Students’ Ability to Differentiate Between Healthy and Unhealthy Stress: PSYC321 Final Research Project
Candice Seligman, Celine To, Lizzie Vu
University of British Columbia
PSYC 321
April 28, 2015
Students’ Ability to Differentiate Between Healthy and Unhealthy Stress:

PSYC321 Final Research Project

Group Name: Trash Talkers

Candice Seligman, Celine To, Elizabeth Vu

The University of British Columbia
Abstract

This study was conducted to explore the research question: Can students differentiate between healthy and unhealthy stress? How do coping mechanisms differ as number of different upcoming deadlines increase? It was predicted that students who are better able to differentiate between healthy and unhealthy stress will have healthier coping mechanisms, despite the number of upcoming deadlines that they have. Healthy coping mechanisms was defined as having a higher COPE inventory score on engagement compared to disengagement. Similarly, unhealthy coping was defined as a higher score for disengagement than engagement on the COPE inventory. Tobin (1985) defined engagement as the attempts by the individual to actively engage in efforts to manage their stressful situation. In contrast, disengagement was defined as strategies that likely result in the individual avoiding thoughts about the situation and refraining from behaviours that may change their stressful situation. One hundred students at The University of British Columbia were selected using a convenience-sampling method to take part in an online modified COPE inventory questionnaire. The results did not support our hypothesis. It was found that 59.4% of participants correctly identified their method of coping with stress (healthy or unhealthy), but although students were able to differentiate between healthy and unhealthy stress, this did not appear to be correlated with having healthier coping mechanisms.

*Keywords:* students, healthy stress, unhealthy stress, coping mechanisms
Students’ Ability to Differentiate Between Healthy and Unhealthy Stress

Method

Participants
One hundred students from The University of British Columbia were selected using a convenience sampling method. The final participant population consisted of 31 males and 69 females. The participant population ranged from first year to PHD level. The mean year of study was third year.

Conditions
In this study, participants were asked to disclose the number of upcoming deadlines which were one of the following; mid term, paper, final, assignment, presentation and other. The number of upcoming deadlines was the independent variable. Furthermore, the dependent variable was the participant's individual COPE scores and the individual’s self-reported coping ability.

Measure
Materials used were The Coping Strategies Inventory-Short Form 32 (Figure 22) (Tobin, 1985) which was manually transferred onto www.SurveyPlanet.com (Survey Planet, 2015) to create an online survey. Further demographic questions were also added.

Procedure
Participants were selected using a convenience sampling method at various times and dates throughout the month of March. The online survey was distributed electronically to participants using laptops. At the beginning of our survey there was a consent notice stating that by proceeding with the survey, the participant has agreed to consent to being a participant in the study. Participants were informed that they were allowed to discontinue participation at any point. The survey was distributed online via the online social networking website Facebook and distributed face-to-face in various locations at The University of British Columbia: Walter C. Koerner Library, The Centre for Interactive Research on Sustainability, Irving K. Barber Library, Neville Scarfe Building, and The Student Union Building. Participants approached face-to-face were offered candy as compensation to participate in the study. Pamphlets from The UBC Wellness Centre (See Figure 13) regarding anxiety and stress were readily available to participants in the case that the survey triggered any negative emotions or if the participant wanted to seek further information regarding campus resources.

Results
Data analysis showed that as number of deadlines increased from 1-3, the amount of engagement decreased and the amount of disengagement increased (See Figure 25-26). However, as number of deadlines increased from 3-5, the amount of engagement increased and the amount of disengagement decreased (See Figure 25-26). Results also showed that 59.4% of participants correctly identified their method of coping with stress, with 40.6% of participants incorrectly identifying their coping style.
Discussion

The results of this experiment disconfirm the hypothesis of students who are better able to differentiate between healthy and unhealthy stress will have healthier coping mechanisms, despite the number of upcoming deadlines that they hold.

There are many limitations identified for this study. As for all self-report questionnaire studies, we can only infer correlation not causation. As well as having n=100 participant population, which represents ~.0025% of the total University Of British Columbia student population. This is a big limitation for our results as we cannot generalize or make definitive statements. Further, self-report bias is affected by participant’ motivation, honesty, memory, and ability to respond. This study also utilized a very specific population: the researchers’ social media networks including friends and family, and also participants convenience-selected at locations on campus. There was also the use of The Shortened COPE Inventory which might have affected the results of our study, possibly leaving out important data/trends that could have been captured using the full 72-item COPE inventory questionnaire (See figure 14). Lastly, this study did not use true random selection of participants, which may have affected our final results.

Strengths of the study include the use of the COPE inventory since it’s validity has been tested numerous times in various studies (Tobin, 2001). The factor structure supports the relationship between the scales the hierarchical relationship and the proposed subscales. The factor structured consisted of 3 subscales, where there was 8 primary factors investigated how participants perceived stress in terms of problem solving, social support, wishful thinking and so forth. There were 4 secondary factors that streamlined into 2 tertiary factors of engaged or disengaged. The criterion validity was successful since the CSI (Tobin, 2001) was able to clinically differentiate a sample of depressed from non-depressed participants. Lastly, the construct validity, which studied the link between the CSI and other, constructs relating to stress and coping academic literature. Several studies have suggested that the CSI is able to correctly depressive amongst participants under high stress (Tobin et al, 1983).

Implications of our results are that the majority of students (from our study) can accurately appraise their coping style. We found that the students in our study use both engaging and disengaging coping styles simultaneously. We can suggest that when students are more disengaged in their coping strategies, students can experience an increased amount of negative outcomes due to stress, such as negative effects on physical, mental, and social well-being. We further suggest that when an individual's’ balance of styles is dominated by engagement, the individual may receive positive implications of their stressors such as motivation and feelings of competence.

We suggest a further study could look at a specific population of international students attending UBC. These students may face additional stressors compared to local students as many of them are further from home and also pay a much higher tuition. It could be interesting to look at whether or not these students have more varying healthy and unhealthy coping strategies because of these extra variables that could affect the amount of stress that one might have. For example, perhaps pressure of doing well in school is more prominent in international students because of the increased costs of failing a course compared to a student who pays local tuition.
**Recommendations for UBC**

From our results, we have several recommendations for UBC where our results might be incorporated and utilized. On campus resources such as UBC Mental Health Awareness Club, UBC Wellness Centre, SpeakEasy, or UBC Counselling Services may incorporate this knowledge to initiate a conversation on stress management specifically tailored to UBC students. We believe it is important to have a future study that examines how mental health issues (such as stress) are currently being addressed on campus and evaluate whether or not students are receiving the resources they want or need. Currently, UBC addresses stress related issues through workshops, campaigns and campus wide programs (Health & Wellness at UBC) however there appears to be a discrepancy between the availability, knowledge, and use of these resources. For example, The UBC Live Well website provides an abundance of information on wellness topics including stress, however we believe this resource is underutilized. Focus could lie more on preventative approaches to stress issues.

We also recommend that UBC increase student awareness of support services through more innovative means. Some more specific suggestions we have to promote services including having student reps make quick announcements to classes about related events and resources during high periods of stress such as midterms. We believe that it is important that a peer makes these announcements as it encourages student engagement by increasing relatability. Having a peer deliver these types of messages breaks down social barriers that may exist on this topic. The Ubyssey could include a short survey like the COPE, which allows student access to complete in their own time. While also listing resources so individuals might become aware of their coping style and reach out if their score concerns them. It is also of importance to have RezLife hold more meetings or events for residents where they discuss stress coping or prevention strategies that might normalize the conversation on stress.
References


Welcome to our study. We are running a survey on stress in students' lives as our group project for the PSYC 321-Environmental Psychology course. The survey will take about 4 minutes to complete. You will answer a series of questions on stress in your life in the survey.

Your participation in this survey is entirely voluntary and anonymous. You can refuse to participate or withdraw from the survey at any time. Your identity will be kept strictly confidential. All documents will be identified only by code number and stored securely. You will not be identified by name in any reports of this study. Data in this survey will only be accessed by the students, the course instructor, and the teaching assistant. Results of this study will be used to write a research report. There are no risks associated with participating in this survey. If you have any questions about the study, please contact us below. Candice Seigman: candies3@gmail.com | (778) 957-0775
Cellina To: cellinato25@gmail.com | (604) 780-0774
Elizabeth Vu: lizzi4@icloud.com

You can also contact the course instructor, Dr. Jaying Zhao, assistant professor in the Department of Psychology and the Institute for Resources, Environment and Sustainability at UBC. Dr. Zhao can be reached at (604) 822-2103, or environmentalpsychology321@gmail.com.

If you consent to participate in this study, please proceed to the following questions. Thank you.

Continue

If you are a student, what year or grade are you in?

What gender do you identify with?

In the next two weeks, do you have any of the following school-related deadlines?

[ ] paper

Figure 1. Survey outlining the consent information of the survey (Pg. 1 of 12)
Students’ Ability to Differentiate Stress

Figure 2. Survey pg. 2 of 12
For all the following questions, think about a stressful task or event that you’ve had in the past two weeks.

I worked on solving the problems in the situation
- not at all
- a little
- somewhat
- much
- very much

I looked for the silver lining, so to speak; I tried to look on the bright side of things
- not at all
- a little
- somewhat
- much
- very much

I let out my feelings to reduce the stress.
- not at all
- a little
- somewhat
- much
- very much

Figure 3. Survey pg. 3 of 12
Figure 4. Survey pg. 4 of 12
Figure 5. Survey pg. 5 of 12
Figure 6. Survey pg. 6 of 12
Figure 7. Survey pg. 7 of 12
Figure 8. Survey pg. 8 of 12
Figure 9. Survey pg. 9 of 12
Figure 10. Survey pg. 10 of 12
Figure 11. Survey pg. 11 of 12
Figure 12. Pg. 12 of 12
Figure 13. Pamphlets available to participants in the case anyone wanted to seek resources regarding stress/anxiety

Figure 14. COPE Inventory Manual (Pg. 1 of 8)
Students’ Ability to Differentiate Stress

Figure 15. COPE Inventory Manual (Pg. 2 of 8)

Figure 16. COPE Inventory Manual (Pg. 3 of 8)
Table 3. Analysis of the Primary Subscales of Coping

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem-Solving</td>
<td>0.62</td>
<td>0.67</td>
<td></td>
<td></td>
<td>0.58</td>
<td>0.69</td>
<td>0.68</td>
<td>0.66</td>
</tr>
<tr>
<td>Cognitive Restructuring</td>
<td>0.63</td>
<td>0.68</td>
<td></td>
<td></td>
<td>0.69</td>
<td>0.71</td>
<td>0.70</td>
<td>0.68</td>
</tr>
<tr>
<td>Emotion-Focused Engagement</td>
<td>0.69</td>
<td>0.71</td>
<td></td>
<td></td>
<td>0.72</td>
<td>0.71</td>
<td>0.70</td>
<td>0.68</td>
</tr>
<tr>
<td>Emotion-Focused Management</td>
<td>0.67</td>
<td>0.69</td>
<td></td>
<td></td>
<td>0.68</td>
<td>0.69</td>
<td>0.68</td>
<td>0.66</td>
</tr>
<tr>
<td>Problem Avoidance</td>
<td>0.65</td>
<td>0.69</td>
<td></td>
<td></td>
<td>0.68</td>
<td>0.69</td>
<td>0.68</td>
<td>0.66</td>
</tr>
<tr>
<td>Working Through</td>
<td>0.69</td>
<td>0.70</td>
<td></td>
<td></td>
<td>0.68</td>
<td>0.69</td>
<td>0.69</td>
<td>0.66</td>
</tr>
</tbody>
</table>

Table 4. Sample Factor Scores and Structure Coefficients

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem-Solving</td>
<td>0.45</td>
<td>0.50</td>
<td></td>
<td></td>
<td>0.49</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive Restructuring</td>
<td>0.49</td>
<td>0.50</td>
<td></td>
<td></td>
<td>0.49</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotion-Focused Engagement</td>
<td>0.49</td>
<td>0.50</td>
<td></td>
<td></td>
<td>0.49</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotion-Focused Management</td>
<td>0.49</td>
<td>0.50</td>
<td></td>
<td></td>
<td>0.49</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problem Avoidance</td>
<td>0.49</td>
<td>0.50</td>
<td></td>
<td></td>
<td>0.49</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working Through</td>
<td>0.49</td>
<td>0.50</td>
<td></td>
<td></td>
<td>0.49</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 17. COPE Inventory Manual (Pg. 4 of 8)

Figure 18. COPE Inventory Manual (Pg. 5 of 8)
Appendix C

COPE Inventory Manual (Pg. 6 of 8)

Appendix D

COPE Inventory Manual (Pg. 7 of 8)
Table 2: COPE Inventory Manual

<table>
<thead>
<tr>
<th>Scale</th>
<th>Males mean</th>
<th>Males SD</th>
<th>Females mean</th>
<th>Females SD</th>
<th>df</th>
<th>F (p = .05)</th>
<th>p (p = .05)</th>
<th>p (p = .01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem Solving</td>
<td>3.00</td>
<td>.90</td>
<td>3.08</td>
<td>.97</td>
<td>78</td>
<td>3.15</td>
<td>.001</td>
<td>.001</td>
</tr>
<tr>
<td>Cognitive Reappraisal</td>
<td>4.73</td>
<td>.74</td>
<td>4.76</td>
<td>.67</td>
<td>65</td>
<td>6.44</td>
<td>.001</td>
<td>.001</td>
</tr>
<tr>
<td>Supportive Reacting</td>
<td>2.65</td>
<td>.30</td>
<td>2.79</td>
<td>.30</td>
<td>40</td>
<td>2.04</td>
<td>.156</td>
<td>.156</td>
</tr>
<tr>
<td>Social Support</td>
<td>2.42</td>
<td>.20</td>
<td>2.37</td>
<td>.20</td>
<td>100</td>
<td>2.10</td>
<td>.142</td>
<td>.142</td>
</tr>
<tr>
<td>Positive Reappraisal</td>
<td>2.14</td>
<td>.20</td>
<td>2.19</td>
<td>.20</td>
<td>90</td>
<td>2.10</td>
<td>.142</td>
<td>.142</td>
</tr>
<tr>
<td>Placing Dependents</td>
<td>3.21</td>
<td>.18</td>
<td>3.19</td>
<td>.19</td>
<td>69</td>
<td>1.12</td>
<td>.293</td>
<td>.293</td>
</tr>
<tr>
<td>Self-Disclosure</td>
<td>2.15</td>
<td>.20</td>
<td>2.20</td>
<td>.20</td>
<td>76</td>
<td>1.56</td>
<td>.121</td>
<td>.121</td>
</tr>
<tr>
<td>Social Withdrawal</td>
<td>2.53</td>
<td>.20</td>
<td>2.51</td>
<td>.20</td>
<td>13</td>
<td>1.21</td>
<td>.271</td>
<td>.271</td>
</tr>
</tbody>
</table>

**Note:**
- Table shows the mean and standard deviation for different scales.
- Significant differences are indicated by asterisks: *, **, ***.
- Further analysis includes reliability information and other statistical tests.

Figure 21. COPE Inventory Manual (Pg. 8 of 8)
SCORING INFORMATION FOR THE CSI-S

**Primary Subscale Items** (alpha average .70)
- Problem Solving = 1, 9, 17, 25
- Cognitive Restructuring = 2, 10, 18, 26
- Express Emotions = 3, 11, 19, 27
- Social Contact = 4, 12, 20, 28
- Problem Avoidance = 5, 13, 21, 29
- Wishful Thinking = 6, 14, 22, 30
- Self Criticism = 7, 15, 23, 31
- Social Withdrawal = 8, 16, 24, 32

To calculate the secondary and tertiary subscale scores, simply add together the primary scales that make up each subscale (see users manual).

**Secondary Subscale Items** (alpha average .80)
- Problem Focused Engagement = Problem-Solving + Cognitive-Restructuring
- Emotion Focused Engagement = Social Contact + Express Emotions
- Problem Focused Disengagement = Problem Avoidance + Wishful-Thinking
- Emotion Focused Disengagement = Social-Withdrawal + Self Criticism

**Tertiary Subscale Items** (alpha average .90)
- Engagement = Problem Focused Engagement + Emotion Focused Engagement
- Disengagement = Problem Focused Disengagement + Emotion Focused Disengagement

*Figure 22. COPE Inventory Shortened Version (Pg. 1 of 3)*
Students’ Ability to Differentiate Stress

Figure 23. COPE Inventory Shortened Version (Pg. 2 of 3)
25. I knew what had to be done, so I doubled my efforts and tried harder to make things work.
26. I convinced myself that things aren't quite as bad as they seem.
27. I got in touch with my feelings and just let them go.
28. I asked a friend or relative I respect for advice.
29. I avoided thinking or doing anything about the situation.
30. I hoped that if I waited long enough, things would turn out OK.
31. Since what happened was my fault I really chewed myself out.
32. I spent some time by myself.

(C) 1985, 1995
David L. Tobin
All Rights Reserved

Figure 24. COPE Inventory Shortened Version (Pg. 3 of 3)
Figure 25. COPE Score and number of deadlines

Figure 26. Trajectory of engagement vs. disengagement
<table>
<thead>
<tr>
<th>Number of Deadlines</th>
<th>Engagement Score Mean</th>
<th>Disengagement Score Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>53.4</td>
<td>45.4</td>
</tr>
<tr>
<td>1</td>
<td>48.4</td>
<td>50.2</td>
</tr>
<tr>
<td>2</td>
<td>48.6</td>
<td>44</td>
</tr>
<tr>
<td>3</td>
<td>48.5</td>
<td>42.3</td>
</tr>
<tr>
<td>4</td>
<td>51</td>
<td>50</td>
</tr>
<tr>
<td>5</td>
<td>65</td>
<td>59</td>
</tr>
</tbody>
</table>

*Figure 27. Deadlines and Mean Scores of Engagement and Disengagement*

Conversations with the stakeholders - not much information was provided. However, incentives were provided which did help in recruiting participants.