# Mindfulness, self-compassion, resiliency and wellbeing in Higher Education: A recipe to increase academic performance.



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| Journal: | *Journal of Further and Higher Education* |
| Manuscript ID | CJFH-2020-0233.R2 |
| Manuscript Type: | Original Paper |
| Keywords: | mindfulness, self-compassion, self-criticism, wellbeing, resiliency, student performance |
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**Abstract**

Universities are facing a difficult challenge in supporting good mental health whilst striving to enhance academic performance. The present study aimed to specifically investigate the relationship between attitudinal and personality constructs that are associated with wellbeing and to explore their association with student academic outcomes. Two-hundred and six undergraduate students were recruited and were given questionnaires measuring mindfulness, self-compassion, resiliency, procrastination, consideration of future consequences, self-criticism and social comparison. At the end of the academic year, the researchers accessed their academic records and documented their academic performance. Results indicated that there are strong, clear associations between better academic performance and higher resiliency, mindfulness, self-compassion and consideration of future consequences, and negative associations to procrastination. We concluded that there is a clear gain to be had in academic performance through enhancing these elements using appropriate interventions which are user friendly, affordable and can be embedded into existing student learning and support to reinforce adaptive coping and life skills.

Keywords: mindfulness; self-compassion; self-criticism; wellbeing; resiliency; higher education; student performance

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## Introduction

Mental ill health in higher education institutions has become an increasing concern with the number of students reporting that they have a mental health condition doubling since 2013/14 (Hubble & Boulton 2019) and up to half of students in a recent survey reporting that they had considered leaving university due to poor mental and physical health and academic stress (Randstad 2020). Mental health is of equal importance and relevance to progression, retention and academic performance as teaching and learning strategies (Bewick, Gill, Mulhern, Barkham, & Hill, 2008; Eisenberg, Hunt, Speer, & Zivin, 2011). It is very common for students to experience increased levels of stress, anxiety and depression and they report a high level of experiences of negative thoughts and emotions (Bauldry, 2015; Bewick, Koutsopoulou, Miles, Slaa, & Barkham, 2010; Regehr, Glancy, & Pitts, 2013). The extent of poor mental health can be devastating for students, health providers and academic institutions, with some reports indicating that approximately 50% of students experience high levels anxiety and stress (e.g., Craggs, 2012; Bayram & Bilgel, 2008), with consequential high rates of stress-related mental health problems in undergraduate and graduate students (Hunt & Eisenberg, 2010; Pinder-Amaker, 2012; Stallman, 2010).

Poor mental health and negative experiences are directly associated with lower academic performance (Sohail, 2013), and some researchers have suggested that mental health initiatives may form a new basis of assisting students in higher education, not just with the aim of improving mental health, but also for improving their academic performance (see Mantzios, 2019; Mantzios, Egan & Cook, 2019a, b). There are however a number of barriers to implementation including the demand on specialist knowledge, the increased need for appropriate mental health care and the stigma and discrimination that still exists around experiencing and seeking help for mental health (Egan, Keyte, McGowan, Peters, Lemon, Parsons, Meadows, Fardy, Singh & Mantzios, 2018; Lannin, Vogel, Brenner, Abraham, & Heath, 2016; Wallin, Maathz, Parling, & Hursti, 2018) There is an increasing need to consider easier and more affordable support that could be embedded by academic

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institutions to enhance wellbeing and therefore academic performance. We are proposing that mindfulness, self-compassion, considerations of future consequences and resiliency may form an alliance to support student wellbeing, while reducing and overcoming barriers of self-criticism, social comparison and procrastination create a powerful tool for teaching university students both academic and life skills.

Resilience is defined as an increased likelihood of success despite environmental adversities (Wang 1994). Resilient students are described as those who maintain high motivational achievement and performance even when faced with stressful events and conditions that place them at risk of poor performance; in other words, those students who succeed despite the presence of adverse conditions. When considering endurance and adaptability as forms of resilience in higher education, resilience could (a) help more students become authentic and critical learners, and (b) improve progression and retention statistics in higher education institutions; again, by enhancing the overall performance of the student. Resilience arises when students engage their internal strengths such as utilising coping skills and attitude (Ungar 2008) and disengage from less helpful thoughts and behaviours; and one means of enhancing adaptive coping skills is mindfulness.

Mindfulness practice is described as attentional training that is centred in the current experience with an approach of curiosity, openness and acceptance (Bishop et al. 2004), or, phrased differently, a non-judgemental awareness of the present moment (Kabat-Zinn, 1990). Mindfulness-based interventions are effective methods of reducing stress and anxiety (Barnes, Trieber, & Davis, 2001; Manocha, Marks, Kenchington, Peters & Salome, 2002; Regehr et al., 2013). Mindfulness meditation consists of focusing on a specific procedure such as ones' breathing, acknowledging any intrusive thoughts and emotions that may arise, and then letting them go (Germer, Siegel & Fulton, 2016) and has been shown to be effective in treating anxiety (Miller, Fletcher & Kabat-Zinn, 1995). McCloskey (2015) explored mindfulness meditation and meta-cognitive awareness and emphasised how students can succeed in a highly stressful academic environment. Mindfulness techniques have been shown to improve academic performance, including test performance by reducing anxiety and

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improving coping strategies (Dundas, Thorsheim, Hjeltnes & Binder, 2016; Shapiro, Brown, Thoresen & Plante, 2011). Furthermore, students who practice mindfulness have been shown to achieve higher grades on tests than students who do not practice mindfulness (Bakosh, Snow, Tobias, Houlihan & Barbosa-Leiker, 2016; Docksai, 2013; Ramsburg & Youmans, 2014). Academic performance is hypothesized to improve both through gains in mental health and wellbeing, and that the attentional training that is typical in mindfulness practices enhances cognitive functioning (Iranzo-Bennet, Egan, Cook & Mantzios, 2018).

Self-compassion is a component relevant to mindfulness that can potentially offer further support for students. Neff (2003a) defines self-compassion as experiencing one's own suffering through feelings of kindness toward oneself and with a mindful awareness and recognition that one's experience is part of the common human experience. A self-compassionate person sees problems, weaknesses, and shortcomings accurately, yet reacts with kindness and compassion rather than with self-criticism and harshness. Individuals with high self-compassion may possess more effective emotional regulation strategies, particularly in the face of experiencing negative events, than those with low levels of self-compassion (Neff, Kirkpatrick & Rude, 2007). This is important for students as individuals with high self-compassion are more likely to accept responsibility for their actions and to perceive their mistakes more accurately than those with lower levels of self-compassion (Leary et al., 2007) and this is highly relevant when interpreting and responding to assessment feedback Self compassion also supports mental health and wellbeing in students, university students who were placed in a self-compassionate programme during their first year significantly enhanced their overall wellbeing (Hope, Koestner & Milyavskaya, 2014).

The principles of mindfulness are sometimes misunderstood to be suggesting that all focus is on the here and now, or the present moment, with little or no consideration of what may happen in the future. However, it has been found that mindfulness is not in fact associated with a hedonic association (Garland, 2016) that increases impulsive and unhealthy decision making, but rather that mindfulness reiterates the notion that actions taken in the present moment have an impact on the

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future. Being able to focus on goals that are future oriented is adaptive for students in achieving academic success facilitating them to eschew immediate gratification for the achievement of future goals. This focus often means delaying immediate gratification for the purpose of something that will happen in the future (Rönnlund et al., 2019). Consideration of future consequences is linked to procrastination, where a reduction in procrastination and a focus on specific, achievable goals can lead to positive life outcomes, particularly academic success and satisfaction.

Procrastination is something that most people have experienced, at least to some degree. For students, leaving academic work until the last minute often means not accessing full opportunities for formative feedback or feedforward, and not being able to produce their best work. It can also increase anxiety, as not doing the work often is accompanied by a constant feeling of 'I should be doing…..' which increases as the deadline approaches. Evidence clearly shows that measures of academic procrastination predict poorer academic performance (Kim & Seo 2015). Akinsola, Tella, and Tella (2007) found in their research that low procrastinators performed better than moderate and high procrastinators during their undergraduate years (see also Iskender, 2011). Procrastination impacts negatively on mental health, increasing stress and negative self-criticism, and Sirois (2014) outlines how self-compassion is beneficial in mediating the common link between stress and procrastination.

Self-criticism can be viewed as the exact opposite to self-compassion (Neff, 2003a), and proposes the opposite outcomes, or a potential barrier to higher achievement. Self-criticism is not necessarily a negative thing, but rather it is the way in which a person operationalises such self-criticism that may have a negative impact on their well-being and have a detrimental impact on improving performance rather than a positive one. Closely aligned to self-criticism is what Festinger (1954) proposed in his theory of social comparison, which states that people have a fundamental desire to evaluate their opinions and abilities and that they strive to have stable, accurate appraisals of themselves. Research indicates that there is a positive relationship between social comparison and self-criticism, whereby people are reinforcing a negative cycle of downward evaluation of

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oneself (Santor & Yazbek, 2006). Individuals with high social comparison orientation make more social comparisons and get more affected by the consequences (Buunk & Gibbons, 2006). It is reported that as social comparison orientation increases, self-esteem, optimism, and positive affect decrease; depression, anxiety, social anxiety, neuroticism, and negative affect increase (Gibbons & Buunk, 1999). In situations where there are stresses, novelty or change, such as attendance at university, the need for social comparison increases (Keum, 2016) and the adaptive and coping roles of social comparison may gain importance and this may have a negative impact on student mental health

The factors associated with poor mental health, student underachievement and poor completion rates in Higher Education (HE) are well researched (e.g., Yorke & Longden, 2008) We also know that such factors disproportionately impact on students from poorer backgrounds and from Black and other minority ethnic groups, undermining the aims of widening participation into HE. Many teachers and lecturers themselves feel stressed and anxious at work (Czerwinski, Egan, Cook & Mantzios; 2020; Mantzios & Egan, 2019) and may be unfamiliar and uncomfortable with the idea of delivering mental health interventions. Identifying effective protective factors to improve both wellbeing and academic outcomes for students could potentially allow for the enhancement of these factors through more acceptable academic support and interventions. Previous literature suggested that resiliency, mindfulness, self-compassion and consideration of future consequences are associated with positive student wellbeing, academic outcomes and student satisfaction (Mantzios, Egan, Cook, Jutley-Neilson & O'Hara; 2019). The present study aimed to specifically investigate the relationship between the constructs outlined here, and their association to student academic outcomes.

## Method

### Participants

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A total of 206 undergraduate students in the School of Education and Social Work were recruited at a university in the West Midlands of the United Kingdom. Participants were recruited online, using voluntary sampling via an email that was distributed by colleagues who were teaching on courses relating to primary and secondary education, as well as social work undergraduate courses. Twenty-seven students were attending a social work course, while 161 participants self-reported education to be the primary study area (18 participants did not disclose the course they were attending). The age had an average of 30.08 (*SD* = 11.91, *SE* = .83, Range 18-60). Frequencies and percentages of gender are presented in Table 1.

*Insert Table 1 here*

**Materials:**

*Resiliency Scale (Campbell-Sills & Stein, 2007)*. The scale incorporates 10 items, measuring an individual's level of the resilience trait, with high scores indicating high levels of resiliency. A 5-point Likert Scale was used to record the responses from 1 (not true at all) to 5 (true nearly all of the time) and included statements such as "Can stay focused under pressure" and "Coping with stress can strengthen me". The present study produced a Cronbach's alpha of .908.

*Five Facet Mindfulness Questionnaire- Short Form (*Bohlmeijer, ten Klooster, Fledderus, Veehof & Baer, 2011). For the current study a short form version of the Five Facet Mindfulness Questionnaire consisting of a 24-item scale was used, that measured an individual's levels of the mindfulness trait, with high scores indicating high levels of mindfulness. A 5-point Likert scale was used to record the responses from 1 (never or very rarely true) to 5 (very often or always true) and include statements such as "When I have distressing thoughts or images, I just notice them and let go" and "I find myself doing things without paying attention". The present study produced a Cronbach's alpha of .778.

*Self-Compassion Scale (SCS; Neff, 2003).* The SCS scale is a 26 item self-report measure. Responses range from 1 (*almost never*) to 5 (*almost always*), with overall scores ranging from 26 to 130. Sample items include '*I try to be loving towards myself when I'm feeling emotional pain*' (i.e. self-kindness)

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and '*When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am*' (i.e. common humanity). The present study produced an overall alpha of .719 for the total score.

*Functions of Self-Criticizing/Attacking Scale* (*FSCAS;* Gilbert et al., 2004). This is a 21-item scale measuring the functions and reasons people use to justify being critical with oneself. There are two sub-scales: 'self-correction', which is a self-improvement of the self and avoid making mistakes (e.g., 'To make me concentrate') and 'self-persecution', which is an expression of anger with oneself (e.g., 'To cope with feelings of disgust with myself'). Responses range from 0 (*not at all like me*) to 4 (extremely like me). The present study produced an overall alpha of .931 for the total score.

Procrastination Scale (*PS*; Lay, 1986). The PS is a 20-item scale where procrastination is explored across different activities. Participants rate each item on a 5-point Likert scale (*strongly disagree* to *strongly agree*). Sample items include "In preparing for some deadlines, I often waste time by doing other things". The present study produced an overall alpha of .816 for the total score.

Consideration of Future Consequences Scale (*CFC*-14; Joireman, Shaffer, Balliet, & Strathman, 2012). The CFC is a 14-item scale measuring individual differences in immediate and more distant implications of behaviours and events. The scale consists of a 7-point Likert scale, with sample items such as "I consider how things might be in the future, and try to influence those things with my day to day behaviour". The CFC also has two-factors within the scale, one exploring Consideration of Immediate Consequences and the other Consideration of Future Consequences. Cronbach's α for the overall scale score for this research was .714.

Social Comparison Scale (*SC*; Allan & Gilbert, 1995). The SC scale was created to explore current feelings of feeling inferior to others. The psychometric tools consists of 11-item exploring global comparisons to others. The scale utilizes a semantic differential where participants respond on a scale of 1 to 10, for example: "*In relation to others I feel: Incompetent 1 to 10 Competent*". Cronbach's α for the overall scale score for this research was .753.

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## Results

Initially correlational analysis was used to investigate any relationships between the constructs that were measured and the average marks achieved at the end of the year. The focus of the bivariate correlation was around the average mark that students achieved at the end of the year. A significant positive correlation was observed between self-compassion and average mark ($r_p = 0.31$, $p < .001$), similar to the observed coefficient between mindfulness and average mark ($r_p = 0.23$, $p = .008$). These correlations indicated that as self-compassion and mindfulness increased, average mark increased. Furthermore, consideration of future consequences and resiliency were positively correlated with average mark, while procrastination was negatively correlated with average mark Table 2 presents all the results of the bivariate correlations.

*Insert Table 2 here*

### Linear Regression Analysis (Positive Traits)

Linear regression models were used to determine the strength of the relationships between the constructs under investigation and the outcome variable, which in this study was the average end of year mark. The results of the linear regression model were significant, indicating that approximately 15% of the variance of average marks were explained by self-compassion, mindfulness, consideration of future consequences, and resiliency. Self-compassion significantly predicted average marks. Similarly, consideration of future consequences significantly predicted average mark. Mindfulness, however, did not significantly predict average mark and this was also observed for resiliency. Table 3 summarizes the results of the regression model.

*Insert Table 3 Here*

### Linear Regression Analysis (Negative Traits)

The results of the linear regression model were significant indicating that approximately 6% of the variance in average marks is explainable by self-criticism, social comparison, and procrastination.

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Self-criticism did not significantly predict average marks, and social-comparison did not significantly predict average marks. Procrastination on the other hand significantly predicted average marks. Table 4 summarizes the results of the regression model.

*Insert Table 4 Here*

**Discussion**

The findings from this study provide support for a positive relationship between self-compassion, mindfulness, consideration of future consequences and resiliency with academic performance, that is, as these increase so does academic performance. Furthermore linear regression model analysis showed that higher levels of self-compassion and consideration of future consequences also *predicted* higher academic performance, but this was not significant for mindfulness and resiliency, potentially through the accountancy of co-variance between variables. These results suggest the potential for facilitating and supporting the growth of self-compassion in HEI.

Furthermore, the findings from this study provide support for a negative relationship between procrastination, social comparison, and self-criticism with academic performance, as these increase, academic performance decreases. The linear regression analysis including these variables was significant; however, although lower levels of procrastination predicted greater higher academic performance, this was not significant for self-criticism and social comparison.

The current findings expand on the growing body of research demonstrating the problems associated with lower levels of self-compassion and higher levels of self-criticism on academic performance. In essence, treating oneself harshly, with self-criticism, and a general lack of kindness and acceptance after failure, may contribute to lower average marks. Interventions that focus on increasing self-compassion may be particularly beneficial for helping students to understand and take on board constructive criticism on assessment feedback. Assessment and feedback consistently receive the lowest satisfaction rating in the NSS, and evidence suggests that negative feedback can elicit a strong negative response from students, which acts as a demotivator to engaging with and

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improving academic performance (Pitt & Norton 2017). The value of self-compassionate interventions is that they may help students to become more resilient, and in effect, keep on trying to learn and improve while at university, instead of allowing adversity to lead to withdrawal from university (Neff et al., 2007).

Self-compassion is a component that is inclusive of mindfulness, and is considered a mindfulness-based intervention and there is mounting evidence that mindfulness-based interventions are effective in increasing self-compassion (Neff & Germer, 2012; Rimes & Wingrove, 2011). Moreover, higher scores on Consideration of Future Consequences significantly predicted higher academic performance. The consideration of future consequences on current behaviour is increasingly acknowledged as being important in the self-regulation of impulsivity and valuable for wellbeing, health and future academic performance (Joireman et al., 2012). HEI's could usefully focus on developing ways of identifying and supporting students with low levels of Consideration of Future Consequences by guiding students more explicitly to focus on how their present academic endeavours will directly enhance their future prospects in terms of employability for example.

While considering future consequences is an important element in motivating students to successfully complete their degree, the desire to procrastinate similarly represents a barrier to success, manifesting in irregularities in time management, time-perspective and organisation of workload (Rönnlund et al., 2019; Witowska & Zejenkowskim 2018). Findings from the current study demonstrate that students who displayed higher levels of procrastination received lower overall academic marks. Interventions aimed at firstly identifying these students, and then discussing ways of acknowledging, reducing and avoiding procrastination, possibly through considering future consequences would be beneficial in enhancing their academic performance and subsequent professional lives. Discussion of how procrastination impacts on learning could be incorporated into personal tuition sessions in a supportive, non-judgemental manner, and where appropriate, students could be signposted to cognitive behavioural therapy which has shown to be effective in reducing procrastination (van Eerde & Klingsieck 2018).

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Prior to generalising the results, a few considerations need to be taken into account. First, future research should seek a wider sample across different institutions to verify the results. Second, the potential of discussion of causal elements of this research, such as interventions aiding healthy and productive learners should be explored through experimental and longitudinal research. Thirdly, the ability to explore individual differences and other potential personality characteristics may be of benefit, as students who are open to new experiences may be keener to participate and engage with practices that require some time and commitment. Qualitative research exploring student experiences of interventions designed to improve mental health and wellbeing and academic performance could usefully highlight the barriers and enablers of engaging in such interventions. This may be particularly useful in exploring issues of accessibility and suitability, and of shame and stigma in mental health which may be impacted by cultural and familial norms and expectations (Kauser et al 2020).

The findings from the present study are highly relevant and important at the present time during the Covid-19 pandemic where supporting students in innovative ways, using a variety of remote and online platforms is vital to the health and wellbeing of students and of Higher Education institutions. Results indicate that an effective means of improving mental health and wellbeing and academic performance amongst students would be to develop strategies that enable students to engage in mindfulness-based interventions which incorporate self-compassion, considerations of future consequences and procrastination reduction and prevention. Strategies might include a focus on the actions that one can do 'right here, right now' to enhance future prospects (this is particularly helpful when students are feeling overwhelmed), and utilisation of mindfulness theory and interventions to enhance and support mental health and academic performance.

In conclusion, measuring the attitudinal and personality constructs discussed in this study at the beginning of student academic journey in HE can open up an going discussion between student and tutors on how such factors may be protective (or not) for mental health and wellbeing and how they impact on academic performance. The findings from the present study could usefully support

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academic tutors in HEI's in teaching university students both academic and life skills which are necessary to successfully complete their degrees and to facilitate a successful transition into graduate destinations. Such interventions may be delivered by using and adapting existing support mechanisms to online support, such as enhanced personal tuition (O'Hara et al 2020) and Mental Health First Aid (Mantzios, 2019; Mantzios, Egan & Cook, 2019a, b) and these could form an effective basis for evaluating potential interventions in future research.

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Table 1

*Frequency Table for Gender of participants*

| Variable | *n* | % |
|---|---|---|
| Gender | | |
| Male | 41 | 19.90 |
| Female | 165 | 80.10 |

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Table 2

*Pearson bivariate correlation between self-compassion, self-criticism, mindfulness, social comparison, consideration of future consequences, procrastination, resiliency, and average mark.*

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| 1. self-compassion | - | | | | | | | |
| 2. self-criticism | -0.59** | - | | | | | | |
| 3. mindfulness | 0.60** | -0.48** | - | | | | | |
| 4. social comparison | -0.38** | 0.33** | -0.38** | - | | | | |
| 5. consideration of future consequences | 0.24** | -0.08 | 0.35** | -0.01 | - | | | |
| 6. procrastination | -0.43** | 0.23** | -0.46** | 0.22** | -0.28** | - | | |
| 7. resiliency | 0.55** | -0.25** | 0.50** | -0.20** | 0.22** | -0.25** | - | |
| 8. Average mark | 0.31** | -0.17 | 0.23** | -0.07 | 0.29** | -0.22** | 0.26** | - |

** *Correlation is significant at the 0.01 level.*

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Table 3

*Results for Linear Regression with self-compassion, mindfulness, consideration of future consequences, and resiliency predicting average mark*

| Variable | *B* | *SE* | 95% CI | β | *t* | *p* |
|---|---|---|---|---|---|---|
| (Intercept) | 33.83 | 6.46 | [21.05, 46.62] | 0.00 | 5.23 | < .001 |
| self-compassion | 0.14 | 0.07 | [0.01, 0.28] | 0.23 | 2.14 | .035 |
| mindfulness | -0.03 | 0.09 | [-0.20, 0.14] | -0.04 | -0.38 | .701 |
| consideration of future consequences | 0.30 | 0.11 | [0.07, 0.52] | 0.22 | 2.61 | .010 |
| resiliency | 0.13 | 0.13 | [-0.13, 0.40] | 0.10 | 0.99 | .324 |

*Note.* Results: $F(4,131) = 5.91$, $p < .001$, $R^2 = 0.15$

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Table 4

*Results for Linear Regression with self-criticism, social comparison, and procrastination predicting average marks*

| Variable | *B* | *SE* | 95% CI | β | *t* | *p* |
|---|---|---|---|---|---|---|
| (Intercept) | 71.90 | 5.11 | [61.78, 82.02] | 0.00 | 14.06 | < .001 |
| self-criticism | -0.07 | 0.05 | [-0.18, 0.03] | -0.13 | -1.39 | .168 |
| Social comparison | 0.02 | 0.12 | [-0.22, 0.26] | 0.02 | 0.19 | .847 |
| procrastination | -0.15 | 0.07 | [-0.29, -0.02] | -0.20 | -2.23 | .027 |

*Note.* Results: $F(3,132) = 2.95$, $p = .035$, $R^2 = 0.06$

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