COURSEWORK STRESS
IN UNIVERSITY STUDENTS:

Investigating problem solving coping, wishful thinking coping, anxiety and depression as predictors of coursework stress.

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ABSTRACT

The aim of the present study was to investigate students’ perceived university coursework stress and whether the use of wishful thinking or problem-focused coping was related to anxiety and depression levels. The method of investigation was a four-part questionnaire. Participants were 81 Glasgow Caledonian University students. There were two hypotheses: 1) problem solving copers will score lower on the Hospital Anxiety and Depression scale. 2) Those high in perceived coursework stress and who reveal wishful thinking strategies will have higher anxiety and depression scores. A multiple regression revealed partial support for both hypotheses – problem strategies had no relationship to coursework stress but wishful thinking and anxiety were both positive predictors of stress; however, contrary to hypothesis 2 depression revealed a strong negative association with stress. The conclusion from this study is that wishful thinkers are also more likely to be anxious; problem focused copers are not anxious, depressed or stressed; stressed students do not suffer from depression. The last finding is possibly because coursework stress is a transient stressor not severe enough to trigger depression.
INTRODUCTION

Why study stress? Bartlett (1998) points out there is immense empirical support for the belief that stress impacts adversely on physiological and mental health. Ogden, 2000, identifies some areas stress may influence: might cause ulcers through increased acid production in the stomach; increased corticosteriods (linked with arthritis) and catecholamines (linked with formation of blood clots) - both influence the immune system. Stress also reduces hormones that repair DNA and fight carcinogenic materials (Kiecolt-Glaser and Glaser, 1986).

Stress is defined as a physiological non-specific reaction to external or internal demands (Selye, 1974). Thus running to catch a bus is placed in the same category as feeling sick and anxious before a job interview. Alternately it can be described as a relationship between an individual and their environment that is appraised as dangerous and evaluated as beyond their ability to deal with (Lazarus, 1966). Therefore, it is not the event (the stressor) that causes stress but the individual’s perception, and emotional reaction to it.

Buell & Elliot (1979) suggest a link between stress related illnesses and coping patterns; they believe stress related illnesses are interrelated because all stem from the ability or inability to cope with environmental stressors. Suzuki, Kumano & Sakano (1998) found a distinction between problem solving and emotion coping strategies in terms of raised cardiovascular response for those who use problem solving strategies (Obrist, 1981) and raised skin conductance levels for those who use emotion coping strategies (Evans, Evanz, Pillips & Fearn, 1984).
Lazarus and Folkman (1984) addressed the issue of coping by formulating a cognitive paradigm of stress and coping. This is a transactional model that perceives the relationship between the individual and the environment as dynamic and reciprocal. Consequences of the coping strategy are irrelevant.

Before deciding which coping method to use in stressful situations, people perform two types of appraisals (Cohen & Lazarus, 1983; Lazarus, 1999; Lazarus & Folkman, 1984). The first, primary appraisal is concerned with assessing the degree of threat to the individual. Secondary appraisals involve considering what the individual can do to cope with the situation. The strategy chosen is thought to be situation specific. In other words different coping strategies are employed according to the context of the stressor.

Lazarus and Folkman (1984) define eight separate coping strategies that they believe individuals employ in stressful situations. These are confrontation; seeking social support; planned problem-solving; self-control; accepting responsibility; distancing; positive reappraisal; and escape/avoidance (wishful thinking). These separate into two types of coping strategies. The first is problem solving – removal of or getting around the stressor; the problem is defined, alternatives are considered and the best strategy for that situation is selected and put into action. The second coping strategy is emotion focused and involves the use of mainly cognitive processes that reduce perceived suffering. In general, people employ problem-solving strategies to situations where there may be some degree of control. Emotion focused strategies tend to be used in situations that they have little power over such as when experiencing physical health problems (Lazarus & Folkman, 1984).

It must be noted that Lazarus and Folkman believe that each strategy has its own merit and none is better than the other. If a strategy is
appropriate for the individual and if there are no ill effects (then or later) then the coping strategy is an appropriate tool in stress reduction (Folkman and Lazarus, 1985). However, some believe that emotion (especially avoidant) coping strategies are not as efficient as problem solving ones since people who do not deal with their stressors successfully are more likely to suffer ill health (Holahan & Moos, 1987). There is evidence for the belief that problem-solving strategies are better than emotion strategies for coping effectively (Roy-Byrne, Vitaliano, Cowely, Luciano, Zheng and Dunne, 1992).

In order to measure the aforementioned coping strategies Folkman & Lazarus, 1980, constructed The Ways of Coping Checklist (revised in 1985). This is an empirically derived inventory composed of problem focused and emotion focused items. The WACC measures particular ways in which individuals might cope with a stressful episode in their life. Participants are required to respond to a specific stressor (for instance work demands) and indicate the extent to which they have used each coping method to deal with it. The reply is then factor-analyzed to discover more wide-ranging patterns of coping.

The Ways of Coping scale is usually altered to fit into the context of the research investigation (Taylor, 1998). This is also true for the present investigation. As a result, comparisons with other studies are severely restricted. It must be noted that this scale is not designed to assess whether an individual consistently uses a particular coping strategy. To assess consistency of strategies one would have to repeatedly use this measure over a number of specific stressors (Folkman and Lazarus, 1985).

The Hospital Anxiety and Depression Scale (Zigmond & Snaith, 1983) has been used in the general population as a measure of stress (anxiety)
and its close associate depression. Anxiety has a strong relationship to stress; in fact, some view them as a different term for the same meaning (Lazarus and Folkman, 1984). Pinel (2003) defines stress as a physiological response to a perceived threat. Cardwell (1996) defines anxiety as both fear and a physiological arousal. Depression has a strong relationship to anxiety as prolonged stress can lead to depression (Sarafino, 2002). In relation to the coping aspect Sarason (1984) showed that problem focused coping has an inverse relationship to anxiety whereas emotion focused coping is positively related to anxiety (see also Palmer, 1999, – Exam Stress…and Coping Mechanisms).

HADS was initially designed for use with those with physical illnesses. Carroll, Kathol, Noyes, Wald & Clamon (1993) and others have successfully used HADS to measure anxiety and depression in individuals suffering from a wide variety of illnesses. HADS has internal validity as it is in agreement with other equivalent measures of psychological afflictions (Lewis & Wessley, 1990). However, Silverstone (1994) points out that HADS is designed for use in a clinical setting as a gauge for the presence of depression and anxiety; it is not designed to diagnose these two problems. Subsequently as it is not designed for diagnosis, it can be used ethically, with the general public.

The aim of this particular study is to assess what relationship perceived levels of coursework stress in university students have with coping styles and what influence (if any) these variables have on levels of anxiety and depression. Can styles of coping predict the stress experience? It must be noted that this study uses participants from the lower end of a normal distribution and therefore the analysis is on a skewed population sample.
Hypothesis 1: Students that use more problem solving coping strategies will score lower on the anxiety and depression scale than those who use wishful thinking coping.

Hypothesis 2: Students who perceive coursework stress as high and who utilise wishful thinking coping strategies will reveal higher scores on anxiety and depression than those who have low perception of coursework stress and who use problem solving strategies

METHOD

DESIGN

This investigation was a survey design. The participants’ task was to respond to 4 sections of a self-administered questionnaire, 3 of which were to identify their strength of feeling about coursework.

<table>
<thead>
<tr>
<th>Table 1: dependent variables/independent variable</th>
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<tbody>
<tr>
<td>INDEPENDENT VARIABLES</td>
</tr>
<tr>
<td>HYPOTHESES 1 &amp; 2</td>
</tr>
<tr>
<td>Problem solving copers</td>
</tr>
<tr>
<td>Anxiety</td>
</tr>
</tbody>
</table>
PARTICIPANTS

There were 81 participants in total comprising of 24 males and 57 females. Their ages were from 17 to 47 years and all were students at Glasgow Caledonian University. The purpose of the study i.e. student stress and university coursework was made clear at the outset. There were no set criteria for participants except that they were students of Glasgow Caledonian University. Participants freely agreed to take part in the study when invited.

APPARATUS

1 Standardised participant invitation letter (appendix i)
Section A – 18 questions on demographics (appendix ii).
Section B – 1 question on perceived stress and 14 questions amended from the Ways of Coping Revised Scale (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986) (appendix iii).
Section C – 11 questions pertaining directly to coursework (appendix iv).
(Statements “I enjoy completing coursework” and “My computing skills are a great help to me in completing coursework on time” were dropped from any statistical analysis as they proved ambiguous in determining whether they were a high stress or a low stress statement.
Section D - 1 Hospital Anxiety and Depression Scale (HADS) - 14 item self-administered rating scale originally intended for rating individuals with physical poor health.
1 self-sealing envelope

PROCEDURE

Participants completed the questionnaire in their own time after reassuring them on the anonymity and confidentiality of information.
The provision of blank self-sealing envelopes ensured confidentiality. The information from participants was converted into numbers and statistically analysed by computer using SPSS.

RESULTS

Table 2 : means and standard deviations for key variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COPING STYLE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problem focused coping</td>
<td>81</td>
<td>14.12</td>
<td>3.10</td>
</tr>
<tr>
<td>Wishful thinking coping</td>
<td>81</td>
<td>15.85</td>
<td>4.50</td>
</tr>
<tr>
<td>Perception of coursework stress</td>
<td>80</td>
<td>2.91</td>
<td>0.81</td>
</tr>
<tr>
<td>(1 missing value)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HADS scores</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety score</td>
<td>81</td>
<td>10.42</td>
<td>7.41</td>
</tr>
<tr>
<td>Depression score</td>
<td>81</td>
<td>6.31</td>
<td>7.32</td>
</tr>
</tbody>
</table>

Table 2 shows the mean scores and standard deviations of all the variables for the present study. Note missing values have been accounted for.
Using the direct method the dependent variable stress was regressed on four dependent variables (problem strategies, wishful thinking, depression and anxiety). Multiple R was .491 [F [4, 75, 79]= 5.957, p = .000. The squared multiple correlation was consequently .241, indicating that Stress shares 24% of its variance with these 4 predictors.

The regression equation was Stress = 1.950 -2.117problem + 5.841wishful + -6.038depression + 6.835

Table 2 shows what the four predictors contributed to this analysis. Comparing the beta coefficients it can be seen that wishful thinking and anxiety were both predictors of stress but that anxiety was the stronger predictor. Problem solving strategies are shown to have no relation to stress. Depression has a strong significantly negative relationship to stress.

Table 3: beta coefficients and t values for problem solving coping, wishful thinking coping, depression and anxiety as predictors of the stress experience

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>BETA</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROBLEM</td>
<td>-.081</td>
<td>-.795</td>
<td>.429</td>
</tr>
<tr>
<td>WISHFUL</td>
<td>.322</td>
<td>2.973</td>
<td>.004</td>
</tr>
<tr>
<td>DEPRESSION</td>
<td>-.544</td>
<td>-2.510</td>
<td>.014</td>
</tr>
<tr>
<td>ANXIETY</td>
<td>.624</td>
<td>2.823</td>
<td>.006</td>
</tr>
</tbody>
</table>
DISCUSSION

The results for hypothesis 1: problem solving copers will score lower on the anxiety and depression scale wishful thinking copers, and hypothesis 2: high perceived coursework stress with wishful thinking scores higher on anxiety and depression, were as follows were as follows $F_{[4, 75, 79]}= 5.957, p =.000$. Hypotheses 1 was partially supported (see table 3). Problem solving coping strategies were not significantly related to depression. In other words, those students that used the strategy neither stressed nor depressed individuals. However, wishful thinkers (which the hypothesis indirectly says will score higher) were found to be both anxious and stressed. Anxiety was found to be a stronger predictor of stress than wishful thinking. Nevertheless, it must be remembered that this is not a clinical diagnosis of depression (Silverstone, 1994); it should only be used as a gauge. Despite this, there is a tendency for wishful thinkers to be of lower mood than problem copers within the population sampled, i.e. within the lower end of a normal population.

Table 3 shows that the results also partially supported Hypothesis 2. There was a significant relationship between individuals who utilized wishful thinking coping and higher scores on the anxiety but not the depression measure. However, as depression was a significantly negative relationship it can be said that those that are anxious and wishful thinkers will not suffer from depression. Those that are anxious in the short term (coursework is transitory) are, if not physically active are psychologically active; they may indulge in day dreaming about the positive results they might receive, may seek alternative stimuli to replace thinking about coursework, or may in some other manner become dynamic. This may either prevent the onset of depression which manifests itself as lethargy, or an inability to get motivated.
Students under coursework stress therefore are proactive rather than passive.

The results give weight to Roy-Byrne et al's (1992) ideas that problem-solving strategies are better than emotion strategies for coping effectively with stressors. As wishful thinkers are anxious individuals their corticosteroids (linked with arthritis) and catecholamines (linked with formation of blood clots) will be elevated. Thus negative health implications imply emotion coping, in this instance wishful thinking, is less effective than problem solving coping. This belief is also in agreement with Holahan & Moos (1987) who think people who do not deal with their stressors successfully are more likely to suffer ill health.

Sarason (1984) showed that problem focused coping has an inverse relationship to anxiety whereas emotion focused coping is positively related to anxiety. The present study supports their conclusion. However, despite depression having a strong relationship to anxiety because prolonged stress can lead to depression (Sarafino, 2000) this study did not uphold this belief. This may be because coursework stress is a temporary stress and therefore unlikely to induce depression within a normal population. In retrospect, the use of HADS probably was not an appropriate measure. A single measure of anxiety would have been more suitable for the aims of this particular study.

There were areas in this study that could be improved. Coursework should have been quantified to allow a weighing up of the perception of stress with the reality of the situation. A question on average grades in previous work or came back to see what grade was received for coursework would have been of use to determine if problem focused copers were more effective in terms of standards of grades. Behavioural
coping strategies could have been addressed in an examination of whether any one is more effective.

It may also be of interest, perhaps for another study, to investigate the delayed effects of stress. Did individuals who perceived their coursework as stressful, used wishful thinking and were anxious experience more minor illnesses than problem solvers?

One area that has not been studied is differences in emotion focused coping e.g. wishful thinking and positive reappraisal. Coursework stress however may not be appropriate to this type of investigation.
REFERENCES


STUDENT REACTION TO COURSEWORK STRESS

RESEARCH STUDY
We are conducting a 3rd year Psychology undergraduate Social / Health Psychology research project which involves gathering data about Student Stress and University Coursework in undergraduate degree programmes. We are conducting this research under the guidance of Mr. M. Wrennall, a senior lecturer in the department.

If you are an undergraduate student, we are asking that you would please agree to participate in this research by completing this self-reported questionnaire, which is COMPLETELY ANONYMOUS. We do not ask for any identifying information. The information you provide is STRICTLY CONFIDENTIAL. Please put the completed questionnaire into the self-sealing envelope provided.

In our reports, all of the information from participants will be converted into numbers, pooled together and statistically analysed by computer. In this way, we seek to generalise our findings beyond specific individuals.

We hope you will agree to participate in this study but you are at liberty to refuse to do so. For any further questions regarding the research project or the results (Due out Mid Dec 2003) please email: kmonag11@caledonian.ac.uk.

THANK YOU
Appendix ii

REACTION TO COURSEWORK STUDENT STRESS

QUESTIONNAIRE

Please answer all questions

Please write or circle the answer most applicable to you

Section A  Information about you and your academic experience

1. What age are you _______
2. Gender: Are you a) Female  b) Male
3. What year of study are you in
   a) First  b) Second  c) Third  d) Fourth
4. Are you a) Full time  b) Part time
5. What programme are you currently studying ________________
6. Marital Status
    a) Single  b) Married  c) Living with partner  d) Divorced / Separated  e) Widowed
7. Are you a single parent?  Yes  No
8. How many dependents do you have?
    (These may be children, elderly or ill family members or relatives)
    a) None  b) One  c) Two  d) More than two
9. If you have dependants, to what extent do you feel they hinder or create difficulties for your studies?
    a) Not at all  b) A little  c) To some extent  d) A great deal
10. How many modules are you taking this semester
    a) One  b) Two  c) Three  d) More than three
11. Since starting your university studies, have you ever failed an examination, that is you have been required to resit the examination?
    No (now go to Q12)  Yes
    If yes, Which one(s) did you fail ________________
12. Have you ever had to repeat a year OR carry a module over into the next academic year
   a) Yes  b) No

13. If yes, are you currently carrying any modules?
   a) Yes  b) No

14. Have you ever failed a module because of coursework, that is you have been required to resubmit or do extra coursework to pass a module?
   a) Yes  b) No
   If yes, how many modules have you failed? ____________________

15. Do you currently work in paid employment
   a) No (now go to Q17)  b) Yes

16. If yes, how many hours per week do you work on average?
   a) Less than 5  b) 5 to 10  c) 10 to 15  d) 15 to 20  e) 20+

17. Do you work on a voluntary basis
   No (now go to Section B) Yes

18. If yes, how many hours per week do you do voluntary work on average?
   a) Less than 5  b) 5 to 10  c) 10 to 15  d) 15 to 20  e) 20+

Appendice iii

Section B
Some students suffer from stress or can be under pressure when meeting coursework deadlines and there are a number of ways in which people attempt to cope with such pressures. We would like you to indicate how you cope with the pressures and demands of coursework.

To what extent do you feel that you are under pressure, at the moment, in terms of meeting coursework deadlines in your present modules?

   a) Not at all under pressure
   b) A little bit under pressure
   c) Under quite a bit of pressure
   d) Under a great deal of pressure.
Different people use different methods of coping with stress. For each of the possible methods of coping with stress when trying to meet coursework deadlines, please indicate the extent to which you use each method.

<table>
<thead>
<tr>
<th></th>
<th>Method</th>
<th>Never use</th>
<th>Use sometimes</th>
<th>Use often</th>
<th>Always use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I wish that the situation would somehow go away</td>
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<td>2</td>
<td>I hope a miracle would happen</td>
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<td>3</td>
<td>I have fantasies or wishes about how things might work out</td>
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<td>4</td>
<td>I try to make myself feel better by eating</td>
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<td>5</td>
<td>I avoid being with people in general</td>
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<td>6</td>
<td>I refuse to believe that it is going to happen</td>
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<td>7</td>
<td>I take my stress out on other people</td>
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<tr>
<td>8</td>
<td>I sleep more than usual</td>
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<td>9</td>
<td>I know what has to be done, so, I double my efforts to make things work</td>
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<tr>
<td>10</td>
<td>I make a plan of action and follow it</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>I just concentrate on what has to be done</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>I change my approach so that the situation will turn out all right</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>I draw on my past experiences; I have been in a similar situation before</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>I come up with a couple of different solutions to the problem</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Section C

This section asks you how you feel about some aspects of completing coursework and some of the stresses involved.

Please read each statement below and indicate, using the rating scales, how much you agree or disagree with each statement

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree/disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the last few weeks I have had a great deal of coursework to complete</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>I do not find it stressful to meet coursework deadlines</td>
<td>Strongly disagree</td>
<td>Disagree</td>
<td>Neither agree/disagree</td>
<td>Agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>I often ask for extensions for coursework submission dates</td>
<td>Strongly disagree</td>
<td>Disagree</td>
<td>Neither agree/disagree</td>
<td>Agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>I think I have good time management skills</td>
<td>Strongly disagree</td>
<td>Disagree</td>
<td>Neither agree/disagree</td>
<td>Agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>I enjoy completing coursework</td>
<td>Strongly disagree</td>
<td>Disagree</td>
<td>Neither agree/disagree</td>
<td>Agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>I would rather do unseen written exams rather than coursework for assessment</td>
<td>Strongly disagree</td>
<td>Disagree</td>
<td>Neither agree/disagree</td>
<td>Agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>Most modules require too much coursework</td>
<td>Strongly disagree</td>
<td>Disagree</td>
<td>Neither agree/disagree</td>
<td>Agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>I never plan ahead and always seem to be doing coursework at the last minute.</td>
<td>Strongly disagree</td>
<td>Disagree</td>
<td>Neither agree/disagree</td>
<td>Agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>I am a perfectionist when putting in coursework since I want to get the best possible mark</td>
<td>Strongly disagree</td>
<td>Disagree</td>
<td>Neither agree/disagree</td>
<td>Agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>My computing skills are a great help to me in completing coursework on time.</td>
<td>Strongly disagree</td>
<td>Disagree</td>
<td>Neither agree/disagree</td>
<td>Agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>I rely on family or friends for practical support when I am stressed through coursework</td>
<td>Strongly disagree</td>
<td>Disagree</td>
<td>Neither agree/disagree</td>
<td>Agree</td>
<td>Strongly agree</td>
</tr>
</tbody>
</table>