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Published online: 22 Sep 2023.

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

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ABSTRACT

The study tested the associations between stress and coping on mood, course satisfaction and learning motivation. Undergraduate students (N = 175) were surveyed on student stressors, personality, support and control against mood, course satisfaction and motivation. Defensive pessimism, context control and agreeableness lowered anxiety. Neuroticism, extraversion and hassle ratings towards tutor support, increased it. Control and neuroticism mediated between stress ratings given to support from family and friends and anxiety. Optimism and defensive pessimism lowered depression scores. Those high in Defensive pessimism, compared to those high in optimism, scored lower on anxiety, higher on learning motivation and course satisfaction and this is despite the optimism group being higher in self-efficacy, control and conscientiousness. Both groups scored higher than the cohort average on GPA. The results suggest that context control, defensive pessimism and optimism all offer effective coping, with individual differences an important caveat – for those capable and high in anxiety, defensive pessimism was effective.

Introduction

While being a student offers the opportunity for growth, exploration and achievement, studies abound that show it is a period often associated with reduced mental health and increased loneliness (Gibbons, 2022b; Neves & Hewitt, 2020). This study explored the experience of students in a UK university with a focus on the key ingredients affecting coping behaviour.

One of the most cited models, the Transactional model of stress (Lazarus & Folkman, 1987), incorporates the perception and assessment of stress demands (the primary appraisal) along with the factors affecting coping (the secondary appraisal) and their influence on behaviour and health. Primary appraisals can lead to the judgement 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, are sources of eustress (B). Those that

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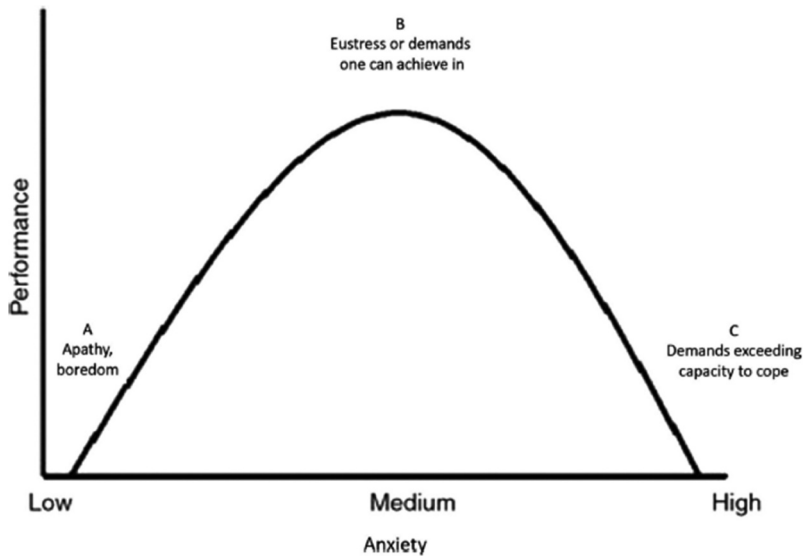
Figure 1. The curvilinear relationship between stress and performance (Gibbons, 2008).

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 employing the UK National Student Survey (NSS), with an adapted response scale, allowing 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' appraisals in the Transactional model.

Sources of student stress

Sources of student stress include academic demands, including coursework, exams and work-life balance; fear of failure, lack of timely feedback and the quality of teaching (Ansari et al., 2014; Gibbons, 2022b). Gibbons (2022c) 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, were higher in those 'at risk' of a stress-related illness. The support ratings were also associated with lower course satisfaction and higher anxiety (Gibbons, 2022a, 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 and to manage 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 (Gibbons & Murray-Gibbons, 2022a; Zhang et al., 2015), and, depending on how stress is construed, it can positively or negatively influence learning motivation and course satisfaction (Gibbons, 2022b, 2022c). Denovan and Macaskill (2017) reported that students under 26 suffer most because they are still transitioning into adulthood.

Key stress effects, measured in the UK's National Student Survey (NSS), are course satisfaction and learning motivation. Students rate a range of common experiences, such as teaching and learning, assessment and feedback, learning resources and support infrastructure. Final-year students are invited to complete the survey, and the results influence rankings in university league tables.

While understanding the influences on course satisfaction is important, so is understanding the influences on mood (anxiety and depression) because of its association with performance *and* mental health. The *x* axis in Figure 1, for example, is often operationalised through measures on anxiety, with increases in anxiety beyond the optimum, associated with a decline in performance, such as a narrowing in attention and a reduction in the efficiency of working memory (Eysenck et al., 2007).

Ibrahim et al. (2013) surveyed 923 students across six UK universities and found 58.1% of females and 59.9% of males reported high depressive symptoms, with those from deprived areas twice as likely to be depressed. Gibbons (2022b) found lack of motivation and the hassle ratings given to tutor support as key predictors of student anxiety.

Coping with stress

According to Neves and Hewitt's (2020) UK survey, key predictors of course satisfaction in 2019 ($n = 14072$) and 2020 ($n = 10227$) were: the level of challenge in course demands; the student effort invested; the opportunity to interact with others, and how well the course was organised.

Key influences on coping include personality and past experiences, and these are drawn on to perceive and manage stress demands. Of all the Big Five traits, the significance given to student effort in Neves and Hewitt's (2020) findings reflects the importance of conscientiousness in relation to student performance and course satisfaction (Gibbons, 2022b; Ivcevic & Brackett, 2014). The opportunity to interact with other students reflects the importance of support (Gibbons, 2009; Neves & Hewitt, 2020; Taylor, 2011).

Context control, or the skills acquired to manage particular situations, has been found to be an important coping resource in several studies (Maddi, 2002), including in an H.E. context (Gibbons, 2015, 2022a, 2022b) and self-efficacy or confidence, is commonly reported (Zimmerman, 2000). Other important Big Five traits (McCrae & Costa, 2004) linked to coping include: extraversion (Kuijpers et al., 2021), and levels of emotional stability and openness (Vollrath & Torgersen, 2000). In education contexts, openness is important if learning is to expand; and optimistic thinking strategies have

been associated with performance, course satisfaction and well-being (Cabras & Mondo, 2018; Seligman, 2008; Sharot, 2011). Those high in optimism construe stress demands in a way that makes success more likely. As well as a biased expectation of good outcomes, they more readily employ a number of other strategies: They tend to perceive change and stress demands as opportunities to grow and good copers more frequently score stress demands higher on uplifts and lower on hassles (Gibbons, 2010, 2022c). They are biased to attend more to positive over negative events (defensive optimism), especially in situations where they are unable to exercise control (Fournier et al., 2002). They are more forgiving of their mistakes, and they reframe losses by imagining scenarios worse than those they faced. They are more active in learning from errors in coping, and they tend to be higher on conscientiousness, control and support (Gibbons, 2022c; Lazarus & Folkman, 1987).

There is a strong body of evidence associating optimism with health and wellbeing (Cabras & Mondo, 2018; Danner et al., 2001; Seligman, 2008; Sharot, 2011). However, some of the most cited studies linked to optimism, e.g. Danner et al. (2001) longitudinal study of health in nuns, measured emotional expressiveness not optimism. Some that do offer evidence may mistake the effect for the cause – if one is successful, optimistic thinking will follow (the effect). The cause of that success may relate to any number of ingredients, such as the earlier evidence on control, support, confidence and extraversion more characteristic among optimists, and it might relate to those other strategies commonly employed by optimists rather than an optimistic outlook per se.

There are negatives to optimism too – if one overestimates the likelihood of positive outcomes, disappointment will be experienced more and when positive outcomes occur, because they were expected, they will be enjoyed less (Bell, 1985). Positive psychology has become synonymous with the benefits of optimism and self-help books abound with it as the theme. However, Sharot (2011) claims unrealistic optimism or a bias to over-estimate positive outcomes, is held by approximately 80% of those who regard them-selves as optimistic.

Kahneman and Tversky (1979) coin the term loss aversion to describe the phenom-enon where most feel more pain in relation to a loss than to a gain, even when the amount lost or gained is the same. It relates to the adaptive value of safeguarding what one has, because that is known, while prospective gains are not. As unrealistic optimists have a low expectation of loss, they will, as a result, experience the pain of loss aversion more.

Pessimists do not experience this downside. For them, good outcomes are more enjoyable because they are unexpected and bad outcomes less disappointing because they were anticipated. There is a risk that low expectations may reinforce under-achievement as a false norm, but Norem and Cantor (1986) offer evidence of circum-stances where pessimism helps. They dispute the claim that adopting an optimistic outlook offers a panacea to the downside of stress. They argue that, for those anxious-prone and who have tended to do well, a more effective strategy, is defensive pessimism. This involves setting unrealistically low expectations in situations that cause you anxiety. Setting a high expectation of success could add to already heightened anxiety and inhibit performance, tipping you past the peak (B) to (C) in Figure 1. Gibbons (2022b) found, for example, that students high in defensive pessimism and anxiety and who had tended to achieve, were just as high in learning motivation compared with those high in optimism.

Aims and hypotheses

The study explored two aims – the influence of student stress, rated as hassles and uplifts, on mood, motivation and satisfaction, along with coping influence of support, control and personality; and it compared those high in optimism against those high in pessimism on the same outcome measures and on the differences between these groups on key factors affecting theircoping.

H1: There will be correlations between sources of stress, support, control and personality against mood (anxiety and depression).

H2: Support, control and personality will have a mediating role between sources of stress and mood.

H3: There will be differences in the mood, learning motivation, course satisfaction and GPA between those high in optimism against those high in defensive pessimism.

H4: There will be differences in control, self-efficacy and personality between those high in optimism against those high in defensive pessimism.

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 were predictor variables and included 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-sample 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 assessments experienced in the final year.

Materials

Students completed an 87-item online Qualtrics 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 α for all measures ranged from .60 to .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 6-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 et al., 2004)

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 12-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'.

The Generalized Self-Efficacy Scale (Schwarzer & Jerusalem, 1995)

This scale consists of 10 items and participants respond on a four-point scale from 'not at all true' to 'exactly true'. It is a context-free measure of self-efficacy. A sample item is: 'No matter what comes my way, I'm usually able to handle it'.

Big Five Inventory −10 (BFI-10) (Rammstedt & John, *2007*)

Respondents are asked to rate 10 statements that describe personality, e.g. 'I see myself as someone who is reserved'. Two items measured each trait.

Hospital Anxiety and Depression Scale (HADS) (Zigmond & Snaith, *1983*)

The 14-item HADS contains an anxiety sub-scale and a depression sub-scale. Respondents rate each on a scale from 0 to 3, where 0 is 'not at all' and 3 is 'most of the time', e.g. 'I feel tense or wound up'. This test is widely used in non-clinical settings (Gibbons, 2005). Items also measured age and gender.

Ethics and procedure

The cohort was made aware of the study via email and in links on their course homepage. The study received approval from the Ethics committee at the host university. All participants received a brief and a point of contact for further clarifications. All were informed that participation was voluntary, and they were free to stop at any time and all acknowledged informed consent before participating. All ethical considerations and methods were executed in accordance with the Declaration of Helsinki.

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 only. 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.

The R^2 explained 48.6% of the variance and the Adjusted R^2 explained 46.8% of the variance in scores on anxiety (Table 1). The results of the analysis offered partial support for H1.

Table 1. Multiple regression with anxiety.

Model	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	β
(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	.2 0	.29****
Defensive pessimism	−.27	.05	−.37****

*p < .10, **p < .05, ***p < .01, ****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 (Table 2). 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	−.35**
Optimism	−.294	.064	−.35**
Defensive pessimism	−.294	.064	

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

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:

There was a positive relationship between the hassle ratings given to the support from family and friends and anxiety (the unmediated path, Table 3). However, this relationship was no longer significant (the mediated path, Table 4) when neuroticism was tested as a mediator and then again when context control was tested. The results offer partial support for H2.

Table 3. Unmediated and mediated values between 'hassle' ratings of family and friends support and anxiety.

	β value	p value
For context control as the mediator		
Unmediated path	.223	.005
Mediated path	.105	.133
For neuroticism as the mediator		
Unmediated path	.211	.005
Mediated path	.119	.068

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
Openness	Defensive pessimism	4.20	1.03
	Optimism	4.41	.89

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 but not in these two groups ($n = 130$) (Table 5). Those participants in the upper quartile in both were excluded. The outcome measures were anxiety, depression, course satisfaction, learning motivation and self-estimated GPA.

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

	t	df	p value	Cohen's d
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

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 was 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, $p = .004$, with a medium effect size, $d = .58$.

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 the defensive pessimism group 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:

There was no difference between the two groups on openness, agreeableness, extraversion and neuroticism. However, a medium effect size was reported for extraversion (with the optimism group higher) and neuroticism (with the defensive pessimism group higher). There was no difference between the defensive pessimism group and cohort average on neuroticism. The optimism group was 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 a larger beta value and a stronger negative association. This indicated that, while both were influences in lowering depression, optimism was the stronger influence. While the overall variance of this model was small, the results suggest that the perspectives of optimists and their coping strategies, are to be encouraged, and this result supports earlier findings (Cabras & Mondo, 2018; Seligman, 2008; Sharot, 2011).

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 (2022c) and suggests that for those who have tended to do well and who face uncertain challenges, adopting defensive pessimism can relieve one of the anxiety associated with 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 gruelling 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 effort, with attempts, and often failed attempts, at mastering study

skills. This means feeling vulnerable, experiencing disappointment and often imposter syndrome, are inevitable growing pains towards success. This may, in part, account for these hassle ratings.

Extraversion is often associated with lower experiences of stress and anxiety, but here it was positively associated. The association was only trending towards significance, and similar to the last point, its association might reflect levels of anxiety associated with productivity and performance rather than unhelpful anxiety.

Consistent with earlier findings (Gibbons, 2008, 2022b), context control was associated with lower anxiety. This suggests it is important in good coping. In higher education, the context element refers to the study environment and regime a student fosters. The more students hone the skills needed here, the more they feel in control and the more their experience of anxiety will be at the optimal level (B in Figure 1).

Mediation analysis

There was an association between the support from family and friends when rated as a hassle and anxiety, but this was no longer evident when context control and neuroticism were separately tested as mediators (Figures 2 and 3).
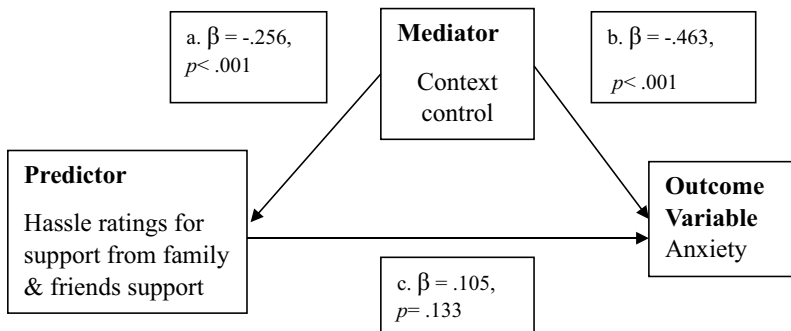

Figure 2. Context control as a mediator between 'family and friends' support rated as a hassle and anxiety.
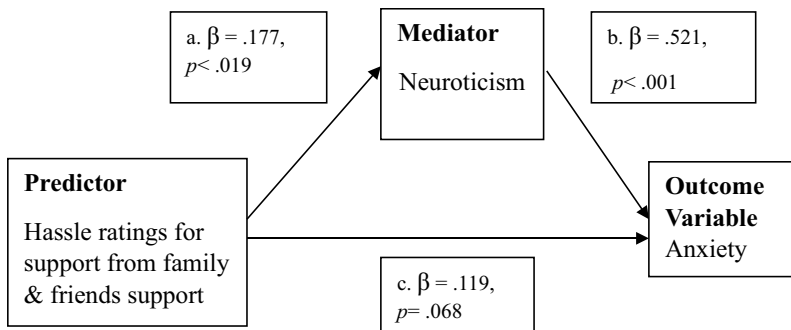

Figure 3. Neuroticism as a mediator between 'family and friends' support rated as a hassle and anxiety.

This suggests that these predictors are the underlying influences accounting for this apparent relationship. Neuroticism positively correlated with the hassle ratings given to the support from family and friends and positively correlated with anxiety. Those high in neuroticism are more likely to search for and tune into potential threats. This is likely to be an evolutionary response – a trait that acts as an early alarm signal to potential threats (Seligman, 1971). Those who are worry-prone are more likely to inflate the potential impact of stress demands. The support offered by friends and family, however well intentioned, may more readily be interpreted as a stress demand if it is not immediately obvious how it is helpful. Demands that are perceived as stressful, add a cognitive load and this is associated with lower concentration and executive functioning (Eysenck et al., 2007). It is likely that family and friends are unable to offer instrumental support, on how to do an assignment for example, and their attempts at emotional support may be limited if they cannot empathise with the university and course-specific demands a student faces. In these circumstances, such support, to those high in anxiety and neuroticism, may be appraised as just another stress demand.

Context control is a powerful coping resource (Gibbons, 2022b, 2022c), and those high in context control are much less likely to rate the same support experience as a hassle because they are coping well. Their high control gives them coping reserves that are likely to change how that experience is perceived. They may, for example, identify more with the good intention behind the support offered.

Comparing optimism and defensive pessimism – Which helps most?

As well as looking at the influence of university stress, personality and coping (support and control) on mood, the aims sought to test the differences between optimism and defensive pessimism groups on mood, course satisfaction, motivation and GPA, along with other individual differences measured. Those in the upper quartile on optimism were compared against those in the upper quartile on defensive pessimism and compared against the rest of the cohort.

The defensive pessimism group was lower than the optimism group and the cohort average, on anxiety and lower than the cohort average on depression. They were higher than the optimism group on course satisfaction and learning motivation, but their averages did not differ from the cohort average. The optimism group was lower than the cohort average, not only on anxiety and on depression but also on course satisfaction and learning motivation.

The results suggest that both optimism and defensive pessimism lower anxiety and depression. Consistent with Fournier et al. (2002), it may be that those high on optimism and who lack a sense of control in stressful situations, find a benefit to mood (anxiety and depression) by focusing on the positives in the situation. This finding is consistent with Norem and Cantor's (1986) work, although they found the benefits short-lived.

The negative association between optimism and course satisfaction and motivation suggests that this explanation is unlikely to apply in the context of academic stress, and it does not support some earlier findings (Cabras & Mondo, 2018; Seligman, 2008; Sharot, 2011). However, it does support the evidence on the downside of optimism, principally that heightened expectations of success, especially unrealistic expectations, increases

disappointment and loss aversion when those expectations are not met and reduces elation when they are (Bell, 1985).

The defensive pessimism strategy – of setting the bar low to relieve oneself of the pressure of having to do well, can, ironically, enhance achievement, as well as increase motivation and satisfaction when low expectations are exceeded. While optimism and pessimism strategies might be useful in lowering anxiety and depression, there is merit in exploring the underlying influence of the other individual differences between these two groups.

The effectiveness of self-efficacy, context control, conscientiousness and extraversion on wellbeing, performance and health is robust. The optimism, compared to the defensive pessimism group, was higher on each attribute by medium-to-large effect sizes. This was not a surprise as there is evidence that those who cope well are likely to draw on more than one of these. However, despite this, the defensive pessimism group fared better on the outcomes measured – they were *lower* on anxiety, *higher* on course satisfaction and learning motivation. Only with depression was there no difference.

While adopting a biased, optimistic perspective can relieve mood in circumstances where one has little control (defensive optimism), these results suggest it is not to be recommended as a general perspective. It appears only to increase disappointment and dissatisfaction and lower motivation, and this is despite the optimism group being higher on attributes normally associated with success. The optimism group did report higher GPA. It is a challenge to square this with their lower satisfaction and motivation, but GPA was self-estimated and calculating it accurately is complicated because of multiple assessments, each weighted differently. The sample average GPA estimate was, for example, higher than the actual year group mean by 5%, and an inflation in estimate is more likely among those (the optimists) with a bias for positive outcomes.

Limitations

Seeking participant approval to look at their actual GPA would redress the last point. The use of a survey method and volunteer sample are not without limitations and a larger sample, across all cohorts in the department, would have allowed more insight into the different demands faced across each year of study. It would also increase the pool of those high in optimism and pessimism, and this would increase generalisability.

Identifying the sources and experiences of stress that are likely to enhance performance and are thereby uplifting, as opposed to hindrance or hassle, is a key challenge in attempting to operationalise sources of stress. The stress that helps you achieve may be experienced as unpleasant and rated as a hassle even though it is necessary to achieve. Adopting different labels for 'hassles' and 'uplifts', such as sources of stress that 'hinder' or are 'necessary to facilitate' performance, might increase the validity of these ratings.

Recommendations

Induction periods are an important time, not just for those adjusting to university in their first year but at the start of the academic year after the four-month break

in between academic years. Part of that induction could focus on stress management, specifically those skills common among those who succeed: Learning and executing key study skills keeps one ahead of the curve. Being organised, disciplined, striking a balance between work and down-time and finding efficient ways into a topic, can sustain motivation. Drawing on online sources, podcasts and the ever-expanding array of AI and study apps and using subject librarians to keep abreast of the best ways to do literature searches; understanding the marking scheme and learning how to critically evaluate, are just some of the ways to build context control.

One can draw on the cognitive strategies used by both pessimists and optimists. They are not mutually exclusive, but the mantra of 'the glass is half-full' is not enough – a bias to expect positive outcomes, in fact, could lower satisfaction and motivation. However, optimists do use strategies that work. They more readily embrace change; they are more forgiving of their mistakes, and they take steps to learn from them. They tune into their successes and this boosts mood. When facing situations over which they have no control, whether that is a future event or a past disappointment, optimists search for the positives and this elevates mood. If one has tended to work hard and do well, then adopting a low expectation of success is unlikely to lower the effort invested but will relieve one of the pressures of having to achieve (placing one at B not C in Figure 1). This suggests defensive pessimism is a robust strategy and should be added to the efforts to build context control and the strategies commonly used by optimists to boost wellbeing and success in and outside one's studies.

Disclosure statement

Notes on contributor

Dr Chris Gibbons is an associate professor in positive and health psychology at Queen's University Belfast. He is chair of the Association for Psychology Teachers and has received several teaching awards, including the national 'Teaching Hero', awarded by the National forum for the Enhancement of Teaching and Learning in HE in 2021.

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Ethics approval and consent to participate

The study received Ethics approval from the QUB Ethics reference: EPS22_430.

Availability of data and materials

The data set is available at: https://orcid.org/0000–0001–6631-721X

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