



**Untangling the role of optimism, pessimism and coping influences on student mood, motivation and satisfaction.**

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Manuscripts

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3 **Untangling the role of optimism, pessimism and coping influences on student mood,**  
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5 **motivation and satisfaction.**  
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8 **Abstract**  
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11 The aims explored the associations between stress and eustress ratings and influences on  
12 coping (control, support and personality), on mood, course satisfaction and learning  
13 motivation. Undergraduate students, (N=175), were surveyed on student stressors,  
14 personality, support, control against mood, course satisfaction and motivation. Defensive  
15 pessimism, context control and agreeableness lowered anxiety, while neuroticism,  
16 extraversion and hassle ratings of tutor support, increased it. Control and neuroticism  
17 mediated between the hassle ratings accorded to support from family and friends and anxiety.  
18 Optimism and defensive pessimism lowered depression scores. Those in the upper quartile on  
19 Defensive pessimism, compared to those in the upper quartile on optimism, scored lower on  
20 anxiety, higher on learning motivation and course satisfaction and this is despite the optimism  
21 group being higher in self-efficacy, control and conscientiousness. Both groups scored higher  
22 than the cohort average on GPA, with the upper quartile in optimism, highest. The results  
23 suggest control, defensive pessimism and optimism all offer effective coping, with individual  
24 difference an important caveat – for those capable and high in anxiety, defensive pessimism  
25 was effective. An optimistic *outlook* is unlikely to be helpful. It may even have negative  
26 consequences, while optimistic *thinking strategies* together with defensive pessimism are  
27 likely to boost motivation, satisfaction and mood.  
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51 **Key words**  
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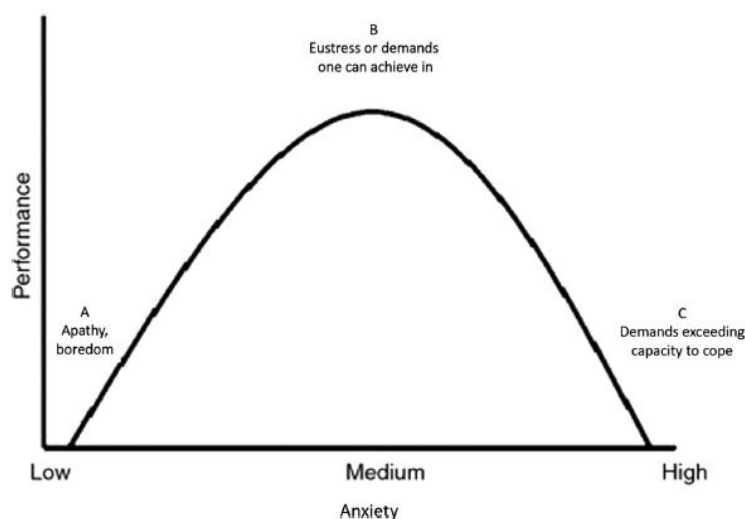
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54 Stress, eustress, personality, optimism, defensive pessimism, context control, learning  
55 motivation, course satisfaction, anxiety, depression.  
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## Introduction

The Transactional model of stress (Lazarus & Folkman, 1987) incorporates the perception and judgment of stress demands (the primary appraisal) along with stress management (the secondary appraisal). Primary appraisals can lead to the judgment that the stressor is irrelevant, a challenge or a threat. As illustrated in Figure 1, stress demands associated with optimal performance i.e., challenges one can achieve in, are called eustress (B). Those that are perceived as associated with apathy or boredom (A) or, more often, as exceeding one's capacity to cope (C), are sources of distress (Gibbons, 2008).

Research into stress usually operationalises it in terms of degrees of distress. This study adopted a positive psychology framework, with university demands measured using an adapted UK National Student Survey (NSS) and response scale that allowed stress demands to be rated as hassles (that hold the potential to have an adverse effect on well-being) *and* as uplifts (that hold the potential to enhance well-being). This is consistent with the 'threat' and 'challenge' or distress and eustress appraisals. The secondary appraisal in the model refers to individual coping resources and factors affecting coping.

**Figure 1 The curvilinear relationship between stress and performance (Gibbons, 2008)**



### Sources of student stress

Sources of student stress include academic demands, such as coursework, exams and work-life balance (Ansari, Oskrochi & Haghgoo, 2014, Gibbons, 2022a, 2022b); fear of failure, lack of timely feedback and the quality of teaching (Gibbons, 2008, 2010, 2015). Gibbons (2022b) found that teaching and course demands, along with a range of support – from peers, tutors, the wider university and one’s partner, when rated as a hassle, was higher in those ‘at risk’ of a stress-related illness. The support ratings were also associated with lower course satisfaction and higher anxiety (Gibbons, 2022b, 2022c). Personal sources of stress include financial concerns, managing free time, working part-time while studying, and future concerns (Gibbons 2015). The changes students experience as they transition to university are frequently a source of acute stress. For most, they are learning to live independently, meet new people, adjust to new accommodation arrangements; to managing their own finances and all along with the challenges posed by a course that may leave them feeling overwhelmed (Denovan & Macaskill, 2017).

### Stress effects

Well-being is defined as: ‘...a state of complete physical, mental and social well-being and not merely the absence of disease and infirmity’ (World Health Organization, 2006, p.100). While critics question the assumption of ‘completeness’ as integral to wellbeing, the definition highlights the critical role of psychology in wellbeing. The experience of stress can affect student well-being: including depression, anxiety and happiness (Zhang *et al.*, 2015, Gibbons & Murray-Gibbons, 2023); and learning motivation and course satisfaction (Gibbons, 2022a, 2022b). Denovan and Macaskill (2017) report that students under 26 suffer most because they are still transitioning into adulthood.

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3 Key stress effects measured in the UK's National Student Survey (NSS), are course  
4 satisfaction and learning motivation. Students rate a range of common experiences, such as  
5 teaching and learning, assessment and feedback, learning resources and support  
6 infrastructure. Final year students are invited to complete the survey and the results are key in  
7 university league tables.  
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12 While understanding the influences on course satisfaction is important, understanding the  
13 influences on mood (anxiety and depression) is because of its association with mental health  
14 and performance. The  $x$  axis in Figure 1, for example, is often operationalised through  
15 measures on anxiety, with increases in anxiety beyond the optimum, associated with a decline  
16 in performance, such as a narrowing in attention and a reduction in the efficiency of working  
17 memory (Eysenck, Derakshan, Santos & Calvo, 2007).  
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22 Ibrahim, Kelly and Galzebrook surveyed 923 students across six UK universities and found  
23 58.1% of females and 59.9% of males reported high depressive symptoms, with those from  
24 deprived areas twice as likely to be depressed. Gibbons (2022a) found lack of motivation  
25 towards studies and the hassle ratings given to tutor support as key predictors of student  
26 anxiety.  
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### 29 30 31 32 33 34 35 36 37 38 39 40 41 42 **Coping with stress**

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45 According to Neves and Hewitt's (2020) UK survey, key predictors of course satisfaction in  
46 2019 ( $n= 14072$ ) and 2020 ( $n= 10227$ ) were: the level of challenge in course demands; the  
47 student effort invested; the opportunity to interact with others, and how well the course was  
48 organised.  
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53 Key influences on coping include personality, and past experiences and these are drawn on to  
54 perceive and manage stress demands. Of all the Big Five traits, the significance given to  
55 student effort in Neves and Hewitt's (2020) findings, reflects the importance of  
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3 conscientiousness in relation to student performance and course satisfaction (Gibbons, 2022a;  
4 Ivcevic & Brackett, 2014). The opportunity to interact with other students reflects the  
5 importance associated with support (Gibbons, 2009a, 2009b; Taylor, 2011; Neves & Hewitt,  
6 2020).

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13 Context control, or the skills acquired to manage particular situations, has been found to be  
14 an important coping resource in several studies (Maddi, 2002, Gibbons, 2015, 2022a, 2022b)  
15 and self-efficacy or confidence is commonly reported (Zimmerman, 2000). Other important  
16 Big Five traits (McCrea & Costa, 2004) linked to coping include extraversion (Kuijpers *et al.*,  
17 2021), levels of emotional stability and openness (Vollrath & Torgersen, 2000). In education  
18 contexts, openness is important if learning is to expand; and optimistic thinking strategies  
19 have been associated with performance, course satisfaction and well-being (Schwarzer, 1994;  
20 Seligman, 2008). Those high on optimism construe stress demands in a way that makes  
21 success more likely. As well as a biased expectation of good outcomes, they more readily  
22 employ a number of other strategies: They tend to perceive change and stress demands as  
23 opportunities to grow and achieve and good copers more frequently score stress demands  
24 higher on uplifts and lower on hassles (Gibbons, 2010, 2022b). They are biased to attend  
25 more to positive over negative events (defensive optimism), especially in situations where  
26 they are unable to exercise control to bring about positive change (Fournier, De Ridder &  
27 Bensing, 2002). They are more forgiving of their mistakes and they reframe losses by  
28 imagining scenarios worse than those they face. They are more active in learning from their  
29 coping mistakes and they tend to be higher on conscientiousness, control and support  
30 (Lazarus & Folkman, 1987, Gibbons, 2022b).

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There is a strong body of evidence associating optimism with health and wellbeing  
(Schwarzer, 1994, Scheier & Carver, 1985, 1994; Seligman, 2008). However, some of the  
most cited studies, e.g., Danner, Snowdon and Friesen's (2001) longitudinal study of health

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3 in nuns, measured emotional expressiveness not optimism. Some that do offer evidence may  
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5 mistake the effect for the cause – if one is successful, optimistic thinking will follow (the  
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7 effect). The cause of that success may relate to any number of ingredients, such as the earlier  
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9 evidence on control, support, confidence and extraversion more characteristic among  
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11 optimists, and it might relate to those other strategies commonly employed by optimists  
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13 rather than an optimistic outlook per se.  
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17 There are negatives to optimism too – if one overestimates the likelihood of positive  
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19 outcomes, disappointment will be experienced more and when positive outcomes occur,  
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21 because they were expected, they will be enjoyed less (Bell, 1985). Positive psychology has  
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23 become synonymous with the benefits of optimism and self-help books abound with it as the  
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25 theme. However, Sharot (2011) claims unrealistic optimism or a bias to overestimate positive  
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27 outcomes, is held by approximately 80% of those who regard themselves as optimistic.  
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31 Kahneman and Tversky (1979) coin the term loss aversion to describe the phenomenon  
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33 where most feel more pain in relation to a loss than to a gain, even when the amount lost or  
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35 gained is the same. It relates to the adaptive value of safeguarding what one has because that  
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37 is known while prospective gains are not, and, because unrealistic optimists have a low  
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39 expectation of loss, they will experience the pain of loss aversion more frequently.  
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44 Pessimists do not experience this downside of optimism. For them, good outcomes are more  
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46 enjoyable because they are unexpected and bad outcomes less disappointing because they are  
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48 expected. There is a risk that low expectations may reinforce under-achievement as a false  
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50 norm, but Norem and Cantor (1986) offer evidence of circumstances where pessimism helps.  
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52 They dispute the claim that adopting an optimistic outlook offers a panacea to the downside  
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54 of stress. They argue that for those anxious-prone and who have tended to do well, a more  
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56 effective strategy is defensive pessimism. This involves setting yourself unrealistically low  
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3 expectations in situations that cause you anxiety. Setting a high expectation of success could  
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5 add to already heightened anxiety and inhibit performance, tipping you past the peak (B) to  
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7 (C) in Figure 1. Gibbons (2022a) found, for example, that students high in defensive  
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9 pessimism and high in anxiety but who had tended to achieve, were just as high in learning  
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11 motivation as those high in optimism.  
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### 17 **Aims and hypotheses**

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19 This study explored the influence of student stress, rated as hassles and uplifts, on mood,  
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21 motivation and satisfaction, along with coping influence of support, control and personality  
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23 and with those high on optimism and pessimism compared to shed light on their role in  
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25 coping.  
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31 H1: There will be correlations between sources of stress, support, control and personality  
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33 against mood (anxiety and depression), learning motivation and course satisfaction.  
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37 H2: Support, control and personality will have a mediating role between sources of stress and  
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39 outcomes.  
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43 H3: There will be differences in the mood, learning motivation, course satisfaction and GPA  
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45 between those high in optimism against those high in defensive pessimism.  
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50 H4: There will be differences in control, self-efficacy and personality between those high in  
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52 optimism against those high in defensive pessimism.  
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## Methods

### *Design*

A survey-based, correlational design was employed. The predictor variables were: course-related demands (rated as hassles *and* as uplifts), amended from the National Student Survey. The coping influences measured were support, context control, self-efficacy, the Big five, optimism and defensive pessimism. The outcome variables for the regression analyses were mood (anxiety and depression); and for the between samples optimism and pessimism comparisons, it was mood, course satisfaction, learning motivation and GPA.

### *Participants*

A sample of 175 university students (87% of the cohort) were recruited from the second year of a psychology BSc programme. On demographics, 86.4% were female (n=140) and 14% male (n=25). Participants' average age was 22 years (SD= 4.55 and range 18-59 years). The inclusion criteria were second year students because they had sufficient experience to rate the different sources of stress but not the added weighted demands experienced in the final year.

### *Materials*

Students completed an online survey that included a brief and instructions and gathered information on demographics; sources of student stress, coping influences, mood, learning motivation and course satisfaction. The  $\alpha$  for all measures ranged from .60 - .90. A 5-point Likert 'Strongly Agree' to 'Strongly Disagree' response scale was used unless otherwise stated.

*The National Student Survey (NSS)* (HEFCE, 2017)

NSS items were adapted with participants rating each demand twice on a 5-point scale, from 'no hassle' and 'no uplift' (0), up to 'strong hassle' and 'strong uplifting' experience (5). A range of factors were measured across 25 items, such as teaching demands, time management and support. An example item is:

Hassle		Uplift
0-5	Item	0-5
	The comprehensibility of the material taught on the course.	

An example *Learning motivation* item is: 'I have found the course motivating' and an example *course satisfaction* item is: 'I enjoy my studies'. Respondents also estimated their GPA.

*Context control* (Gibbons, 2010)

The Context control scale, of three items, measured state or situation related levels of control e.g. 'The pace of learning often leaves me with little feeling of control.'

*The Values in Action (VIA) scale* (Seligman, Park & Peterson, 2005)

The eight-item hope/optimism sub-scale from the longer VIA scale was used to measure levels of optimistic thinking e.g. 'I always look on the bright side'.

*Defensive pessimism scale* (Norem & Cantor, 1986)

This is a twelve-item scale, using a 7-point response scale from 'Not at all true of me' (1) to 'Very true of me' (7). A sample item is: 'I often start out expecting the worst, even though I will probably do okay'.

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3 *The Generalized Self-Efficacy Scale* (Schwarzer, 1992)  
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5 This scale consists of 10 items and participants respond on a four-point scale from ‘not at all  
6 true’ to ‘exactly true’. It is a context free measure of self-efficacy. A sample item is: ‘No  
7 matter what comes my way, I’m usually able to handle it’.  
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15 *Big Five Inventory -10 (BFI-10)* (Rammstedt & John, 2007).  
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17 Respondents are asked to rate ten statements that describe personality e.g. ‘I see myself as  
18 someone who is reserved’. Two items measured each trait.  
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22 *Hospital Anxiety and Depression Scale (HADS)* (Zigmond & Snaith, 1983)  
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25 The fourteen-item HADS contains an anxiety sub-scale and a depression sub-scale.  
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27 Respondents rate each on a scale from 0-3, where 0 is “not at all” and 3 is “most of the time”  
28 e.g. “I feel tense or wound up”. This test is widely used in non-clinical settings (Gibbons,  
29 2005).  
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35 *Ethics and Procedure*  
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37 The cohort was made aware of the study via email and in links on their course homepage.  
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39 The study received approval from the Ethics committee at the host university. All participants  
40 received a brief and a point of contact for further clarifications. All were informed that  
41 participation was voluntary and they were free to stop at any time and all acknowledged  
42 informed consent before participating. All ethical considerations and methods were executed  
43 in accordance with the Declaration of Helsinki.  
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## Results

Predictors were entered in blocks: the sources of stress entered in block one; the influences on coping – support rated as an uplift, context control, self-efficacy and personality, in block two. The models illustrate the final blocks. Possible mediators were flagged when there was evidence of predictors significant in one block but not in the next and where new predictors entered were significant. There was evidence of mediation with anxiety but not depression.

**Table 1 Multiple regression with anxiety**

Model	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	$\beta$
(Constant)	28.53	3.28	
Tutor support Hassle	.27	.12	.12**
Context control	-.43	.15	-.20***
Extraversion	.26	.16	.10*
Agreeableness	-.37	.18	-.12**
Neuroticism	.78	.20	.29****
Defensive pessimism	-.27	.05	-.37****

\* $p < .10$ , \*\* $p < .05$ , \*\*\* $p < .01$ , \*\*\*\* $p < .001$

The  $R^2$  explained 48.6% of the variance and the Adjusted  $R^2$  explained 46.8% of the variance in scores on anxiety. The results of the analysis offered partial support for H1.

**Table 2 Multiple regression with depression**

	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	Beta
(Constant)	26.035	1.183	
Optimism	-.294	.064	-.35**
Defensive pessimism	-.061	.032	-.15*

\* $p < .05$ , \*\*  $p < .001$

The  $R^2$  explained 18.7% of the variance and the Adjusted  $R^2$  explained 17.7% of the variance in scores on depression. The results of the analysis offered partial support for H1.

### Mediation analysis

For anxiety, all the predictors entered in block two (Table, 1), were significant and were therefore tested as possible mediators. Context control and neuroticism were found to act as mediators between the hassle ratings given to support from family and friends and anxiety:

Figure 1. Context control as a mediator between 'family and friends' support rated as a hassle and anxiety

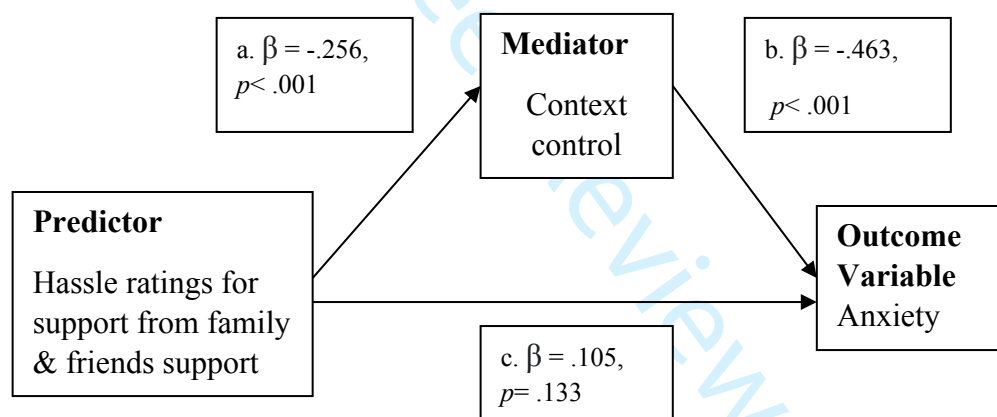
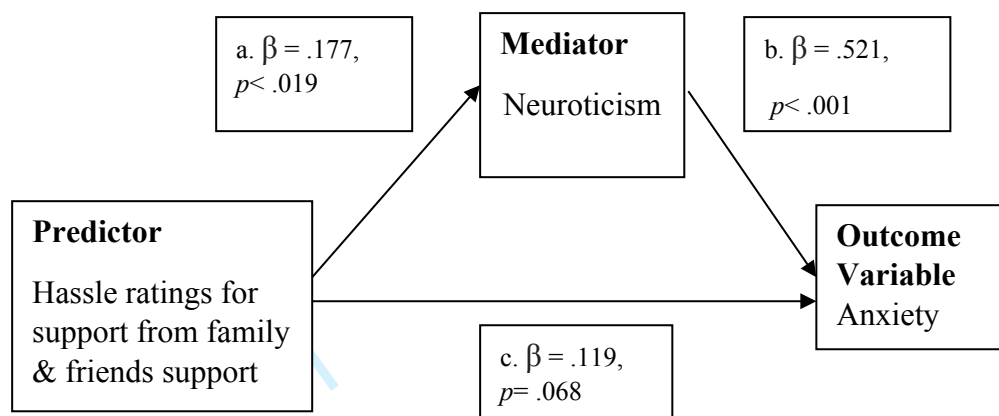


Figure 2. Neuroticism as a mediator between 'family and friends' support rated as a hassle and anxiety



23 There was a positive relationship between the hassle ratings given to the support from family  
24 and friends and anxiety (the unmediated path, Table 3). However, this relationship was no  
25 longer significant (the mediated path, Table 3) when neuroticism was tested as a mediator  
26 and then again when context control was tested. The results offer partial support for H2.  
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35 **Table 3 Unmediated and mediated values between ‘hassle’ ratings of family and friends**  
36 **support and anxiety**  
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39 *For context control as the mediator*

	$\beta$ value	$p$ value
Unmediated path	.223	.005
Mediated path	.105	.133

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50 *For neuroticism as the mediator*

Unmediated path	.211	.005
Mediated path	.119	.068

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### Comparisons between those high in optimism and defensive pessimism

To test H3, T-tests were run between those in the upper quartile on optimism ( $n=27$ ) against those in the upper quartile in defensive pessimism ( $n=10$ ) and against the rest of the sample not in these two groups. Those participants in the upper quartile in both were excluded. The outcome measures were anxiety, depression, course satisfaction, learning motivation and self-estimated GPA.

On anxiety, the optimist group ( $M=19.74$ ,  $SD=5.56$ ) were higher than the defensive pessimism group ( $M=17.30$ ,  $SD=1.47$ ). This difference was trending towards significance  $t(35)$ ,  $1.34$ ,  $p=.09$ , with a medium effect size  $d=.46$ . Both groups were significantly lower than the cohort average on anxiety ( $M=22.72$ ,  $SD=5.11$ ), for the optimism group,  $t(155)$ ,  $2.71$ ,  $p=.004$ , with a medium effect size  $d=.57$ ; and for the defensive pessimism group,  $t(138)$ ,  $3.25$ ,  $p<.001$ , with a large effect size  $d=1.07$ .

On depression, there was no difference between the optimist group ( $M=18.30$ ,  $SD=3.43$ ) and the defensive pessimism group ( $M=18.30$ ,  $SD=3.77$ ). Both means were lower than the cohort average ( $M=19.64$ ,  $SD=2.92$ ). For the optimism group this was significant,  $t(155)$ ,  $2.11$ ,  $p=.018$ , with a medium effect size  $d=.45$ ; and for the defensive pessimism group this was trending towards significance,  $t(138)$ ,  $1.37$ ,  $p<.087$ , with a medium effect size  $d=.45$ .

Course satisfaction, for the optimist group ( $M=5.89$ ,  $SD=2.29$ ), was lower than for the defensive pessimism group ( $M=7.20$ ,  $SD=2.66$ ). This difference was trending towards significance  $t(35)$ ,  $1.48$ ,  $p=.07$ , with a medium effect size  $d=.55$ . There was no difference between the defensive pessimism group and the cohort average ( $M=6.83$ ,  $SD=2.78$ ), but the

optimism group were lower than the cohort average  $t(155)$ , 1.65,  $p=.05$ , with a small to medium effect size  $d=.35$ .

On learning motivation, the optimist group ( $M=4.07$ ,  $SD=1.86$ ) were lower than the defensive optimism group ( $M=5.60$ ,  $SD=1.84$ ),  $t(35)$ , 2.22,  $p=.03$ , with a large effect size  $d=.82$ . However, there was no difference between the mean for the defensive pessimism group and the cohort average on learning motivation ( $M=5.21$ ,  $SD=1.98$ ), with the optimism group *lower* than the cohort average  $t(155)$ , 2.73,  $p=.004$ .

On GPA, the optimism group ( $M=66.33$ ,  $SD=3.00$ ) were higher than the defensive pessimism group ( $M=63.90$ ,  $SD=5.90$ ),  $t(35)$ , 1.24,  $p=.05$ , with a medium effect size  $d=.46$ . There was no difference between these and the cohort average ( $M=64.25$ ,  $SD=6.69$ ).

To test H4, to see if the differences in these outcomes for the optimism and defensive pessimism groups could be attributed to the influence of the other individual differences studied, T tests were run on the differences between these two groups on control, personality and self-efficacy:

***Table 4 Individual differences descriptive statistics for those high in defensive pessimism and optimism***

	Groups	Mean	Std. Deviation
Self-efficacy	Defensive pessimism	29.60	6.70
	Optimism	36.15	6.17
Context control	Defensive pessimism	9.50	2.17
	Optimism	11.26	1.85
Extraversion	Defensive pessimism	5.40	1.26
	Optimism	6.22	1.95
Agreeableness	Defensive pessimism	7.50	2.22
	Optimism	7.67	2.04
Conscientiousness	Defensive pessimism	6.00	1.76
	Optimism	7.56	1.37
Neuroticism	Defensive pessimism	7.20	1.55
	Optimism	6.07	2.04



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Openness	Defensive pessimism	4.20	1.03
	Optimism	4.41	.89

For Peer Review Only

**Table 5 Individual differences between those high in optimism against those high in defensive pessimism**

	<i>t</i>	<i>df</i>	<i>p</i> value	Cohen's <i>d</i>
Self-efficacy	2.80	35	.008	1.04
Context control	2.45	35	.019	.91
Extraversion	1.24	35	.225	.46
Agreeableness	.216	35	.830	.08
Conscientiousness	2.84	35	.007	1.05
Neuroticism	1.58	35	.123	.59
Openness	.60	35	.550	.22

There was no difference in the two groups on openness, agreeableness, extraversion and neuroticism. However, a medium effect size was reported for extraversion and neuroticism.

There was no difference between the defensive pessimism group and cohort average on neuroticism. The optimism group were lower than the cohort average,  $t(155), 4.67, p < .001$ .

The optimist group scored higher than the defensive pessimist group on self-efficacy, context control and conscientiousness. The results offer partial support for H4.

## Discussion

### Regression model for depression

There was a negative association between optimism and defensive pessimism on depression. Optimism reported the larger beta value and a stronger negative association. This indicated that, while both were influences, optimism was the most beneficial, supporting Seligman (2008) and Scheier and Carver, (1985).

### Regression model for anxiety

In this analysis, defensive pessimism was the strongest predictor – with high scores predicting low anxiety. Interestingly, self-efficacy, different types of support and optimism were separately significant with anxiety as bi-variate correlations, but none were in the regression analysis. In a challenge to the claimed benefits of optimism and these other factors often associated with optimism, defensive pessimism was the strongest predictor of low anxiety. This supports Norem and Cantor (1986) and Gibbons (2022b) and suggests that for those who have tended to do well and who face uncertain challenges, adopting defensive pessimism can relieve the pressure of having to do well while not changing the effort invested.

Not unsurprisingly, those ‘neurotic’ or worry-prone, were more likely to report higher anxiety and students who reported support from their tutor as a hassle, scored higher on anxiety.

These tutor ratings may reflect the variations in support students received but it might equally relate to the different ways that stress is perceived. That is to say, the stress that helps you achieve may not be rated only as uplifting, it may be stress experiences that, at the time, are daunting or even unpleasant. In the same way a coach may put her team through grueling training to bring success, the support and guidance from tutors aims to empower students with the skills to succeed as independent learners. Students have to meet this guidance with

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3 effort, with attempts, and often failed attempts, at mastering study skills. This means feeling  
4  
5 vulnerable, experiencing disappointment and often imposter syndrome are inevitable growing  
6  
7 pains towards success. This may, in part, account for these hassle ratings.  
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10 Extraversion is often associated with lower experiences of stress and anxiety but here it was  
11  
12 positively associated. The association was only trending to significance and, similar to the  
13  
14 last point, its association might reflect levels of anxiety associated with productivity and  
15  
16 performance rather than unhealthy anxiety.  
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20 Consistent with earlier findings (Gibbons, 2008, 2022a), context control was associated with  
21  
22 lower anxiety. This suggests it is important in good coping. In higher education, the context  
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24 element refers to the study environment and regime a student fosters. The more they hone the  
25  
26 skills needed to succeed in higher education, the more they feel in control and the more their  
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28 experience of anxiety will be at the optimal level (B in figure 1).  
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### 32 33 **Mediation analysis**

34  
35 There was an association between the support from family and friends when rated as a hassle,  
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37 and anxiety but this was no longer evident when neuroticism and context control were tested  
38  
39 as possible mediators, suggesting that these are the underlying influences accounting for this  
40  
41 apparent relationship. Neuroticism positively correlated with the hassle ratings given to the  
42  
43 support from family and friends and positively correlated with anxiety. Those high in  
44  
45 neuroticism are more likely to search for and tune into potential threats. This is likely to be an  
46  
47 evolutionary response – a trait that acts as an early alarm signal to potential threats  
48  
49 (Seligman, 1971). Those who are worry-prone are more likely to inflate the potential impact  
50  
51 of stress demands. The support offered by friends and family, however well intentioned, may  
52  
53 more readily be interpreted as a stress demand if it is not immediately clear how it is helpful.  
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55 Demands that are perceived as stressful, add a cognitive load and this is associated with lower  
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3 concentration and executive functioning (Eysenck *et al.*, 2007). It is likely that family and  
4 friends are unable to offer instrumental support, on how to do a particular assignment for  
5 example, and their attempts at emotional support may be limited if they cannot empathise  
6 with the university and course-specific demands a student faces. In these circumstances, such  
7 support, to those high in anxiety and neuroticism, may be appraised as just another stress  
8 demand.  
9

10  
11 Context control is a powerful coping resource (Gibbons, 2009, 2022a, 2022b) and those high  
12 in context control are much less likely to rate the same support experience as a hassle because  
13 they are coping well. Their high control gives them coping reserves that are likely to change  
14 how that experience is perceived, they may, for example, identify more with the good  
15 intention behind the support.  
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### 18 **Comparing optimism and defensive pessimism – which helps most?**

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20 As well as looking at the influence of university stress, personality and coping (support and  
21 control) on mood, learning motivation and course satisfaction, the aims sought to test the  
22 differences between optimism and defensive pessimism groups on these outcomes and in  
23 GPA and on the other individual differences measured. Those in the upper quartile on  
24 optimism were compared against those in the upper quartile on defensive pessimism and  
25 compared against the rest of the cohort.  
26  
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28  
29 The defensive pessimism group were lower than the optimism group and the cohort average  
30 on anxiety, and the cohort average on depression. They were higher than the optimism group  
31 on course satisfaction and learning motivation, but their averages did not differ from the  
32 cohort average. The optimism group were lower than the cohort averages on anxiety and  
33 depression, but also on course satisfaction and learning motivation.  
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3 The results suggest both optimism and defensive pessimism lower anxiety and depression.  
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5 Consistent with Fournier *et al.*, (2002), it may be that those high on optimism and who lack a  
6  
7 sense of control in stressful situations, find a benefit to mood (anxiety and depression) by  
8  
9 focusing on the positives in the situation. This finding is consistent with Norem and Cantor's  
10  
11 (1986) findings, although they found the benefits were short-lived.  
12  
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15 The negative association between optimism and course satisfaction and motivation suggests  
16  
17 this explanation is unlikely to apply in relation to academic stress demands, and it does not  
18  
19 support some earlier findings (Schwarzer, 1994, Seligman, 2008). It does, however, support  
20  
21 the evidence on the downside of optimism, principally that heightened expectations of  
22  
23 success, especially unrealistic expectations, increase disappointment and loss aversion when  
24  
25 those expectations are not met and reduce elation when they are (Bell, 1985).  
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30 The defensive pessimism strategy – of setting the bar low to relieve oneself of the pressure of  
31  
32 having to do well, can, ironically, enhance achievement, as well as increasing motivation and  
33  
34 satisfaction when low expectations are exceeded. While optimism and pessimism strategies  
35  
36 might be useful in lowering anxiety and depression, there is merit in exploring the underlying  
37  
38 influence of the other individual differences between these two groups.  
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42 The effectiveness of self-efficacy, context control, conscientiousness and extraversion on  
43  
44 wellbeing, performance and health is robust. The optimism, compared to the defensive  
45  
46 pessimism group, were higher on each attribute by medium to large effects. This was not a  
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48 surprise as there is evidence that those who cope well are likely to draw on more than one of  
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50 these. However, despite this, the defensive pessimism group fared better on the outcomes  
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52 measured – they were lower on anxiety, higher on course satisfaction and learning  
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54 motivation. Only with depression was there no difference.  
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3 While adopting a biased, optimistic perspective can relieve mood in circumstances where one  
4 has little control (defensive optimism), these results suggest it is not to be recommended as a  
5 general perspective. It appears only to increase disappointment and dissatisfaction and lowers  
6 motivation, and this is despite the optimism group being higher on attributes normally  
7 associated with good coping. The optimism group did report higher GPA. It is a challenge to  
8 square this with their lower satisfaction and motivation, but GPA was self-estimated and  
9 calculating it accurately is complicated because of multiple assessments, each weighted  
10 differently. The sample average, for example, was higher than recorded year group mean by  
11 5% and an inflation in estimate is more likely among those with a bias for high expectations.  
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### 24 **Limitations**

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26 The use of a survey method and volunteer sample are not without limitations and a larger  
27 sample, across all cohorts in the department, would have allowed more insight into the  
28 different demands faced across each year. It would also increase the pool of those high in  
29 optimism and pessimism and this would increase generalizability.  
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36 Identifying the sources and experiences of stress that are likely to enhance performance and  
37 are thereby uplifting, as opposed to a hinderance or hassle, is a key challenge in attempting to  
38 operationalise sources of stress. The stress that helps you achieve may be experienced as  
39 unpleasant and rated as a hassle, even though it is necessary to achieve. Adopting different  
40 labels for 'hassles' and 'uplifts', such as sources of stress that 'hinder' or are 'necessary to  
41 facilitate' performance might increase the validity of these ratings.  
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### 51 **Recommendations**

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53 Induction periods are an important time, not just for those adjusting to university in their first  
54 year but at the start of the academic year after the four-month break between academic years.  
55 Part of that induction could focus on stress management, specifically those skills common  
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3 among those who succeed: Learning and executing key study skills keeps one ahead of the  
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5 curve. Being organized, disciplined, striking a balance between work and down-time and  
6  
7 finding efficient ways into a topic, can sustain motivation. Drawing on online sources,  
8  
9 podcasts and the ever-expanding array of AI and study apps, and using subject librarians to  
10  
11 keep abreast of the best ways to do literature searches; understanding the marking scheme  
12  
13 and learning how to critically evaluate all build context control.  
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17 One can draw on the cognitive strategies used by both pessimists and optimists. They are not  
18  
19 mutually exclusive but the mantra of ‘the glass is half-full’ is not enough – a bias to expect  
20  
21 positive outcomes, in fact, could lower satisfaction and motivation. However, optimists do  
22  
23 use strategies that work. They more readily embrace change; they are more forgiving of their  
24  
25 mistakes and they take steps to learn from them. They tune into their successes and this  
26  
27 boosts mood; when facing situations over which they have no control, whether that is a future  
28  
29 event or a past disappointment, optimists search for the positives and this elevates mood. If  
30  
31 one has tended to work hard and do well, then adopting a low expectation of success will not  
32  
33 lower the effort invested but will relieve one of the pressure of having to achieve (placing one  
34  
35 at B not C in figure 1). This suggests defensive pessimism is a robust strategy and should be  
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37 added to efforts to build context control and the strategies commonly used by optimists.  
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