The role of Mental Toughness and Affect in academic success within a higher education setting.

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INTRODUCTION

A respected conceptualisation of Mental Toughness is the individual's level of Commitment, Control, Challenge and Confidence displayed in order to achieve their goals (Crust et al. 2002). Those who are high in Mental Toughness are reported to be more resilient in stressful situations and may even flourish in such demanding situations (Clough et al. 2002; Gerber et al. 2013).

Dewhurst et al. (2009) reported that those with high Mental Toughness were less distracted by irrelevant information on a memory task. This indicates that Mental Toughness helps individuals to remain focussed on current goals with less interference with unwanted intrusions. Furthermore, Hardy et al. (2014) found that Mental Toughness was associated with complex task learning. It could be inferred from these studies that cognitive performance and academic success may be mediated by mental toughness.

Crust (2009) argues that there is a relationship between Mental Toughness and emotional control , in particular, avoiding the detrimental consequences of negative affect on performance. Clough et al. (2002) reported that performance of those higher in mental toughness remained stable irrespective of positive or negative feedback. Conversely, the performance of individuals lower in mental toughness was more variable and dependent upon whether they were given positive or negative feedback. Valiente et al. (2012) reported a clear link between negative affect and academic performance, but there has been little research into the impact of positive affect on academic success. Nevertheless, the development of emotional intelligence is possibly an important factor in student retention in higher education (HE) (Qualter et al. 2009).

This could suggest that students in HE demonstrating higher levels of Mental Toughness may be more goal focussed and less susceptible to negative affect and this may have an impact on academic outcomes. Consequently, the aim of the current study was to investigate whether HE students who report greater mental toughness are more likely to be academically successful than those lower in mental toughness. It is also the aim of this study to gain further insight into the role of affect, that is, positive and negative emotions in academic success.

METHOD

Design: This was a survey looking at the relationship between the mean module mark of the students at the end of semester one as well as scores on the MTQ48 and the PANAS. Males and females were analysed separately as there are some reported gender differences in mental toughness (Clough et al. 2002)

Participants:

An opportunity sample of N = 182 UWL students took part , where N = 114 gave consent for the researcher to access their end of semester module marks.

	Males	Females
Number	24	90
Mean Age	20.54	20.85

Questionnaires:

Positive and Negative Affect Scale (PANAS) (Watson et al. 1988).

Rate words from 1 to 5
1 = Slightly/not at all - 5 = Extremely
Positive: 10 Items Negative: 10 Items

Mental Toughness Questionnaire : MTQ48 (Clough et al. 2002) has 4 scales plus 2 subscales on the dimensions of Confidence and control

5 point Likert Scale
1 = Strongly Disagree - 5 = Strongly Agree

Confidence:	Commitment	Control:	Challenge
Interpersonal		Life	
Ability		Emotion	

RESULTS

Results: These data were analysed using partial correlation where age was controlled for (e.g. Marchant et al. 2008) and split by gender. All analysis are one tailed as directional predictions were made.

Table 1: Correlations between Module Marks and the positive and negative Scales of the PANAS

PANAS	Males	Female
Positive	.36*	-.05
negative	-.27	-.04

*p<.05

Table 3: Correlations between Module Marks and the Scales of the MTQ48

Mental Toughness	Male	Female
Total Score	.11	.17
Challenge	.18	.16
Commitment	.33	.22*
Control (Total)	.06	.19*
Control Life	.20	.18*
Control Emotion	-.28	.12
Confidence (Total)	-.13	.08
Confidence Ability	-.17	.02
Confidence Interpersonal	.01	.15

*p<.05

Regression Analysis: The MTQ48 scales were used to predict module marks using the Enter method. The model was significant $F(6,107), = 89.49; p=0.021$, predicting 13% of variance in module marks. Confidence-in-Ability was a significant negative predictor of module marks (Beta = -.47 p=.002).

SUMMARY-OF-RESULTS & CONCLUSION

PANAS: -

Males – There was a significant positive correlation between the positive items and module marks.

Females – There was no relationship between the PANAS Scores and module marks.

MTQ48: -

Males – There was no relationship between any of the MTQ48 scales and module marks.

Females – There were significant positive correlations between module marks and the following Scales, Commitment, Control (Total) and Control Life.

Males: The significant positive correlation for positive affect and module mark is of interest as most work has concentrated on negative emotions (Valiente et al. 2012).

The could suggest that feedback provided in a positive manner could help to enhance performance in males. No significant correlations for the MTQ48 may reflect the small number of males in the sample.

Females: The significant positive correlation on the MTQ48 scale of Commitment could indicate that a determination in completing tasks is related to academic achievement. Furthermore, the significant positive correlations for Control and Control of Life suggests that a belief that their own actions has a positive impact on academic achievement.

Unexpectedly, there was no impact for the PANAS (e.g. Valiente et al. 2012). This possibly reflects that the PANAS ascertains current mood and may not reflect how females respond emotionally under stressful situation such as exams.

Future research could look at the direct effects of affect on performance by directly manipulating positive and negative feedback on a learning task.

Total Sample: The MTQ48 subscale Confidence-in-Ability was found to be a negative predictor of module marks suggesting that if a student is overly confident they may not seek appropriate help or advice when preparing for exams or completing assessments.

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