Abstract

Aim: To explore the predictive ability of sources of stress and a range of dispositional and coping behaviours on student satisfaction and motivation.

Background: Most research exploring sources of stress and coping in students construes stress as psychological distress, with little attempt to consider positive experiences of stress.

Method: 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 effect on course satisfaction and motivation.

Findings: 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 an uplift. Published University league tables draw heavily on student course satisfaction but this negatively correlated with intellectual motivation, suggesting course satisfaction alone reveals an incomplete picture of the student experience.

Conclusion: Course educators need to consider how course experiences contribute not just to potential distress but to 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

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1. Introduction
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 effect on well-being (Leicester University, 2002, Robotham and 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 and Folkman, 1984) and little research has looked at sources of eustress in students (Association for University Counsellors, 2002, Leicester University, 2002).

Figure 1 The Yerkes–Dodson curve.

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, 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).

1.1 The National Student Survey and stress in students
The National Student Survey (NSS) has been used annually since 2005 to assess students’ satisfaction in higher education. 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 is being treated as a potential source of stress with respondents asked to rate, not on a Likert scale (as in the NSS) but on a hassle and uplifting scale, the extent to which each contributes 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.

1.2 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 and Costa, 1992); self-efficacy (Schaubroeck and Merritt, 1997); perceived control, support and coping style (e.g. Van der Doef and 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 are also affected by what is perceived as a source of stress and, in turn, its subsequent impact on well-being.

1.3 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 and motivation.

2. Method
2.1 Design
A questionnaire-based study was carried out on data collected in 2011.

2.2 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%) consented. The inclusion criteria were first year students studying their BSc Psychology degree in the host institution.

2.3 Measures
The first 63 items of the questionnaire contained items used in the NSS in 2010, together with banked items from earlier versions. 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 groups as factors, for control, support and satisfaction each exceeded .7 and were judged to have face validity (Gibbons, 2009).

2.4 The Generalized Self-Efficacy Scale (Schwarzer, 1992)
This scale consists of ten 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.

2.5 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% 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).

2.6 NEO Five-Factor Inventory (NEO-FFI), (Costa and McCrea, 2004).
This is the short sixty 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 Generalized Self-Efficacy Scale and the NEO Five-Factor Inventory. The remaining items measured age and sex.

2.7 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.

2.8 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.
3. Results

Table 1 - Regression model with intellectual motivation

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>(Constant)</td>
<td>2.906</td>
<td>.757</td>
<td></td>
</tr>
<tr>
<td>Learning resources uplift</td>
<td>-.131</td>
<td>.085</td>
<td>-.166</td>
</tr>
<tr>
<td>Careers advice hassle</td>
<td>.055</td>
<td>.075</td>
<td>.098</td>
</tr>
<tr>
<td>Course content and structure hassle</td>
<td>.043</td>
<td>.034</td>
<td>.138</td>
</tr>
<tr>
<td>Social opportunities hassle</td>
<td>.158</td>
<td>.071</td>
<td>.263</td>
</tr>
<tr>
<td>Course delivery hassle</td>
<td>-.088</td>
<td>.111</td>
<td>-.122</td>
</tr>
<tr>
<td>Work-home interface uplift</td>
<td>.154</td>
<td>.054</td>
<td>.277</td>
</tr>
<tr>
<td>Openness</td>
<td>-.311</td>
<td>.147</td>
<td>-.227</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>-.107</td>
<td>.132</td>
<td>-.092</td>
</tr>
</tbody>
</table>

- Dependent Variable: Intellectual motivation

R squared = .328. Adjusted R squared = .256 The final regression model explained 25.6% of the variance in scores on intellectual motivation.

Table 2- Regression model with course satisfaction

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>(Constant)</td>
<td>3.068</td>
<td>.561</td>
<td></td>
</tr>
<tr>
<td>Teaching uplift mean</td>
<td>.319</td>
<td>.143</td>
<td>.239</td>
</tr>
<tr>
<td>Course content and structure uplift</td>
<td>.133</td>
<td>.084</td>
<td>.175</td>
</tr>
<tr>
<td>Course content and structure hassle</td>
<td>-.044</td>
<td>.038</td>
<td>-.115</td>
</tr>
<tr>
<td>Social opportunities hassle</td>
<td>-.176</td>
<td>.079</td>
<td>-.240</td>
</tr>
<tr>
<td>Assessment hassles</td>
<td>-.069</td>
<td>.071</td>
<td>-.103</td>
</tr>
</tbody>
</table>

- Dependent Variable: Course satisfaction

R squared = .307; Adjusted R squared = .263 The final regression model explained 26.3% of the variance in course satisfaction scores.
4. Discussion.

Descriptive data revealed that of the psychology students surveyed in the last NSS 83% scored high on course satisfaction (NSS, HEFCE, 2011). This compares with 81% based on this survey.

4.1 Intellectual motivation

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. The regression model revealed a number of counter-intuitive findings: Social opportunities, when rated as a hassle, predicted more not less intellectual motivation. This predictor refers to formal opportunities on the course and across the university to interact with other students and it may be because of possible disappointments with the formal social opportunities available that students focused on and engaged more in the subject. However, given the value of peer support in enhancing learning, well-being and satisfaction (Gibbons, 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. Such a result may reflect the contextual demands of testing students 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 will begin to have a positive impact on intellectual motivation.

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 therefore in a way that was not intellectually motivating.

4.2 Course satisfaction

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. As social opportunities, when rated as a hassle, increased course satisfaction declined. Similarly, the more the
content and structure of the course and the more aspects of the assessment were rated as a hassle the lower were scores on course satisfaction. Interestingly, intellectual motivation negatively correlated with course satisfaction (rho=-.634 p<.01). Course satisfaction related to the enjoyment associated with the course and intellectual motivation, while clearly important is more challenging and not always enjoyable in the short-term. It is important to recognise that a programme of study can be both meaningful and valuable during the process of learning but not necessarily enjoyable at the time!

4.4 Limitations
There were some limitations, notably those associated with a survey design, such as the problems linked to self-reporting, incomplete responses, response sets and state congruence recall. The sample type was opportunity and while the response rate from the target population was favourable (73%), a larger sample would have allowed for more variables to be entered into the regression models and interaction effects to be tested.

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

The sources of stress, when rated as a hassle, were the more frequent predictors than when rated as an uplift (6 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 experienced as disproportionately high in the first year compared with subsequent years. This may explain why student retention and attrition are particular problems in the first year. It is important that educators are aware of this student experience and consider ways to build on the existing strategies to support 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 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 or inability as individual learners but of the circumstances and challenges the first year poses.

5. References


National Student Survey (2011) - Findings and trends 2006 to 2010, HEFCE


Yerkes, R. M., and Dodson, J. D. (1908) The relation of strength of stimulus to rapidity of habit-formation. Journal of Comparative Neurology and Psychology 18, 459-482