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MAJOR ARTICLE



# The interplay between mindfulness and caring for bliss on later student burnout

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## ABSTRACT

**Objectives:** While there are good reasons to assume that mindfulness protects against burnout in students, nothing is known about the role of caring for bliss. This study examined whether caring for bliss moderated the relationship between mindfulness at baseline and aspects of burnout approximately 12 weeks later. **Participants:** Students ( $n = 92$ ) from a university in the United States. **Methods:** Online surveys were administered in 2018. **Results:** Moderated regression analyses, controlling for depressive symptoms and burnout at baseline, revealed that caring for bliss moderated the relationship between earlier mindfulness and two aspects of later student burnout, namely emotional exhaustion and cynicism. Specifically, exhaustion and cynicism were low when students reported either low or high scores on both mindfulness and caring for bliss. No moderating effect was found for academic efficacy. **Conclusions:** Mindfulness and caring for bliss appear to work synergistically to reduce aspects of student burnout over time.

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## KEYWORDS

Burnout; caring for bliss; depression; mindfulness; moderation

The mental health of students, including burnout, is a major concern in industrialized countries.<sup>1,2</sup> Students generally experience various demands, such as academic requirements, social and family expectations for academic performance, and financial difficulties, that can lead to chronic stress and catalyze the development of student burnout.<sup>3</sup> Studies investigating the efficacy of mindfulness-based trainings, such as the well-studied Mindfulness-Based Stress Reduction (MBSR) program,<sup>4,5</sup> suggest that individuals cultivating mindfulness are at lower risk for burnout.<sup>6–8</sup> The present study builds on this notion and examines the temporal relationship between mindfulness and academic burnout and the moderating role of caring for bliss in college students.

## Burnout

Following Maslach and Jackson's<sup>9</sup> conceptualization of work burnout, Schaufeli et al.<sup>10</sup> defined student burnout as a three-dimensional syndrome made up of emotional exhaustion, cynicism, and reduced academic efficacy. It has been postulated that these dimensions manifest sequentially<sup>11,12</sup> with feeling emotionally exhausted in response to the study demands being the first to occur. Cynicism or the development of a detached attitude toward one's study is seen as an attempt to deal with exhaustion. Lastly, the perceived ability to cope with study demands slowly diminishes, resulting in feelings of being academically ineffective or incompetent. Because there is evidence that emotional exhaustion and cynicism are more strongly associated with each other

than with reduced professional efficacy,<sup>13,14</sup> emotional exhaustion and cynicism are often seen as core components of the burnout syndrome.

The Maslach Burnout Inventory-Student Survey (MBI-SS)<sup>10</sup> is the most widely used instrument to assess burnout in university students. A systematic review among medical students reported a prevalence rate of overall burnout, as measured with the MBI-SS, that ranged from 7.5% to 75.2%.<sup>1</sup> Another systematic review of medical students found a prevalence rate for burnout of approximately 44.2%.<sup>15</sup> To the best of our knowledge, however, prevalence rates for burnout among undergraduate students or social science students, in particular, are lacking.

The high prevalence rates of student burnout are a serious problem given that student burnout can result in the absence or drop out from school and increases the likelihood of substance abuse, anxiety, and depression.<sup>16</sup> In fact, there is some debate whether burnout and depression are different constructs with some studies showing an overlap and some not.<sup>17,18</sup> Burnout and depression appear to share some common symptoms, such as loss of interest or pleasure, depressed mood, fatigue or loss of energy, but burnout seems to be related to someone's working environment, whereas depression seems to be more context-free and pervasive though at its first stages it might be situation specific.<sup>18</sup> Despite its similarity with depression, burnout is not listed in the DSM-V.<sup>19</sup>

The structured and compulsory activities students need to meet are comparable to workplace demands and the Job

Demands-Resources model (JD-R)<sup>20,21</sup> can be used to explain the development of student burnout. This model assumes that burnout occurs when workplace demands are perceived as exceeding workplace and personal resources. Personal resources in the JD-R model are unique individual attributes such as resiliency, optimism, and perceived control that affect how people perceive workplace demands and deploy workplace resources, which in turn, affect the degree to which they experience stress.<sup>22</sup>

### **Mindfulness and caring for bliss**

Mindfulness, or bringing one's complete attention to the present experience from moment to moment,<sup>23</sup> is a personal resource that has been found to buffer against burnout. For instance, mindfulness helps individuals to focus on the immediate demands that are important and utilize job resources.<sup>24</sup> Less mindful individuals, on the other side, are less focused and their attention drifts to problems and possibilities in the distant future or past, which interferes with and can prevent them from solving the problems at hand.<sup>24</sup> Furthermore, mindful individuals tend to view thoughts or emotions as passing events in the mind rather than being reflections of reality, allowing them to respond thoughtfully, instead of reacting automatically to stressful events.<sup>25</sup> Interestingly, relatively few studies have explored the effect of mindfulness-based interventions on burnout in students. For instance, in a systematic review of twelve articles, only three studies reported on the effects of mindfulness-based interventions on burnout in undergraduate medical students.<sup>26</sup> Of these three, one reported a significant decrease on the Maslach Burnout Inventory subscale emotional exhaustion from pre to post-training.<sup>27</sup> There are more studies with healthcare professionals, and they generally suggest that mindfulness trainings reduce burnout.<sup>6-8</sup> It is therefore reasonable to assume that mindfulness would prevent burnout in undergraduate students, particularly those in the health and social sciences.

Caring for bliss, a concept related to mindfulness, may be another personal resource that could help prevent student burnout. According to Rudaz et al.,<sup>28</sup> caring for bliss describes active practices or behaviors to cultivate inner joy or genuine happiness that is based on a peaceful state of mind and a compassionate heart. It is assumed that genuine happiness can be cultivated by generating feelings of happiness in the here and now, searching for lasting happiness inside oneself, appreciating what one has, and following the deepest desires of one's heart. A recent study investigated the impact of a brief mindfulness training on two aspects of caring for bliss (gratitude/appreciation and the generation of feelings of happiness) and found that these aspects increased from pre to post intervention.<sup>29</sup> There is also evidence, that caring for bliss predicts overall well-being (i.e., satisfaction with life, flourishing, and happiness) above and beyond mindfulness and self-compassion.<sup>28</sup> However, the present study is the first that investigated the moderating role of caring for bliss on the effect of mindfulness on school burnout.

### **The present study**

Given the serious consequences of burnout in students,<sup>1,2</sup> more research is needed to understand possible protective factors. Building on the notion that a high level of mindfulness reduces the risk for school burnout, we tested two hypotheses: First, we hypothesized that higher levels of mindfulness and caring for bliss at baseline are associated with lower levels of emotional exhaustion and cynicism and with higher levels of academic efficacy at follow-up. Second, we hypothesized that higher levels of caring for bliss enhance the relationship between mindfulness at baseline and the outcomes of emotional exhaustion, cynicism, and academic efficacy at follow-up. Due to the comorbidity of burnout and depression,<sup>17,18</sup> we not only controlled for burnout at baseline but also for depressive symptoms in testing both hypotheses.

## **Method**

### **Participants**

Participants ( $N=92$ ) were undergraduate students who were recruited at an urban university in the Southeast of the United States in 2018 from a course that satisfied a university-wide liberal studies requirement in social sciences. Participation in the study required completing two online surveys at two-time points, approximately 12 weeks apart. The two surveys were part of a larger study to examine mental, physical, spiritual, and relational well-being and took approximately 60 minutes to complete. Ethical approval for the study was obtained from the local Institutional Review Board (IRB).

The mean age of participants was 20.33 years ( $SD=2.94$ ; range: 18–39). Of the 92 participants, 89 (96.7%) were female and 3 (3.3%) were male. Regarding racial background, 67.4% identified as White or Caucasian or European American, 16.3% as African American or Black, 13.0% as Latino or Hispanic, and 3.3% as Asian or Pacific Islander.

### **Measures**

#### **Mindfulness**

The 5-item Mindful Attention Awareness Scale Short Version (MAAS-5)<sup>30</sup> was used to measure the general tendency to be attentive to and aware of what is taking place in the present moment. The items (e.g., "It seems I am "running on automatic," without much awareness of what I'm doing") were rated on a 6-point scale ranging from 1 (almost always) to 6 (almost never). All items were reverse-coded and then a mean score was calculated with higher scores reflecting higher levels of mindfulness (Cronbach's  $\alpha = .87$ ).

#### **Caring for bliss**

The 4-item Caring for Bliss Scale (CBS)<sup>28</sup> was administered to measure the generation of feelings of happiness in the here and now, searching for lasting happiness inside oneself, appreciating what one has, and following the deepest desires

of one's heart. The items (e.g., "I search for lasting happiness inside myself, rather than outside of myself") were rated on a 5-point scale ranging from 0 (never) to 4 (regularly). A mean score was calculated with higher scores indicating higher levels of caring for bliss (Cronbach's  $\alpha = .86$ ).

### Depressive symptoms

Depressive symptoms were measured with the 10-item Center for Epidemiological Studies Depression Scale (CES-D).<sup>31</sup> The items (e.g., "I felt that everything I did was an effort") were rated in terms of the frequency that each mood or symptom occurred during the past week on a 4-point scale ranging from 0 (rarely or none of the time/less than one day) to 3 (most or all the time/5–7 days). A sum score was calculated with higher scores indicating higher levels of depressive symptoms (Cronbach's  $\alpha = .83$ ).

### Burnout

The 16-item Maslach Burnout Inventory-Student Survey (MBI-SS)<sup>10</sup> was used to measure student burnout. However, as suggested by Schutte et al.<sup>32</sup> one item was excluded in the data collection resulting in total 15 items. The MBI-SS comprises three dimensions: Emotional exhaustion (5 items; e.g., "I feel emotionally drained by my studies"), cynicism (4 items; e.g., "I doubt the significance of my studies"), and academic efficacy (6 items; e.g., "I can effectively solve the problems that arise in my studies"). The items were rated on a 7-point scale ranging from 0 (never) to 6 (always). Summed scores were calculated with higher scores indicating higher levels of emotional exhaustion, cynicism, and academic efficacy, respectively (Cronbach's  $\alpha$  at baseline and follow-up = .84 and .97 for emotional exhaustion, .90 and .97 for cynicism, and .83 and .90 for academic efficacy). According to Schaufeli et al.,<sup>10</sup> high scores on emotional exhaustion and cynicism and low scores on academic efficacy were indicative of high levels of burnout. In the present study, the criterion for burnout was defined as the presence of emotional exhaustion >14, cynicism >6, and academic efficacy  $\leq 22$ .<sup>3</sup>

### Statistical analysis

Ordinary least squares (OLS) regression analysis and  $R^2$ <sup>33</sup> were used to assess the moderating role of caring for bliss on aspects of burnout over time. Three models were estimated, all using mindfulness at baseline as a predictor variable and depressive symptoms and burnout at baseline as control variables. Model 1 had emotional exhaustion at follow-up as outcome with the same variable at baseline as control; model 2 had cynicism at follow-up as outcome with the same variable at baseline as control; and Model 3 had academic efficacy at follow-up as outcome with the same variable at baseline as control. Caring for bliss was examined as a moderating variable in all three models. The control, predictor, and moderator variables were mean-centered prior to the analysis.<sup>34</sup> The predictor and moderator variables

were then multiplied to form the interaction terms. Significant interactions were plotted for low and high levels of caring for bliss. Low caring for bliss was defined as one standard deviation (*SD*) below the mean and high caring for bliss was defined as one *SD* above the mean. The R package interactions<sup>35</sup> was used to generate the graphs with 95 percent confidence intervals and for simple slopes analysis. Using an alpha level of .05 and a power level of .80, the current sample size of 92 students allowed the detection of an incremental effect of as small as  $f^2 = .09$  or  $R^2 = .08$  ( $G^*Power$ <sup>36</sup>).

## Results

### Descriptive statistics

The percentages of the different categorizations of the burnout syndrome are shown in Table 1. At baseline, 32.6% were classified as having high emotional exhaustion, 29.3% as having high cynicism, and 35.9% as having low academic efficacy. At follow-up, 25.8% were classified as having high emotional exhaustion, 36% as having high cynicism, and 40.4% as having low academic efficacy. There were no significant differences on the levels of emotional exhaustion and academic efficacy between baseline and follow-up [ $t(88) = 1.68$ , Cohen's  $d = 0.19$  and  $t(88) = 0.42$ , Cohen's  $d = 0.06$ , respectively]. However, the component of cynicism significantly increased from baseline to follow-up [ $t(88) = 2.62$ ,  $p = 0.01$ , Cohen's  $d = 0.30$ ]. According to the three-dimensional burnout criterion, 12% were experiencing burnout at baseline and 11.2% at follow-up.

Table 2 presents the product-moment correlations among the study variables and the descriptive statistics. As expected, the correlations of mindfulness and caring for bliss with emotional exhaustion and cynicism were negative and ranged between small and medium in size (with the exception of the correlation between caring for bliss and emotional exhaustion at follow-up, which was negligible in size). A medium-sized correlation was also found between mindfulness and caring for bliss. Also, in line with our hypothesis, the correlations of mindfulness and caring for bliss with academic efficacy were positive and ranged between small

**Table 1.** Prevalence of the burnout syndrome according to the subscales of the Maslach Burnout Inventory Student Survey (MBI-SS) at baseline and at follow-up.

Domain	<i>n</i> (%) at baseline	<i>n</i> (%) at follow-up
Emotional exhaustion		
Low (0–9)	26 (28.3)	34 (38.2)
Moderate (10–14)	36 (39.1)	32 (36)
High (>14)	30 (32.6)	23 (25.8)
Cynicism		
Low (0–1)	21 (22.8)	16 (18)
Moderate (2–6)	44 (47.8)	41 (46.1)
High (>6)	27 (29.3)	32 (36)
Academic Efficacy		
Low ( $\leq 22$ )	33 (35.9)	36 (40.4)
Moderate (23–27)	25 (27.2)	24 (27)
High ( $\geq 28$ )	34 (37)	29 (33)
Three-dimensional burnout <sup>1</sup>	11 (12)	10 (11.2)

Note. <sup>1</sup>High emotional exhaustion + high cynicism + low academic efficacy. *n* at baseline = 92; *n* at follow-up = 89.

**Table 2.** Correlations, means, standard deviations, and empirical ranges for the study variables.

Variable	1	2	3	4	5	6	7	8	9
1. Depressive symptoms baseline	–								
2. Mindfulness baseline	-.45***	–							
3. Caring for bliss baseline	-.47***	.35**	–						
4. Emotional exhaustion baseline	.50***	-.43***	-.19	–					
5. Emotional exhaustion follow-up	.40***	-.36***	-.07	.46***	–				
6. Cynicism baseline	.41***	-.36***	-.13	.59***	.31**	–			
7. Cynicism follow-up	.46***	-.35**	-.11	.46***	.78***	.43***	–		
8. Academic efficacy baseline	-.48***	.28**	.53***	-.38***	-.30**	-.49***	-.40***	–	
9. Academic efficacy follow-up	-.36***	.25*	.40***	-.35***	-.29**	-.32**	-.40**	.56***	–
<i>M</i>	8.93	3.57	2.73	12.29	11.09	4.89	6.47	24.73	24.36
<i>SD</i>	5.48	0.98	0.80	5.04	7.15	3.84	5.90	5.78	7.20
Empirical Range	0–26	1–6	0.5–4	0–25	0–30	0–19	0–24	12–36	6–36
<i>n</i>	87	89	85	92	89	92	89	92	89

Note. *M* = Mean; *SD* = Standard deviation; Possible range: 0–30 for depressive symptoms, 1–6 for mindfulness, 0–4 for caring for bliss, 0–30 for emotional exhaustion, 0–24 for cynicism, and 0–36 for academic efficacy. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001 (2-tailed).

and large in size. With regard to the control variable depressive symptoms, mindfulness and caring for bliss correlated negatively with depressive symptoms, sharing about 20 percent of their variance. The correlations between depressive symptoms with emotional exhaustion and cynicism were positive and with academic efficacy negative, ranging between medium and large in size. Regarding the three dimensions of burnout, the largest correlation emerged between emotional exhaustion and cynicism, both at baseline and at follow-up.

### Moderation analysis

The results of the three moderation models, controlling for depressive symptoms and burnout at baseline, are provided in Table 3.

### Emotional exhaustion

As expected, the association between emotional exhaustion at baseline with emotional exhaustion at follow-up was positive and statistically significant. The associations between depressive symptoms, mindfulness, and caring for bliss at baseline with emotional exhaustion at follow-up were not significant. Further, the interaction effect, mindfulness with caring for bliss, was statistically significant, indicating that the association between mindfulness at baseline and emotional exhaustion at follow-up was moderated by the level of caring for bliss at baseline. Figure 1(a) illustrates the relationship between mindfulness and emotional exhaustion

for low caring for bliss and high caring for bliss. Emotional exhaustion was low in individuals reporting either low mindfulness and low caring for bliss or high mindfulness and high caring for bliss. Emotional exhaustion was high when either mindfulness was low and caring for bliss was high or mindfulness was high and caring for bliss was low. Simple slope analysis revealed that the association between mindfulness and emotional exhaustion was significant for high caring for bliss ( $b = -2.74, SE = 0.80, p < .01$ ) but not for low caring for bliss ( $b = 1.05, SE = 1.41, p = .46$ ). The total explained variance was 41 percent and the variance explained by the interaction effect above and beyond the simple effects was 5.9 percent,  $F(4, 76) = 10.46, p < .001$ .

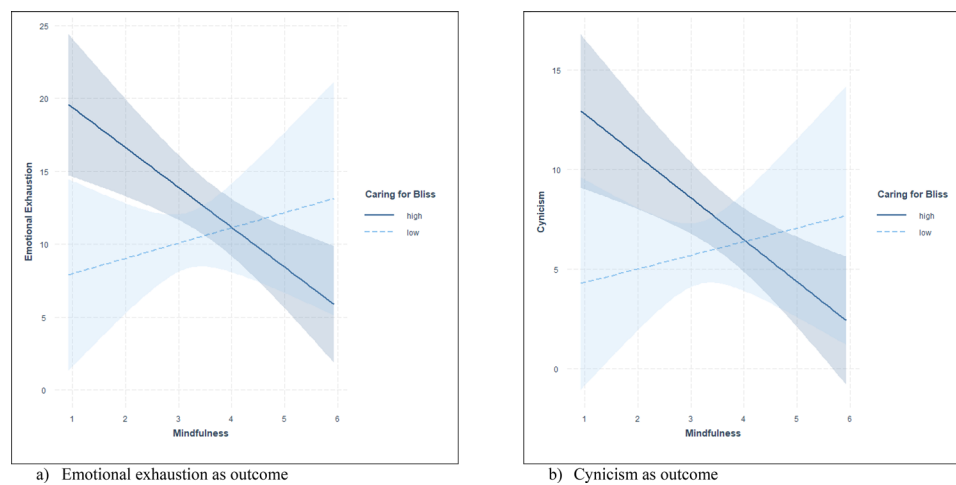
### Cynicism

The associations of depressive symptoms and cynicism at baseline with cynicism at follow-up were positive and statistically significant. The associations between mindfulness and caring for bliss at baseline with cynicism at follow-up were not significant. Further, the interaction effect between mindfulness and caring for bliss was statistically significant, indicating that the association between mindfulness at baseline and cynicism at follow-up was moderated by the level of caring for bliss at baseline. Figure 1(b) illustrates this interaction effect for low caring for bliss and high caring for bliss and indicates that the pattern resembles the one found for emotional exhaustion: Cynicism was low in individuals reporting either low mindfulness and low caring for bliss or high mindfulness and high caring for bliss. Cynicism

**Table 3.** Moderated regression analyses for emotional exhaustion, cynicism, and academic efficacy.

Predictor	Emotional exhaustion follow-up		Cynicism follow-up		Academic efficacy follow-up	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Depressive symptoms baseline	0.29	0.15	0.35**	0.12	-0.14	0.15
Outcome baseline	0.35*	0.15	0.30*	0.15	0.44**	0.15
Mindfulness baseline ( <i>M</i> )	-0.85	0.92	-0.71	0.74	-0.83	0.97
Caring for bliss baseline ( <i>C</i> )	1.20	0.94	0.92	0.76	1.81	1.12
<i>M</i> × <i>C</i>	-2.34**	0.85	-1.72*	0.69	1.82	0.96
Intercept	11.50***	0.68	6.74***	0.56	24.25***	0.73
<i>R</i> <sup>2</sup>	.41		.42		.36	
<i>F</i> (5, 75)	10.60***		10.73***		8.57***	

Note. All predictor variables were mean-centered prior to the analysis. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001 (2-tailed).



**Figure 1.** Regression lines with 95 percent confidence intervals showing the moderating effect of caring for bliss on the relationship between mindfulness and emotional exhaustion and mindfulness and cynicism, respectively. Low caring for bliss is defined as 1 standard deviation (SD) below the mean and high caring for bliss is defined as 1 SD above the mean.

was high when either mindfulness was low and caring for bliss was high or mindfulness was high and caring for bliss was low. As was the case for emotional exhaustion, the association between mindfulness and cynicism was significant for high caring for bliss ( $b = -2.11$ ,  $SE = 0.64$ ,  $p < .01$ ) but not for low caring for bliss ( $b = 0.68$ ,  $SE = 1.15$ ,  $p = .55$ ). The total explained variance was 42 percent and the variance explained by the interaction effect above and beyond the simple effects was 4.8 percent,  $F(4, 76) = 11.09$ ,  $p < .001$ .

### Academic efficacy

As for emotional exhaustion, the association of academic efficacy at baseline with academic efficacy at follow-up was positive and statistically significant. The associations between depressive symptoms, mindfulness and caring for bliss at baseline with academic efficacy at follow-up were not significant, indicating that academic efficacy at follow up is independent of mindfulness, caring for bliss, and depressive symptoms when controlling for academic efficacy at baseline. Also, the interaction effect of mindfulness with caring for bliss was not significant.

### Discussion

With student burnout occurring at alarming rates in industrialized countries,<sup>1</sup> promoting students' health and well-being is critical. Cultivating mindfulness has shown promise in reducing burnout in healthcare professionals,<sup>6-8</sup> but little is known about the prevalence of burnout in students pursuing a non-medical degree and the extent to which mindfulness impacts student burnout.<sup>26</sup> This study is the first that examined the impact of mindfulness and caring for bliss on burnout over time in undergraduate social sciences students. After adjusting for depressive symptoms and burnout at baseline, the results partially supported our hypotheses. Contrary to our first hypothesis, higher levels of mindfulness and caring for bliss at baseline were not associated with lower levels on the three components of student burnout.

However, the results supported our second hypotheses in that caring for bliss moderated the association between mindfulness at baseline and two components of student burnout 12 weeks later, namely, emotional exhaustion and cynicism. In particular, emotional exhaustion and cynicism were low when students reported either low or high scores on both mindfulness and caring for bliss, but not if one of the two scores was high and one was low. No moderating effect was found for the model with academic efficacy as outcome.

The finding that mindfulness and caring for bliss have a positive effect on reducing emotional exhaustion and cynicism when they were both high, underscores the importance of cultivating both mindfulness and caring for bliss. However, further research is needed to understand why they seem to work only jointly in reducing student burnout and not independently. In addition, the current findings imply that there may be the potential for students with high mindfulness and low caring for bliss or vice versa to benefit from mindfulness or caring for bliss trainings in order to reduce emotional exhaustion and cynicism. Since mindfulness and caring for bliss are separate but related concepts, which is supported in our data showing that they share about 12 percent of their variance, it may be interesting to integrate caring for bliss practices into existing mindfulness trainings to give students another tool to deal with academic stress.

Interestingly, mindfulness and caring for bliss also had a positive effect on reducing emotional exhaustion and cynicism when they were both low. This may be because students with low mindfulness and low caring for bliss let themselves drift into the past and the future and do not care about what actions could lead to lasting happiness. In contrast to emotional exhaustion and cynicism, there was no moderating effect on academic efficacy. A possible explanation may be the weaker association of reduced professional efficacy with emotional exhaustion and cynicism<sup>13,14</sup> that has even led to questioning whether reduced professional efficacy is a key component of the burnout syndrome.<sup>18</sup> Another explanation may be that burnout is not

an individual problem but also depends on workplace resources as pointed out in the JD-R model.<sup>20,21</sup> So, improving personal resources may not be enough to lower all aspects of the burnout syndrome. Finally, the control variable depressive symptoms predicted cynicism but not emotional exhaustion and reduced academic efficacy. This finding is partially in line with a recent study in physician assistant students that found that depression significantly predicted cynicism, but also emotional exhaustion using a cross-sectional design.<sup>37</sup>

Using the cutoffs of Boni et al.,<sup>3</sup> our data also showed that between 11 and 12 percent of the undergraduate social sciences students met the criteria for burnout at baseline and follow-up, respectively. These numbers were in the range reported in a systematic review of overall burnout, as measured with the MBI-SS, among medical students.<sup>1</sup>

### Strength and limitations

The strengths of the current study are the inclusion of a prospective longitudinal design and the use of two potential protective factors for student burnout, mindfulness and caring for bliss. The following limitations should be taken into consideration. First, it should be noted that over 95% of the participants were female and all were from the social sciences. Although women are more represented in the social sciences,<sup>38</sup> further research is needed to replicate these findings for males and students from various fields of study. Second, Maslach and Jackson's<sup>9</sup> conceptualization of the burnout syndrome has been criticized. For instance, some researchers suggest that cynicism and reduced efficacy are not components of the burnout syndrome,<sup>39,40</sup> whereas others defend the view that the burnout syndrome should be conceptualized of at least comprising exhaustion and cynicism.<sup>41</sup> Thus, future studies may take into account different conceptualizations and measures of student burnout such as the Copenhagen Burnout Inventory-Student Survey (CBI-SS)<sup>39</sup> or the Oldenburg Burnout Inventory-Student Survey (OLBI-SS).<sup>42</sup> Third, mindfulness in this study referred to mindful attention and awareness in the present moment. It would be interesting to assess mindfulness in future studies more broadly including for instance aspects of non-judgement or non-reactivity.<sup>43</sup> Fourth, it should be noted that although the interaction term was significant for emotional exhaustion and cynicism, it explained only between 5 and 6 percent of the variance above and beyond the simple effects. Future studies may thus examine the effect of additional variables, such as gratitude and self-compassion, which may have a similar preventing effect as mindfulness and caring for bliss. Finally, all data were based on self-report, so biases cannot be ruled out.

### Conclusion

The results of the current study suggest that cultivating both mindfulness and caring for bliss among students may be an effective strategy for preventing the two earlier stages of student burnout, namely emotional exhaustion and

cynicism over time. Specifically, caring for bliss practices such as the cultivation of gratitude and appreciation or following the deepest desires of one's heart<sup>28</sup> could be incorporated into mindfulness-based interventions, such as the MBSR program<sup>4,5</sup> or the Mindful Self-Compassion program.<sup>44</sup> Although more research is needed, it is hoped that these findings will stimulate further research on student burnout and ultimately initiate innovative trainings that will help promote both personal and workplace resources in the university setting.

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### Conflict of interest disclosure

The authors have no conflicts of interest to report. The authors confirm that the research presented in this article met the ethical guidelines, including adherence to the legal requirements, of the United States of America and received approval from the [Institutional Review Board of Florida State University].

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