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Stress, positive psychology and the National Student Survey

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The aim was to explore the predictive ability of sources of stress and a range of dispositional and coping behaviours on student satisfaction and motivation. Most research exploring sources of stress and coping in students construes stress as psychological distress, with little attempt to consider positive experiences of stress. A questionnaire was administered to 120 first-year UK psychology students. Questions were asked which measured sources of stress when rated as likely to contribute to distress (a hassle) and likely to help one achieve (an uplift). The sources of stress were amended from the UK National Student Survey (NSS, 2011). Support, control, self-efficacy, personality and coping style were also measured, along with their potential affect on course satisfaction, motivation and feeling part of a learning community. The sources of stress likely to lead to distress were more often significant than sources of stress likely to lead to positive, eustress states. Ironically, factors one would consider would help students, such as the university support facilities, only did so when rated as a hassle, not as an uplift. Published university league tables draw heavily on student course satisfaction but this negatively correlated with intellectual motivation and feeling part of a learning community. This suggests course satisfaction alone reveals an incomplete picture of the student experience. Course educators need to consider how course experiences contribute not just to potential distress but to potential eustress. Teaching quality, effective support and work-life balance are key to student satisfaction and motivation. How educators interact with their students and the opportunities they create in and outside the class to promote peer support are likely to enhance satisfaction and motivation.
Keywords: *Student stress; eustress; coping; satisfaction; motivation; learning.*

STRESS can be the result of 'too much or too little arousal resulting in harm to mind and body' (Schafer 1992, p.14). There is a growing body of evidence that has looked at stress among university students and its affect on well-being (Leicester University, 2002; Robotham & Claire, 2006)

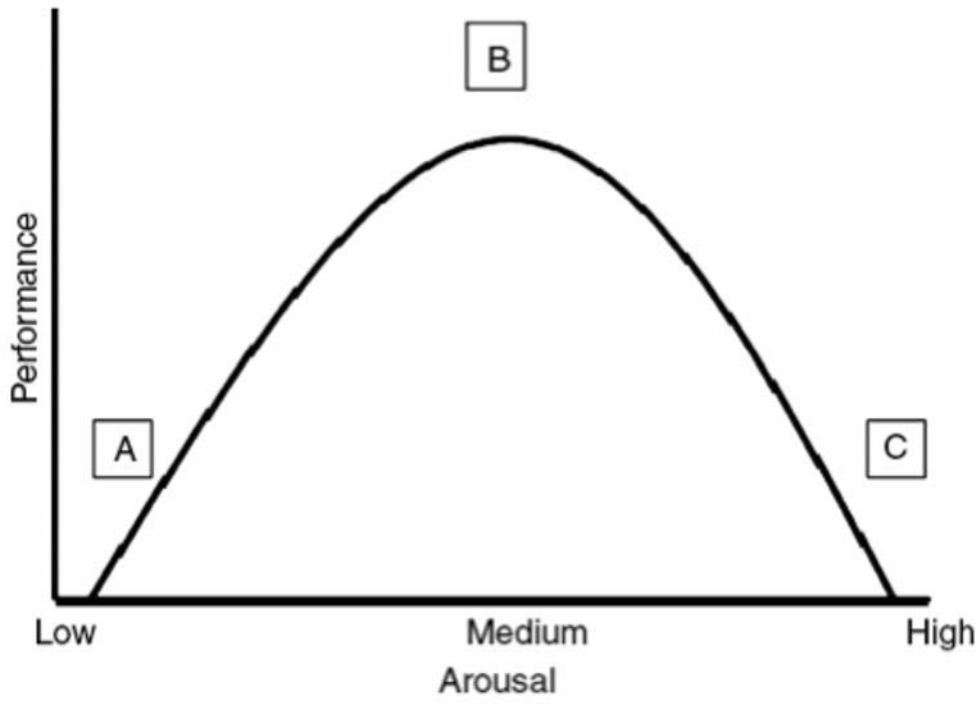
As illustrated in Figure 1, a certain amount of perceived stress and physiological arousal is necessary if one is to perform at the optimum (B). If a source of stress is perceived as negligible (A) or, more likely, is perceived as exceeding one's capacity to cope (C), then distress results (Yerkes & Dodson, 1908). That optimal level of stress or arousal is called 'eustress' (Lazarus & Folkman, 1984) and little research has looked at sources of eustress in students (Gibbons, 2008, 2010; Association for University Counsellors, 2002; Leicester University, 2002).

Sources of academic stress include examinations and assessments (Robotham and Claire, 2006). Fear of failure and the teaching response to student need, as well as lack of timely feedback on assessments, have been reported by students as specific stressors (Gibbons, 2008, 2010). Personal sources of stress include financial concerns; a lack of or difficulties in managing one's apparent free time and a concern about career direction (Leicester University, 2002).

The National Student Survey and stress in students

The National Student Survey (NSS) was first introduced in 2005 and it was the direct result of the 2003 Government White Paper,

Figure 1: The Yerkes–Dodson curve.



The Future of Higher Education, which promised to make students 'intelligent customers'. It was initially met with resistance by many universities because it was seen as duplicating internal feedback mechanisms. However, once the findings were incorporated into university league tables by national newspapers the NSS took on a new importance. The survey involves respondents rating a number of common student experiences, including teaching and learning, assessment and feedback, academic support, organisation and management and learning resources. In this study each of these was treated as a potential source of stress with respondents asked to rate, not on a Likert scale (as in the NSS) but on both a hassle and uplifting scale, the extent to which each contributed as a potential for distress and eustress.

The results of university league tables, underwritten by the findings from the NSS, focus exclusively on course satisfaction as the outcome measure, although NSS banked questions also measure intellectual motivation and the extent to which they feel part of a learning community.

Coping with stress

In Lazarus and Folkman's (1984) Transactional model of stress, the primary appraisal refers to the initial perception about a stressor and whether it is judged to be positive (leading to eustress), negative (leading to distress) or benign. The secondary appraisal refers to the coping responses the individual draws on. Interacting between the perception of stressors and how one responds are a number of moderators. These include personality (McCrea & Costa, 1992); self-efficacy (Schaubroeck & Merritt, 1997); perceived control, support and coping style (e.g. Gibbons, 2010; Van der Doef & Maes, 1999). While these different coping resources or moderators are drawn on to manage perceived sources of stress it is

important to remember that they also affect what is perceived as a source of stress and, in turn, its subsequent impact on well-being. The primary appraisal is also affected by earlier coping experience of dealing with such demands. The NSS measures final year students' perceptions. This study will explore the perception of students in their first and final year with some of the first-year results reported here.

Aims

The aim of this study was to explore stress and coping in first-year psychology students. The Transactional model of stress underpinned the assumptions tested: Significant correlations were expected between the student experience rated as sources of potential eustress and distress and satisfaction and motivation, and between personality, self-efficacy, control, support and coping style with satisfaction, motivation and feeling part of a learning community.

Method

Design

A questionnaire-based study, employing a Between Samples Design, with respondents' scores on different measures compared. Data collection was carried out in 2011.

Sample

A convenience sample of 120 first-year psychology students were invited to take part by the researcher at the start of a course lecture and 88 (73 per cent) consented. The inclusion criteria were first-year students studying their BSc Psychology degree in the host institution.

Measures

The first 63 items of the questionnaire contained items used in the NSS in 2010, together with banked items from earlier versions. As well as course satisfaction, intellectual motivation and feeling part of a learning community were also measured. A continuous response scale was used, with each item rated twice – once from its perceived distress, called a 'hassle', and once from its perceived eustress, called an 'uplift'. A rating scale from 0 to 5 was used, 0 indicating that it was no source and 5 an extreme source of distress or eustress. This was followed by four items generated by the author measuring context control or one's sense of control in a given situation, and dispositional control, and a further three measuring course satisfaction. Respondents answered the support, control and satisfaction items on a five-point Likert scale from strongly agree to strongly disagree. All these items had earlier undergone reliability and validity analyses. The Cronbach's Alpha for these items grouped as factors, for control, support and satisfaction each exceeded .7 and were judged to have face validity (Gibbons, 2009).

The Generalized Self-Efficacy Scale (Schwarzer, 1992)

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.

The Brief COPE (Carver, 1997)

This 28-item scale measures a broad range of coping responses. The items are context free and respondents answer on a four point frequency scale. Carver (1997) recommends researchers subject results to their own factor analysis. This was done in a previous study and four coping factors were identified: approach coping; avoidance coping; altering consciousness and seeking support. They explained 57.99 per cent of the variance in coping scores. The Cronbach's Alpha exceeded .8 for each factor and they were judged to have face validity (Gibbons, 2009).

NEO Five-Factor Inventory (NEO-FFI) (Costa & McCrea, 2004).

This is the short 60-item version of the Five-Factor Inventory. It measures Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience and participants respond on a five-point Likert scale.

Reliability and validity studies with a range of populations are described by the authors of the Generalised Self-Efficacy Scale and the NEO Five-Factor Inventory. The remaining items measured age and sex.

Data collection

After being briefed during a course lecture on the project by the researcher, students interested in taking part were given a copy of the questionnaire and asked to return within the week.

Ethical considerations

The study was approved by a university ethics committee. Participation was voluntary and students were told that they were free to leave at any time; that being involved would mean they could gain course credit, and that confidentiality would be maintained at all times.

Results

All the results are shown in Tables 1 to 3 below.

Discussion

The outcome measure in the first regression model, learning community (Table 1), referred to the extent to which students felt part of a group committed to learning and exploring academic interests; to exploring ideas with confidence and to feeling part of an academic community. In terms of sources of stress, those rated as a hassle were *stronger* predictors of scores on learning community compared to those rated as an uplift. The one exception was that when learning resources were rated as an uplift, scores on feeling part of a learning community *declined*. Learning resources refer to library and IT resources and, ironically, the more students rated these as helping the less they

Table 1: Regression model with learning community.

Model		Unstandardised Coefficients		Standardised Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	*t*	Sig.	B	Std. Error
1	(Constant)	2.524	.302		8.360	.000		
	Learning-resources uplift	–.131	.061	–.225	–2.139	.036	.773	1.294
	Careers advice hassle	.115	.050	.272	2.275	.026	.597	1.674
	Course content and structure hassle	.044	.025	.186	1.787	.078	.792	1.263
	Social opportunities hassle	.112	.051	.247	2.198	.031	.676	1.480
	Course delivery hassle	–.236	.085	–.434	–2.772	.007	.349	2.867
	University support hassle	.138	.050	.334	2.736	.008	.573	1.746
2	(Constant)	3.725	.498		7.480	.000		
	Learning resources uplift	–.105	.059	–.179	–1.780	.079	.758	1.319
	Careers advice hassle	.063	.050	.149	1.239	.219	.535	1.869
	Course content and structure hassle	.041	.023	.171	1.737	.086	.790	1.266
	Social opportunities hassle	.118	.048	.261	2.436	.017	.671	1.490
	Course delivery hassle	–.208	.082	–.382	–2.551	.013	.343	2.914
	University support hassle	.117	.048	.284	2.422	.018	.559	1.788
	Dispositional control	–.078	.031	–.230	–2.503	.014	.912	1.096
	Openness	–.191	.100	–.184	–1.907	.060	.829	1.207

[a] Dependent Variable: learning community. R^2=.423, Adjusted R^2=.362

felt part of a learning community. It may be that the resources helped nurture learning independence. However, the relationship is a trend rather than significant, so one has to be cautious in any interpretation offered.

Course delivery was a source of stress and referred to the learning materials provided; the pedagogic strategies used and how stimulated the students were by this. The more this was rated as a hassle, and as expected, the less students felt part of a learning community.

The more the university support facilities – from the University Student Guidance centre to tutorials, personal tutors and advisors of studies – the more these were rated as a hassle, the higher were the scores on learning community. The measure 'social opportunities' referred to the provision of formal opportunities on the course to interact with other students and across the university, in terms of social events, clubs and societies. The more social opportunities were rated as a hassle the *higher* were the scores on learning community. Again, the opposite would have been anticipated. However, it could be that because there were disappointments in some aspects of the formal support facilities (i.e. university support facilities and social opportunities), students engaged more with other students on their course and through this engagement their willingness to explore and share ideas grew (i.e. the learning community measure). The value of peer support above the infra-structure of support provided by the university has been found in earlier work (Gibbons, 2010). As students adjust to the new and challenging demands on their course they turn to their peers for social comparison and to help manage these demands. Their peers are perceived as being able to offer more immediate support and empathy. Moreover, students may feel that seeking out help through formal support links involves more effort and perhaps may leave the student doubting their competence compared to conversations with other students where learning issues are discussed.

More broadly, it might be the case that rating a source of stress as a hassle might not actually equate to that stress being a source of distress as was anticipated. The dominance of hassles over uplifting ratings across all the regression models may be more indicative of the stage these first year students are at in their transition to university life and in the differences in pedagogy and how one learns at university compared to earlier learning, and this is to say nothing of the demands of financial management, independent living and forming new relationships, common for most first year students. A source of stress that is new and difficult to manage can have significant stress effects as one masters the right strategies and this may explain the dominance of hassle over uplifting ratings.

In terms of coping and personality, only dispositional control and openness were significant predictors. Again, on the face of it, the direction seemed counter-intuitive: the stronger the students' sense of control or the more open their outlook the *less* they felt part of a learning community. Dispositional control is ordinarily regarded as an effective coping strategy. It may be that as control increases so does autonomy and learning independence and this equates to such students feeling less inclined to engage with others on their learning and this may explain the lower scores on learning community.

One would have expected that openness would have been a positive predictor of scores on learning community – a willingness and interest to explore new ideas would seem to go hand in hand with feeling part of a learning community. That this was not found may relate more to when the students were tested – towards the end of their first semester in their first year. At this point the demands of adjusting to university life are likely to remain high for many – both in the university in terms of the pedagogy students are exposed to and in how one is expected to learn, and outside in terms of the demands associated with being a new student and establishing a work-life balance. This is likely

to explain the prevalence of hassles ratings over uplifting ones and why openness did not positively predict learning community scores.

Intellectual motivation

Table 2 illustrates the regression model with intellectual motivation as the outcome measure. The work-home interface referred to measures on personal and family health; to important relationships and to personal aspects of one's life. The more these were rated as positive and uplifting the more students felt enthused and motivated in their learning. As with the earlier regression model, the measure on social opportunities was a predictor: when rated as a hassle it predicted *more* not less intellectual motivation. As with the last outcome measure, the same explanation may apply: that is, because of possible disappointments with the formal social opportunities available students focused on and engaged more in the subject. However, given the value of peer support in enhancing learning, well-being and satisfaction (Gibbons et al., 2008, 2010), it is likely that where students are able to benefit from the support meaningful social opportunities provide, it will have a positive impact on intellectual motivation. The challenge is to make the social opportunities, both those course specific and university wide, of a kind that students feel they can engage in.

Openness was a significant predictor not of higher but lower scores on intellectual motivation. As with the explanation offered with the first model, such a result may reflect more the contextual demands of testing students relatively early in their first year: One needs not just a disposition and interest to explore new ideas to feel intellectually motivated but also a belief in one's competences to do this. It may be that as students adjust to and develop the skills to manage the demands of learning in higher education such dispositional influences are more likely to have a positive impact on intellectual motivation.

Table 2: Regression model with intellectual motivation.

Model		Unstandardised Coefficients		Standardised Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	*t*	Sig.	B	Std. Error
1	(Constant)	1.368	.456		2.998	.004		
	Learning-resources uplift	–.151	.088	–.192	–1.722	.089	.768	1.302
	Careers advice hassle	.122	.071	.216	1.722	.089	.604	1.655
	Course content and structure hassle	.049	.035	.157	1.429	.157	.785	1.274
	Social opportunities hassle	.157	.071	.261	2.201	.031	.673	1.485
	Course delivery hassle	–.096	.110	–.133	–.875	.384	.410	2.440
	Work-home interface uplift	.156	.056	.279	2.787	.007	.946	1.057
2	(Constant)	2.906	.757		3.840	.000		
	Learning resources uplift	–.131	.085	–.166	–1.531	.130	.761	1.313
	Careers advice hassle	.055	.075	.098	.736	.464	.501	1.998
	Course content and structure hassle	.043	.034	.138	1.269	.208	.762	1.313
	Social opportunities hassle	.158	.071	.263	2.220	.029	.637	1.571
	Course delivery hassle	–.088	.111	–.122	–.793	.430	.380	2.629
	Work-home interface uplift	.154	.054	.277	2.837	.006	.942	1.061
	Openness	–.311	.147	–.227	–2.121	.037	.785	1.274
	Conscientiousness	–.107	.132	–.092	–.810	.421	.697	1.434

[a] Dependent Variable: intellectual motivation. R^2=.328, Adjusted R^2=.256

Where learning resources were valued, intellectual motivation declined. This relationship was not significant but it is worth considering if students felt skilled enough to engage meaningfully with the learning resources – in terms of general IT and library resources – to competently carry out literature searches and reviews for example, or whether their level of skill meant they did this superficially and in a way that was not intellectually motivating.

Course satisfaction

As Table 3 illustrates, the more the teaching was rated as uplifting and the more the structure and relevance of the course was clear the higher were scores on course satisfaction. Across all three regression models, social opportunities, when rated as a hassle, was a significant predictor, though in the first two it was not in the anticipated direction. Learning community and intellectual motivation correlated well with each other (rho=.408, $p<.01$), but both negatively correlated with course satisfaction (rho=–.361 learning community, rho=–.634 intellectual motivation $p<.01$). Course satisfaction related to the enjoyment associated with the course and the other two, whilst important indications of intellectual meaning and the learning engaged in, are more challenging and are not always enjoyable in the short-term. This is not to suggest that course satisfaction is unimportant – it is after all the key ingredient, in terms of outcome measures, used by HEFCE in the formation of university league tables based on the NSS. However, it is important to recognise that a programme of study can be both meaningful and valuable during the process of learning whilst not necessarily enjoyable at the time!

Table 3: Regression model with course satisfaction.

Model		Unstandardised Coefficients		Standardised Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	*t*	Sig.	B	Std. Error
1	(Constant)	3.068	.561		5.470	.000		
	Teaching uplift mean	.319	.143	.239	2.233	.028	.764	1.308
	Course content and structure uplift	.133	.084	.175	1.586	.117	.719	1.390
	Course content and structure hassle	–.044	.038	–.115	–1.148	.254	.880	1.137
	Social opportunities hassle	–.176	.079	–.240	–2.231	.029	.757	1.321
	Assessment hassles	–.069	.071	–.103	–.968	.336	.776	1.289

[a] Dependent Variable: course satisfaction. R^2=.307, Adjusted R^2=.263

Limitations

There were some limitations to the study, notably those associated with a survey design, such as the problems linked to self-reporting, incomplete responses, response sets and state congruence recall. This final weakness suggests that the longer the time between when an event occurs and when one is asked to respond to it in a survey the more dispositional influences, such as personality will filter and modify how that event is perceived, such that the survey responses reveal more about personality than the event, in this case the sources of stress. However, given it was the sources of stress rated as hassles or uplifts that were the most frequent predictors it suggests that this influence was negligible. The sample type was opportunity and while the response rate from the target population was not untypical (73 per cent), a larger sample would have allowed for more variables to be entered into the regression models and interaction effects to be tested.

Summary and conclusions

Effective course delivery is integral to making students feel part of a learning community. Paradoxically, influences one would expect would positively relate to learning community and intellectual motivation, such as the university support facilities and the formal opportunities to interact with other students only did so when rated as a hassle not an uplift. Learning community has been treated as an outcome measure here but where students valued it, it may be because of the support benefits that came from being part of a learning group.

It has been suggested that the time of testing could well be critical and this may explain why many of the influences one would expect to be predictive, such as aspects of personality, control, coping and self-efficacy, were not. Indeed self-efficacy was removed from all the final regression models in the process of arriving at the most parsimonious models and yet it has been found to be very predictive of positive well-being among student populations (e.g. Gibbons, 2011). The common difference where it was found to be predictive was where the students tested were in their second or third year of study. This supports the interpretation offered here – that the perceived demands of adjusting to being a student both in and out of the university are critical. This is backed by the growing call from the Government and universities (e.g. from the Russell Group universities) to be involved in the setting of A-level exam questions and in driving the content and skills tested in syllabuses. As well as a check on the quality assurance of A-levels it is intended that this would better prepare students for higher education.

The negative correlation between course satisfaction and the other two outcome measures, learning community and intellectual motivation, suggests that course satisfaction alone is insufficient when reviewing a programme of study and there is utility in including all three measures. The structure and perceived relevance of the course and the quality of teaching when rated as uplifting were the strongest predictors of course satisfaction.

Recommendations

To effectively review the student experience one should draw on several outcome measures. Importantly, while course satisfaction is important, a course can be effective at producing successful outcomes where not all aspects are necessarily enjoyable. University league tables based on NSS results would offer more meaningful insights if the results on learning community and intellectual motivation were also considered.

The sources of stress, when rated as hassles were the more frequent predictors than when rated as uplifts (12 to 4 respectively). This along with the presence of little evidence in the regression models to support the benefit of personality, self-efficacy and coping, suggests that the demands of being a student are perceived as disproportionately high in the first year compared with subse-

quent years. This may explain why retention and attrition are particular problems in the first year for so many students. It is important that educators are aware of this student experience and consider ways of building on the existing strategies to support first year students.

It is likely that an effective way to do this is not to offer more formal support but to promote initiatives for students to informally interact and network more with each other and not just during induction week but throughout the first semester, for example, through class exercises, by rotating group composition in group activities in tutorials and lab classes and in supporting subject society events.

Making students aware of the evidence that the first year is a particularly challenging time and why is critical. It is important that students who experience associated anxiety do not see this as a reflection of their ability as individual learners but of the circumstances and challenges the first year poses. Most students still qualify for university through the A-level route and changes in A-level assessment since curriculum 2000 have involved an increased use of parted questions where essay writing and developing and building a critical argument are assessed less. However, these remain important skills students need in higher education and initiatives that help students to develop these skills, especially where they are subject specific, are likely to help.

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