to students' perfectionistic strivings versus perfectionistic concerns. Mindfulness is positively linked to perfectionistic strivings only. The ability to take a balanced approach to one's negative thoughts and feelings in the face of setbacks and not to be carried away by these feelings may encourage students to set higher standards of performance without raising the evaluative concerns. By contrast, self-kindness is the only component that emerges as a negative predictor of perfectionistic concerns. As expected, being kind to oneself when encountering personal failures may help mitigate the fear about making mistakes and self-doubts stemming from the setbacks or failures. Students who offer themselves warmth and understanding while confronting their own experiences of inadequacy or failure seem less likely to be overly self-critical of performance.

Students' perceptions of academic competence have contrasting effects on the two types of perfectionistic tendencies. Those who perceive that they are capable of succeeding with coursework are prone to show perfectionistic strivings, whereas students who do not feel confident enough to master academic tasks tend to have concerns over mistakes and feelings of discrepancy between their expectations and performance. The contrary relationships found between perceived competence and perfectionistic strivings versus perfectionistic concerns suggest the differences between the two types of perfectionism. Higher levels of perceived competence may lead to students' higher expectations of attaining academic goals and, moreover, attenuate their fears of failure to meet the expectations and reach the goals. Perceived competence together with self-kindness are the psychological resources identified in the present research that have the potential to diminish students' evaluative concerns when pursuing high standards of performance.

Predictors of Work Engagement and Academic Burnout

Of all the components of self-compassion, mindfulness is the only one that is significantly related to students' work engagement. Having a balanced awareness, clarity, and acceptance of thoughts and feelings enables students to fully engage in schoolwork without being disrupted by painful thoughts or feelings in the face of setbacks. Mindfulness, however, no longer shows significant effects when adding perceived competence and perfectionistic tendencies to the regression models. Perceived competence and perfectionistic strivings seem likely to mediate the relationship of mindfulness to work engagement. Previous research (Martin & Kennett, 2018) indicated that students are disinclined to engage in academic tasks if they attribute academic disappointment to a lack of ability or do not believe in their academic competence. In consistence with these findings, results of the current study show the positive association between perceived competence and engagement in academic activities. Moreover, perfectionistic strivings appear to be another motivational resources that are presumed to inspire students' approach-oriented achievement motivation and thereby to elevate their work engagement.

In terms of the predictors of academic burnout, self-kindness and mindfulness are found to be negatively related to student burnout. Little research has yet been conducted to precisely determine the role of each component of self-compassion in burnout. Results of the presents study suggest that the combination of being understanding of oneself and having a balanced awareness, clarity, and acceptance of thoughts and feelings may explain why self-compassion are able to ease one's academic burnout. Perceived competence is also a vital factor that may lessen burnout. Students with higher levels of perceptions of their academic competence are less likely to be vulnerable to burnout. In line with previous findings (Guay et al., 2003; Wong et al., 2002), results of the current research indicate that perceived

competence in effect functions as a resource of resilience when university students encounter academic challenges. Perceived competence is thought to energize students to effectively cope with stress and difficulties. Consequently, burnout may be reduced. As expected, perfectionistic concerns emerge as a positive predictor of academic burnout. Students who show evaluative concerns seem to be at risk of experiencing academic burnout. By contrast, perfectionistic strivings are negatively related to burnout. Clearly, when examining the relationships between perfectionistic tendencies and academic burnout, there is a need to differentiate between perfectionistic strivings and perfectionistic concerns.

It is likely that work engagement partially mediates the effects of perceived competence and perfectionistic strivings on burnout, given that the magnitudes of the influences of these two particular factors are decreased when student engagement is taken into account. Work engagement emerges as the strongest negative predictor of student burnout. The inverse relationship between work engagement and academic burnout found in the current research parallels the findings of Schaufeli et al.'s study (2002). It implicates that motivating students to enthusiastically engage in coursework may be a remedy for academic burnout. Results of the present study indicate that self-compassion, perceived competence, perfectionistic tendencies, and work engagement altogether account for a substantial amount of the variance (58%) of academic burnout. These factors thus are supposed to be the key determinants when it comes to alleviating Taiwanese university students' burnout.

Implications for Practice

Results of the present research indicate the moderating role of perceived competence in the effects of self-compassion on Taiwanese university students' work engagement and academic burnout. A great number of studies (see Muris & Petrocchi, 2017) have consistently reported that self-compassion may be conducive to building

up individuals' positive mental health and also to relieving psychopathological symptoms. The present findings further show how one's perceived competence may interact with self-compassion and then determine the levels of academic engagement and burnout. In addition to cultivating self-compassion, college educators also need to take perceived competence into consideration when aiming at strengthening students' resilience in higher education. As a source of resilience, perceived competence may not only directly mitigate student burnout and boost engagement in its own right, but may intensify the favorable effects of self-compassion on these two outcome variables.

Self-kindness and mindfulness are another antecedent factors that may reduce student burnout. Additionally, mindfulness is positively associated with work engagement. Interventions that designed to develop university students' self-kindness and mindfulness are encouraged. On the basis of the present findings, even high-achieving students are thought to benefit from the practice of self-compassion. Also, students' perfectionistic tendencies play a role in their work engagement and academic burnout. Given that perfectionistic strivings are positively linked to students' engagement in coursework and negatively related to burnout, it may be advantageous to nurture students' perfectionistic strivings without perfectionistic concerns. Students can be motivated to strive for high academic standards. In the mean time, educators should explicitly convey to students that making mistakes is a natural part of learning. When students are free from the concerns about negative evaluations as a result of making mistakes or failure to meet the standards (i.e., perfectionistic concerns), perfectionistic strivings are supposed to maximize the preferable effects.

Limitations and Future Research

Several limitations need to be addressed in the future research. First, as a

component of self-compassion, common humanity fails to significantly predict any outcome variable of interest in the present study. Future research should explore the relationships between the components of self-compassion and other academic-related variables such as achievement goals, academic coping, and academic emotions and compare effects of each component on these outcome variables. The sort of examination can help find out whether common humanity is related to particular variables only or has none effect on one's academic functioning at all. Second, a key strength of the current study is the investigation into the moderating effects of perceived competence on the relationships of self-compassion to student engagement versus burnout. Given that findings of the present research suggest that high-achieving university students' perceived competence can moderate the effects of self-compassion on academic engagement and burnout, future research needs to replicate the present study in other student groups of different academic achievement levels. Such research is required to confirm the generalizability of the findings to an expanded range of students (e.g., students with lower levels of academic achievement). Finally, the present study attempts to examine the potential antecedents of university students' work engagement and academic burnout. Nonetheless, this study is cross-sectional and correlational in nature such that the direction of the relationships among the variables cannot be determined for sure. A cross-lagged panel model that is able to address issues of causality and to more precisely identify the antecedent variables is needed in future research. Such research should provide insights into interventions that may facilitate adaptive academic functioning.

References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage
- Allen, A. B., & Leary, M. R. (2010). Self-compassion, stress, and coping. *Social and Personality Psychology Compass*, 4, 107-118.
- American Psychological Association. (2010). *Ethical principles of psychologists and code of conduct*. Washington, DC: American Psychological Association.
- Barnard, L. K., & Curry, J. F. (2011). Self-compassion: Conceptualizations, correlates, and interventions. *Review of General Psychology*, 15, 289-303.
- Barnett, M. D., & Flores, J. (2016). Narcissus, exhausted: Self-compassion mediated the relationship between narcissism and school burnout. *Personality and Individual Differences*, 97, 102-108.
- Bask, M., & Salmela-Aro, K. (2013). Burned out to drop out: Exploring the relationship between school burnout and school drop. *European Journal of Psychology of Education*, 28, 511-528.
- Deci, E. L., & Ryan, R. (2002). *The paradox of achievement: The harder you push, the worst it gets*. In J. Aronson (Ed.), *Improving academic achievement: Contributions of social psychology* (pp. 61-87). New York: Academic Press.
- Eccles, J. (2009). Who am I and what am I going to do with my life? Personal and collective identities as motivators of action. *Educational Psychologist*, 44, 78-89.
- Ehret, A., M., Joormann, J., & Berking, M. (2018). Self-compassion is more effective than acceptance and reappraisal in decreasing depressed mood in currently and formerly depressed individuals. *Journal of Affective Disorders*, 226, 220-226.
- Ferrari, M., Yap, K., Scott, N., Einstein, D. A., Ciarrochi, J. (2018). Self-compassion moderates the perfectionism and depression link in both adolescence and adulthood. *PLoS ONE*, 13(2): e0192022.

<https://doi.org/10.1371/journal.pone.0192022>

- Frost, R. O., Heimberg, R. G., Holt, C. S., Mattia, J. I., & Neubauer, A. L. (1993). A comparison of two measures of perfectionism. *Personality and Individual Differences, 14*, 119-126.
- Frost, R. O., Marten, P., Lahart, C., & Rosenblate, R. (1990). The dimensions of perfectionism. *Cognitive Therapy and Research, 14*, 449-468.
- Garcia-Izquierdo, M., Rios-Risquez, Carrillo-Garcia, & Sabuco-Tebar. (2018). The moderating role of resilience in the relationship between academic burnout and the perception of psychological health in nursing students. *Educational Psychology, 38*, 1068-1079.
- Gilbert, P. (2009). Introducing compassion-focused therapy. *Advances in Psychiatric Treatment, 15*, 199-208.
- Guay, F., Marsh, H. W., & Boivin, M. (2003). Academic self-concept and academic achievement: A development perspective on their causal ordering. *Journal of Educational Psychology, 95*, 124-136.
- Gunnell, K. E., Mosewich, A. D., McEwen, C. E., Eklund, R. C., & Cocker, P. R. (2017). Don't be so hard on yourself! Changes in self-compassion during the first year of university are associated with changes in well-being. *Personality and Individual Differences, 107*, 43-48.
- Hambleton, R. K. (1994). Guidelines for adapting educational and psychological tests: A progress report. *Bulletin of the International Test Commission, 10*, 229-244.
- Hewitt, P. L., & Flett, G. L. (1991). Perfectionism in the self and social contexts: Conceptualization, assessment, and association with psychopathology. *Journal of Personality and Social Psychology, 60*, 456-470.
- Hope, N. (2014). The role of self-compassion in goal pursuit and well-being among university freshmen. *Self and Identity, 13*, 579-593.

- Howell, D. C. (2013). *Statistical methods for psychology* (8th ed.). Belmont, CA: Wadsworth, Cengage Learning.
- Korhonen, J., Tapola, A., Linnanmaki, K., & Aunio, P. (2016). Gendered pathways to educational aspirations: The role of academic self-concept, school burnout, achievement and interest in mathematics and reading. *Learning and Instruction*, 46, 21-33.
- Kyeong, L. W. (2013). Self-compassion as a moderator of the relationship between academic burn-out and psychological health in Korean cyber university students. *Personality and Individual Differences*, 54, 899-902.
- Lin, S. H., & Huang, Y. C. (2012). Investigating the relationships between loneliness and learning burnout. *Active Learning in Higher Education*, 13, 231-243.
- Manavipour, D., & Saeedian, Y. (2016). The role of self-compassion and control belief about learning in university students' self-efficacy. *Journal of Contextual Behavioral Science*, 5, 121-126.
- Martin, R. D., & Kennett, D. J. (2018). To be kind or not to be kind: The moderating role of self-compassion in the relationship between general resourcefulness and academic self-regulation. *The Journal of Social Psychology*, 158, 626-638.
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, 52, 397-422.
- McArthur, M., Mansfield, C., Matthew, S., Zaki, S., Brand, C., Andrews, J., Hazel, S. (2017). Resilience in veterinary students and the predictive role of mindfulness and self-compassion. *Journal of Veterinary Medical Education*, 44, 106-115.
- Möller, J., Retelsdorf, J., Köller, O., & Marsh, H. W. (2011). The reciprocal I/E model: An integration of models of relations between academic achievement and self-concept. *American Educational Research Journal*, 48, 1315-1346.
- Murberg, T. A., & Bru, E. (2007). The role of neuroticism and perceived school-

- related stress in somatic symptoms among students in Norwegian junior high schools. *Journal of Adolescence*, 30, 203-212.
- Muris, P., & Petrocchi, N. (2017). Protection or vulnerability? A meta-analysis of the relations between the positive and negative component of self-compassion and psychopathology. *Clinical Psychology and Psychotherapy*, 24, 373-383.
- Neff, K. D. (2003a). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity*, 2, 85, 101.
- Neff, K. D. (2003b). The development and validation of a scale to measure self-compassion. *Self and Identity*, 2, 223-250.
- Neff, K. D. (2009). The role of self-compassion: A healthier way to related to oneself. *Human Development*, 52, 211-214.
- Neff, K. D. (2011). Self-compassion, self-esteem, and well-being. *Social and Personality Compass*, 5, 1-12.
- Neff, K. D., Hseih, Y., & Dejiththirat, K. (2005). Self-compassion, achievement goals, and coping with academic failure. *Self and Identity*, 4, 263-287.
- Neff, K. D., Rude, S. S., & Kirkpatrick, K. (2007). An examination of self-compassion in relation to positive psychological functioning and personality traits. *Journal of Research in Personality*, 41, 908-916.
- Parker, P. D., & Salmela-Aro, K. (2011). Developmental processes in school burnout: A comparison of major developmental models. *Learning and Individual Differences*, 21, 244-248.
- Salmela-Aro, K., & Upadyaya, K. (2014). The demands-resources model in school context. *British Journal of Educational Psychology*, 84, 137-151.
- Schaufeli, W. B., Martinez, I. M., Marques Pinto, A., Salanova, M., & Bakker, A. B. (2002). Burnout and engagement in university students: A cross-national study. *Journal of Cross-Cultural Psychology*, 33, 464-481.

- Stoeber, J. (2018). *The psychology of perfectionism: An introduction*. In J. Stoeber (Ed.), *The psychology of perfectionism: Theory, research, applications* (pp. 3-16). London: Routledge.
- Stoeber, J. (2019). *Perfectionism*. In V. Zeigler-Hill & T. K. Shackelford (Eds.), *Encyclopedia of personality and individual differences*. New York: Springer.
- Stoeber, J., & Otto, K. (2006). Positive conceptions of perfectionism: Approaches, evidence, challenges. *Personality and Social Psychology Review, 10*, 295-319.
- Stolker, B. E. & Lafreniere, K. D. (2015). The influence of perceived stress, loneliness, and learning burnout on university students' educational experience, *College Student Journal, 49*, 146-160.
- Trompetter, H. R., de Kleine, E., & Bohlmeijer, E. T. (2017). Why does positive mental health buffer against psychopathology? An exploratory study on self-compassion as a resilience mechanism and adaptive emotion regulation strategy. *Cognitive Therapy and Research, 41*, 459-468.
- Tuominen-Soini, H., & Salmela-Aro K. (2014). Schoolwork engagement and burnout among Finish high school students and young adults: Profiles, progressions, and educational outcomes. *Developmental Psychology, 50*, 649-662.
- Vasalampi, K., Salmela-Aro, K., & Nurmi, J. (2009). Adolescents' self-concordance school engagement and burnout predict their educational trajectories. *European Psychologist, 14*, 332-341.
- Williams, G. C., & Deci, E. L. (1996). Internalization of biopsychosocial values by medical students: A test of self-determination theory. *Journal of Personality and Social Psychology, 70*, 767-779.
- Williams, J. G., Stark, S. K., & Foster, E. E. (2008). The relationships among self-compassion, motivation, and procrastination. *American Journal of Psychological Research, 4*, 37-44.

- Wong, C. C., & Mak, W. W. (2013). Differentiating the role of three self-compassion components in buffering cognitive-personality vulnerability to depression among Chinese in Hong Kong. *Journal of Counseling Psychology, 60*, 162-169.
- Wong, E. H., Wiest, D. J., & Cusick, L. B. (2002). Perceptions of autonomy support, parent attachment, competence and self-worth as predictors of motivational orientation and academic achievement: An examination of sixth- and ninth-grade regular education students. *Adolescence, 37*, 255-266.
- Zhang, H., Carr, E. R., Garcia-Williams, A. G., Siegelman, A. E., Berke, D., Niles-Cames, L. V., Patterson, B., Watson-Singleton, N. N., Kaslow, N. J. (2018). Shame and depressive symptoms: Self-compassion and contingent self-worth as mediators? *Journal of Clinical Psychology in Medical Settings, 25*, 408-419.
- Zhang, Y., Luo, X., Che, X., & Duan, W. (2016). Protective effect of self-compassion to emotional response among students with chronic academic stress. *Frontiers in Psychology, 7*, 1802. doi: 10.3389/fpsyg2016.01802

Table 1

Descriptive Statistics and Correlations for Study Variables (N = 504)

Variable	1	2	3	4	5	6	7	8
1. Self-kindness	—							
2. Common humanity	.59**	—						
3. Mindfulness	.60**	.45**	—					
4. Perceived competence	.36**	.25**	.37**	—				
5. Perfectionistic strivings	.10*	.14**	.24**	.34**	—			
6. Perfectionistic concerns	-.38**	-.21**	-.27**	-.28**	.26**	—		
7. Academic burnout	-.25**	-.13**	-.25**	-.58**	-.28**	.36**	—	
8. Work engagement	.23**	.19**	.29**	.47**	.35**	-.08	-.64**	—
<i>M</i>	3.95	4.03	4.11	4.58	4.45	3.44	2.97	3.75
<i>SD</i>	.74	.86	.73	.77	.71	.83	.78	.78

Note. * $p < .05$. ** $p < .01$.

Table 2

Hierarchical Regression Analyses Predicting Work Engagement and Academic Burnout From Perceived Competence, Self-Compassion Components, and Perceived Competence × Self-Compassion Components Interactions (N= 504)

Variable	Work Engagement			Academic Burnout		
	β	t	ΔR^2	β	t	ΔR^2
Step 1			.09			.06
Common humanity	.07	1.53		-.02	-.38	
Mindfulness	.26**	5.33		-.24**	-5.04	
Step 2			.15			.27
Perceived competence	.42**	9.68		-.56**	-13.92	
Self-kindness	-.01	-.19		-.07	-1.37	
Step 3			.02			.01
Perceived competence × Self-kindness	.13**	3.31		-.09*	-2.48	
Step 1			.09			.08
Self-kindness	.09	1.75		-.15**	-2.84	
Mindfulness	.23**	4.32		-.16**	-2.97	
Step 2			.15			.26
Perceived competence	.42**	9.68		-.56**	-13.92	
Common humanity	.04	.74		.07	1.43	

Step 3			.01		.01
Perceived competence × Common humanity	.12**	2.90		-.09*	-2.39
Step 1			.06		.06
Self-kindness	.19**	3.49		-.27**	-4.98
Common humanity	.08	1.42		.03	.57
Step 2			.18		.28
Perceived competence	.42**	9.68		-.56**	-13.92
Mindfulness	.12*	2.44		-.03	-.69
Step 3			.02		.01
Perceived competence × Mindfulness	.13**	3.29		-.10*	-2.70

Note. * $p < .05$. ** $p < .01$.

Table 3

Hierarchical Regression Analyses Predicting Perfectionistic Tendencies (N= 504)

Variable	Perfectionistic strivings			Perfectionistic concerns		
	β	t	ΔR^2	β	t	ΔR^2
Step 1			.07			.15
Self-kindness	-.11	-1.80		-.37***	-6.35	
Common humanity	.08	1.41		.03	.57	
Mindfulness	.28***	5.02		-.06	-1.08	
Step 2			.08			.02
Perceived competence	.31***	6.88		-.16***	.3.69	

Note. ** $p < .01$. *** $p < .001$.

Table 4

Hierarchical Regression Analyses Predicting Work Engagement and Academic Burnout (N= 504)

Variable	Work Engagement			Academic Burnout		
	β	t	ΔR^2	β	t	ΔR^2
Step 1			.09			.08
Self-kindness	.07	1.18		-.18**	-2.99	
Common humanity	.05	.83		.05	1.00	
Mindfulness	.23***	4.15		-.17**	-3.08	
Step 2			.18			.33
Perceived competence	.35***	7.65		-.43***	-10.51	
Perfectionistic strivings	.21***	4.5		-.23***	-5.53	
Perfectionistic concerns	.01	.09		.31***	7.48	
Step 3						.17
Work engagement				-.48***	-14.05	

Note. ** $p < .01$. *** $p < .001$.

Figure Captions

Figure 1. The moderating role of perceived competence in the relationship between self-kindness and work engagement.

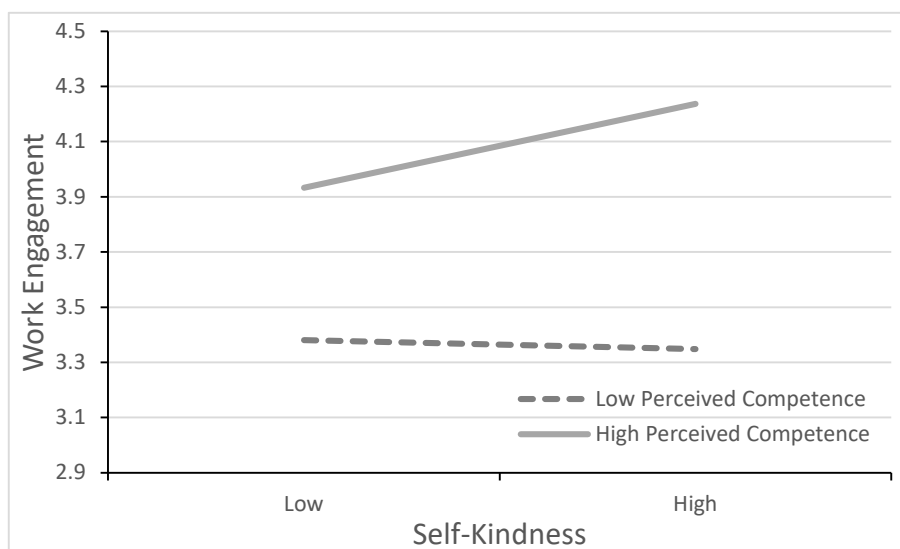


Figure 2. The moderating role of perceived competence in the relationship between common humanity and work engagement.

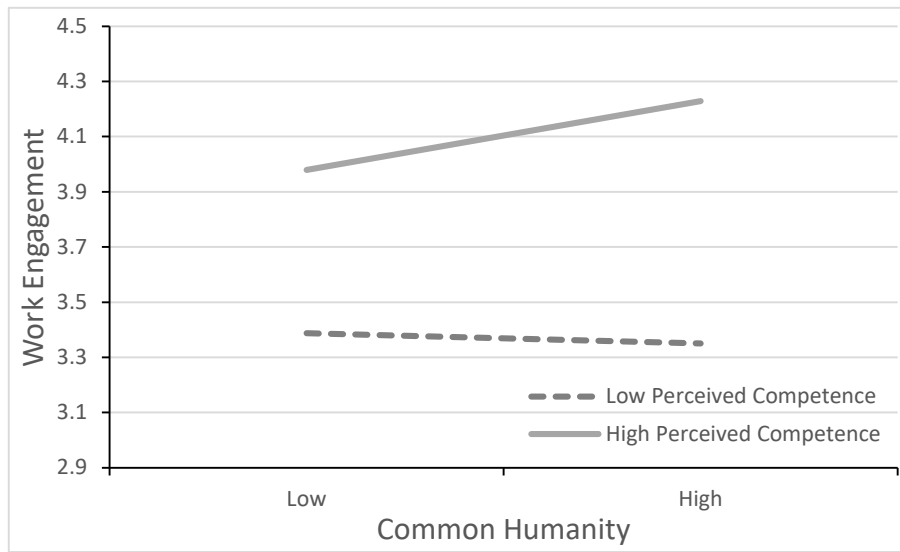


Figure 3. The moderating role of perceived competence in the relationship between mindfulness and work engagement.

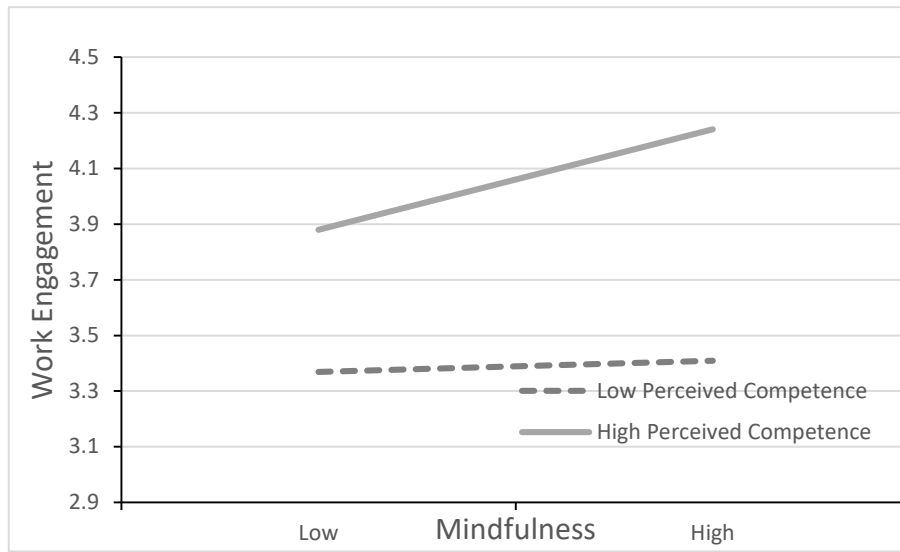


Figure 4. The moderating role of perceived competence in the relationship between self-kindness and academic burnout.

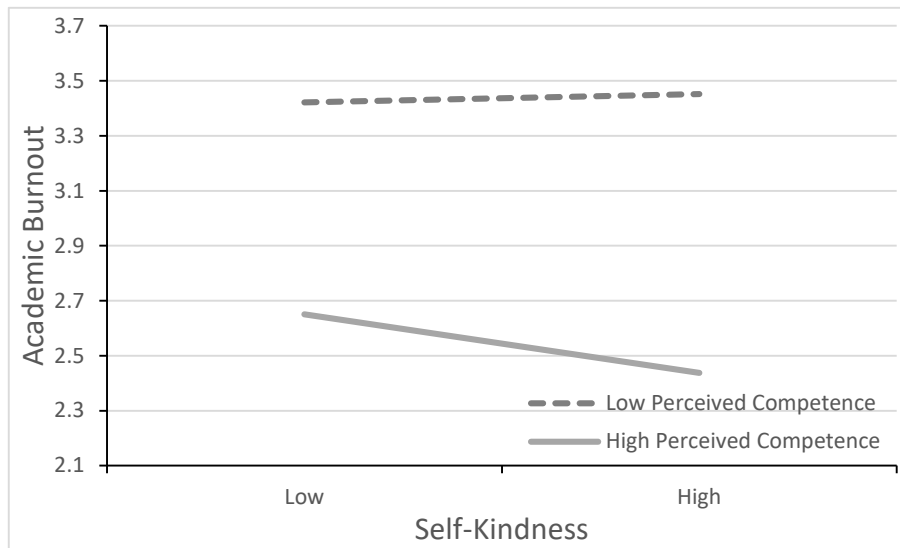
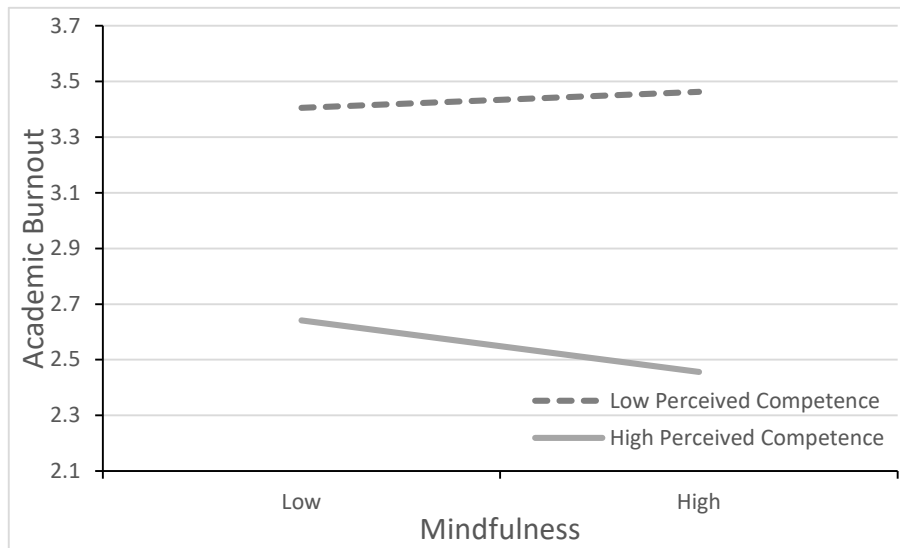


Figure 5. The moderating role of perceived competence in the relationship between mindfulness and academic burnout.



108年度專題研究計畫成果彙整表

計畫主持人：施淑慎			計畫編號：108-2410-H-004-094-SSS		
計畫名稱：自我疼惜對大學生學習倦怠的緩解效果之探究					
成果項目			量化	單位	質化 (說明：各成果項目請附佐證資料或細項說明，如期刊名稱、年份、卷期、起訖頁數、證號...等)
國內	學術性論文	期刊論文	0	篇	
		研討會論文	0		
		專書	0	本	
		專書論文	0	章	
		技術報告	1	篇	本研究成果報告
		其他	0	篇	
國外	學術性論文	期刊論文	2	篇	預計投稿2 篇期刊論文至國外學術期刊(Journal of Individual Differences, Personality and Individual Differences)
		研討會論文	0		
		專書	0	本	
		專書論文	0	章	
		技術報告	0	篇	
		其他	0	篇	
參與計畫人力	本國籍	大專生	0	人次	
		碩士生	1		碩士生兼任助理
		博士生	1		博士生兼任助理
		博士級研究人員	0		
		專任人員	0		
	非本國籍	大專生	0		
		碩士生	0		
		博士生	0		
		博士級研究人員	0		
		專任人員	0		
其他成果 (無法以量化表達之成果如辦理學術活動、獲得獎項、重要國際合作、研究成果國際影響力及其他協助產業技術發展之具體效益事項等，請以文字敘述填列。)					