

# Exploring the relationship between self-efficacy and coping amongst undergraduate students

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## Background and rationale

This study investigates the relationship between self-efficacy and coping amongst first year sport studies students. The aims of the study are threefold. Firstly, to explore the relationship between self-efficacy and coping among first year undergraduate Sport students. Second, to investigate the influence of an intervention strategy to enhance coping skills, and thus raise self-efficacy. Thirdly, to investigate the extent to which academic self-efficacy and coping skills are associated with reduced dropout. The overarching objective is to encourage students to use effective coping strategies that bring about increased self-confidence to deliver the skills required to pass the year. Previous research has identified a link between the use of active coping strategies and self-confidence (Devonport, Lane, Milton, & Williams, 2003). Therefore, it is proposed that as students develop their use of active coping strategies (such as seeking advice and time management), there will be a resultant increase in academic self-efficacy.

In order to complete an undergraduate degree a student must cope with many challenges and stressors. The learning experience of students could be enhanced by understanding the ways in which they appraise and cope with academic stressors (Dalaviras, 2001). Cognitive appraisal has been defined as *'a process through which the person evaluates whether a particular encounter with the environment is relevant to his or her well being, and if so, in what ways'* (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986, p 992). Lazarus and Folkman (1984) proposed that the cognitive appraisal of a stressor involves primary appraisal in which an individual determines the implications of a stressor for well-being, and secondary appraisal in which the capacity for minimising harm or maximising gains are considered. This involves an evaluation of coping options. Coping concerns the way in which an individual manages or regulates a person-environment or an inter-personal interaction.

Recently, Devonport et al. (2003) found that active-coping efforts were associated with higher self-efficacy scores and good dissertation grades. Self-efficacy reflects a person's realistic expectations and degree of certainty about the ability to achieve success (Anshel et al., 2001). The finding that active coping and self-efficacy appear to be predictive of each other is important because efficacy expectations are proposed to influence task selection and the effort expended in task completion. The implication of this may be that academics should encourage the appropriate selection of coping options. Doing so may enhance self-efficacy and consequently academic performance, which in turn could reduce dropout rates.

## The research

### Participants

Participants were 131 Level 1 Sports Studies students ( $M = 22.19$ ,  $SD = 4.40$  years; Male  $N = 87$ , Female  $N = 44$ ). Participants reported being from the following ethnic groups: White - British (80.2%), White - Irish (3.1%), Black/Black British - Caribbean (6.9%), Black/Black British - African (.8%), Black/Black British - Black Other (3.1%), Asian/Asian British -

Indian (2.3%), Asian/Asian British - Pakistani (2.3%), and Mixed parentage - Black and White Caribbean (.8%).

## Measures

### Development of a measure of self-efficacy specific to passing Level 1 Sport

In order to increase the accuracy of self-efficacy beliefs in predicting academic outcomes it is necessary to use measures that are specific to, and correspond with, criteria-based tasks (Bandura, 1986; 1997). Previous research has involved detailed examination of the competencies needed for success (Lane, Hall, & Lane, 2002; Lane, Devonport, Milton, & Williams, 2003). In the present study, Level 2 students were asked to describe the competencies required for success using a similar procedure to that reported by Lane et al. (2002). This led to the development of a 40-item self-efficacy measure that assessed confidence towards successful completion of Level 1 on a sports degree. Questions included: 'How confident are you in your ability to organise your time?' and 'How confident are you in your ability to work independently?' A response scale ranging from 'not at all confident' (0) to 'very confident' (4) was used. The rationale for selecting a scale that was anchored by zero was based on the notion that participants would understand the proposed link between the description 'not at all' with the number zero.

*Coping.* Crocker and Graham's (1995) modified version of the COPE (MCOPE) was used to assess coping strategies. Nine subscales were based on the original COPE measure (Carver et al., 1989): Seeking social support for instrumental reasons; Seeking social support for emotional reasons; Behavioural disengagement; Planning, Suppression of competing activities; Venting of emotions; Humour; Active coping; and Denial. Based on empirical research (Madden, Summers, & Brown, 1990), Self-blame, Wishful thinking, and Increasing effort subscales were added. Participants responded to the 48 items of the MCOPE (4 items to each scale) on a 5-point Likert scale indicating the degree to which they utilized each coping strategy. Initial investigations of the internal consistency of the MCOPE have shown alpha coefficients exceeding 0.60 for all subscales except denial (0.42). Giacobbi and Weinberg, (2000) reported internal consistency coefficients above 0.60 for all subscales.

## Procedure

The self-efficacy and cope inventories were completed during teaching week five within the core module 'personal and professional development' (Semester 1). Students then completed the same inventories twice; before and after an intervention designed to enhance coping skills (Semester 2). The intervention was specifically developed to raise awareness and application of good practice regarding the planning and organising of time. A number of ideas were offered to develop time management skills, including the use of checklists and the identification of a designated working space and time. However, the main focus of the workshop was the development of a planner identifying forthcoming academic, work, sporting and social commitments. Once these commitments were identified students were encouraged to resolve conflicts between commitments, plan the effective use of time and seek support as necessary. Regression analyses were used to explore relationships between coping and self-efficacy (purpose 1). A repeated measures ANOVA was used to explore the effectiveness of the intervention strategy (purpose 2) and discriminant function analysis was used to predict student dropouts from self-efficacy and coping scores (purpose 3).

## Outcomes and benefits

### Purpose 1

Stepwise multiple regression results indicated that active coping and planning significantly accounted for 39% of the variance in self-efficacy (see figure 1). Active coping was influenced by increased effort, more suppression, greater emotional control and less venting. These factors accounted for 64% of the variance in active coping. Finally, greater use of planning

was influenced by increased effort, more suppression, greater emotional control and less wishful thinking. These factors accounted for 53% of variance in the planning scores.

The findings of this study offer support for the findings of Devonport et al (2003) who also found a significant relationship between higher self-efficacy and the use of active coping. On this occasion, the determinants of active coping and planning were also established. These findings were invaluable in developing an intervention strategy intended to develop students' ability to use active coping. The impact of active coping is hypothesised to be a corresponding increase in self-efficacy. Those individuals with higher self-efficacy show a willingness to challenge and persist in the face of perceived obstacles (Kirsch, 1985); an attribute that will assist students with their progression through an undergraduate degree.

Prediction of self-efficacy from coping skills

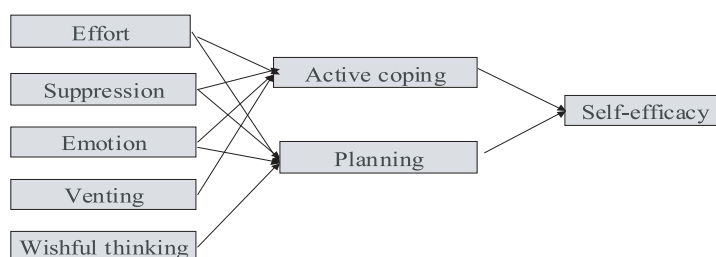


Figure 1

## Purpose 2

A repeated measures factorial ANOVA of self-efficacy over time indicated a significant main effect for self-efficacy ( $F_{2,128} = 8.32, p < .05$ ) and no main effect for gender ( $F_{2,128} = 0.21, p > .05$ ) or an interaction effect ( $F_{2,128} = 0.52, p > .05$ ). As Figure 2 indicates, self-efficacy scores significantly increased from the start of the year until the second completion, in Semester 2. There was no significant change in self-efficacy following the intervention. These findings indicate that as students gain experience and become more knowledgeable of the demands of an undergraduate degree, those who choose to continue their studies show increased self-efficacy to manage such demands. Although not significant, self-efficacy scores reduced following a planning and organisation intervention. It is proposed that by raising student's awareness of good organisational skills via this workshop, this became a reference point when assessing their own coping capacities and behaviours. We would suggest that over time as new coping skills becomes habitualised a further increase in self-efficacy would once again be evidenced.

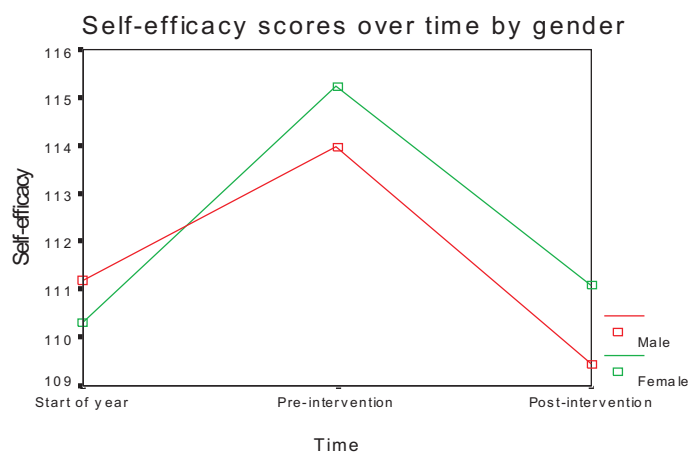


Figure 2.

### Purpose 3

Progression results indicated that 9 students had officially withdrawn from the course. It should be noted that of those students who remained, 34 students passed with 45 credits or less (out of 120 credits). Stepwise discriminant function analysis was used to classify those students who remained from those who dropped out, using self-efficacy and coping scores taken at the start of the year. The first data set was chosen because an early identification of those students at risk is desirable. Results indicated a significant main effect (Wilks' Lambda = .70,  $p < .001$ ) with 88% of cases of students being correctly classified from coping and self-efficacy scores. Stepwise procedure identified four variables that contributed significantly to the discrimination: Confidence to persist with your studies in the face of difficulties ( $r = .53$ ), Confidence to use WOLF<sup>1</sup> ( $r = .47$ ), Confidence to attend lectures punctually ( $r = .47$ ) and the use of humour as a coping strategy ( $r = -.44$ ). This indicates that profiling self-efficacy and coping scores at the start of a semester could be used to correctly identify students at risk of failing.

### Future developments

In summary, the present study was a theory driven approach to investigate factors associated with successfully passing the first year. Findings lend support to the predictive effectiveness of self-efficacy and offer further support for the value of using self-efficacy measures in academic settings. Future work should explore the effectiveness of programmes designed to raise self-efficacy measures and examine the attendant influence on dropout rates.

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<sup>1</sup> WOLF is the University of Wolverhampton Online Learning Framework: the virtual learning environment which supports many modules

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