

**THE MEDIATING ROLE OF APPRAISALS AND COPING STRATEGIES
IN THE RELATION BETWEEN NEGATIVE EMOTIONAL STATE AND
DEPRESSIVE SYMPTOMS**

by

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Abstract

Just as emotional responses to stressful situations may result from the appraisal and coping strategies employed, emotions may also influence cognition and coping strategies. The goals of the present study were to examine the effects of emotional state on appraisal and coping strategies favored in response to potential stressors, and their relationship to depressive symptoms. Carleton University undergraduate students ($N = 134$) completed the Positive Affect Negative Affect Scale, Survey of Coping Profile Endorsed, as well as the Beck Depression Inventory, and they provided stress appraisals of several ambiguous situations. Appraisals of threat mediated the relationship between anxiety and emotion-focused coping strategies. Furthermore, sequential mediation indicated that threat appraisals and emotion-focused coping mediated the relationship between anxiety and depressive symptoms. These data suggest that emotions may influence threat appraisals and coping methods that, in turn, might favor the development of depressive symptoms.

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Introduction

Chronic activation of the stress response is central in the development and maintenance of mood disorders such as major depression (Hammen, 2005; Mazure, 1998). Importantly, however, not everyone who experiences stressful life events develops symptoms of depression. Numerous factors might be responsible for these individual differences, including the appraisals made of stressful events and the coping methods that an individual might use in this regard (Hammen, 2005; Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986). Indeed, characteristics such as negative appraisal biases (Folkman & Lazarus, 1986), and maladaptive coping profiles (Matheson & Anisman, 2003a) are associated with depressive symptoms. Additionally, the stress response is complex, in that emotions have been found to be entwined with appraisals and coping strategies (Folkman & Lazarus, 1988a).

Traditionally, an emotional response to a given situation has been viewed as the result of a specific configuration of appraisals and coping strategies. By example, appraisals of threat have been reported to trigger emotions of anger or shame, and certain coping strategies might act to maintain those emotions (Folkman & Lazarus, 1986). However, alternative directions have also been considered in that specific emotions (e.g., anger) have also been reported to influence cognitive processing (Lerner & Tiedens, 2006), and the relationship between certain coping strategies and emotions has been reported to be reciprocal (Scherer, Schorr, & Johnstone, 2001). In effect, an individual's emotional state may influence appraisal and coping strategies, just as appraisals and coping might come to affect emotional states. Moreover, it has consistently been reported that experiencing negative emotions, such as anxiety, contribute to depressive symptoms

(Cole, Peeke, Martin, Truglio, & Seroczynski, 1998). However, the role that specific negative emotions play in influencing appraisal and coping strategies, and their role in predicting depressive symptoms is still unclear.

The present investigation was thus conducted to determine whether particular emotional states (shame, anger, and anxiety) would influence appraisals of ambiguous situations, which in turn would be related to coping strategies that individuals might use. It was hypothesized that the relationship between particular emotional states and coping strategies would be mediated by appraisals of ambiguous situations. Furthermore, it was hypothesized that the relation between emotions and depressive symptoms would be sequentially mediated by appraisals and coping strategies.

Stress and Appraisals

As described by Lazarus and Folkman (1984), when individuals encounter a potential stressor, evaluations of the situation are made that comprise both primary and secondary appraisals. Primary appraisal refers to whether the individual has anything at stake in that particular encounter (e.g., is there potential threat or harm in relation to the potential challenge?; Folkman et al., 1986). If an individual were to appraise a potential stressor as non-threatening, no further action would be necessary. However, if the potential stressor is appraised as threatening, then secondary appraisals are made concerning what can be done to deal with the stressor. At this phase, coping options are evaluated (e.g., altering the situation, accepting it, seeking more information in an effort to determine an effective strategy; Folkman et al., 1986).

Appraisals and Emotions

How an individual perceives and appraises their environment contributes to the quality and intensity of the emotions experienced (Folkman & Lazarus, 1988b). By example, if an individual determines through primary appraisal that their self-esteem is at stake in an encounter, there is potential for shame and anger to be experienced (Folkman & Lazarus, 1988b). If an individual makes a secondary appraisal and determines that appropriate coping resources are available, then the threat or stressfulness of the situation would be diminished. However, if the secondary appraisal determines that coping resources are not effective, or are questionable, then a different type of emotion might be generated (e.g., fear, annoyance, anger). This, in turn, might cause a cascade of further emotional and behavioral responses, and may also potentially lead to further reappraisal of the situation (Folkman & Lazarus, 1988a).

It seems that the emotions generated as a result of the appraisal process may have specific relations to the threat being presented (Lazarus, 1999). For example, anger tends to be elicited when an individual has been demeaned or offended, and anxiety on the other hand, tends to be elicited in the face of uncertainty in a stressful situation (Lazarus, 1999). Furthermore, emotional responses can often be complex, in that multiple emotions may be elicited in any given encounter. By example, being socially diminished, or being criticized, can evoke complex patterns of negative emotions such as shame, anger, and anxiety simultaneously (Gilbert, 2000).

Although emotions are most often viewed as being generated from appraisals, it has been reported that this relationship is bidirectional (Lazarus, 1999). Paralleling these findings, Lerner and Tiedens (2006) reported that when an individual is angry, they

process information heuristically, placing minimal effort into the decision making process. The authors posit that emotions hinder judgment, and thereby impede situations being handled rationally and objectively, which could potentially cascade into undesirable outcomes. Just as the appraisal process is continuous (i.e., individuals constantly evaluate and reappraise their environment), the emotion generated by one appraisal will subsequently influence the following appraisal. Thus, the influence of emotions, and more specifically anger, can drastically color an individual's appraisal of an event. Moreover, it has been suggested that emotions are tied to an individual's intrinsic self, such as values or goals (Lazarus, 1999). As a result, appraisals of situations that are presented as a challenge to these personal variables may be influenced by the emotional connection related to them.

Appraisals, Emotions, and Depression

Appraisals and emotional responses in the context of stressful experiences might be predictive of the emergence of depressive symptoms (Lazarus & Folkman, 1984). In particular, a negative appraisal style (consistently appraising stressful events as threatening and uncontrollable, in addition to the belief that they lack appropriate coping resources) may favor the development of a maladaptive coping style (Lazarus & Folkman, 1984; Folkman & Lazarus, 1986). The presence of ineffective coping might contribute to allostatic overload, which if sustained, might result in the evolution of depressive pathology. The hopelessness theory of depression (Abramson, Metalsky, & Alloy, 1989) elaborates on the impact of negative perceptions of reality and its potential for depressive outcomes. This perspective captures two main elements, which reflect a logical relationship between distorted perception and risk for depression. The view

offered suggests that depression is not only associated with a negative outlook, but also a sense of lack of control over what can be done. This view is not all that far from that initially suggested by Lazarus and Folkman (1984) who proposed that negative cognitive schemas lead to a distorted view of reality that may exacerbate negative appraisals and would thus influence coping strategies endorsed. Importantly, once depressive symptoms are present (which typically also comprises a negative perspective of the future), further appraisals and coping strategies to deal with stressors would be impaired, thus exacerbating the already existent disturbances (Lazarus, Kanner, & Folkman, 1980). In regard to emotions, tendencies to feel anxiety (Folkman & Lazarus, 1986; Gilbert, 2000) and shame (Jenkins & Karno, 1992) have also been linked to depressive symptoms. However, the influence of these emotions on appraisals in relation to depressive symptoms is not yet well established.

Coping and Appraisals

Coping is the individual's constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as exceeding the individual's resources (Lazarus & Folkman, 1984). These efforts are constantly changing as a function of appraisals and continuous reappraisals of the stressful event (Folkman & Lazarus, 1988b). Effective coping is necessary in order for the individual to maintain a state of equilibrium, and adapt to acute stressors (McEwen, 1999).

There are many coping styles that can be used, but generally they can be categorized into two types: problem-focused and emotion-focused coping (Lazarus & Folkman, 1984). Problem-focused strategies involve addressing the source of distress directly, through logical reasoning, such as generating possible solutions (Lazarus &

Folkman, 1984). Emotion-focused coping in contrast, consists of dealing with the source of distress affectively, such as through emotional expression (Lazarus & Folkman, 1984). Although coping strategies are intrinsically neither good nor bad, some may be more effective in certain situations than others.

Generally, problem-focused coping lends itself to stressors that are appraised as being controllable, and emotion focused coping strategies are generally endorsed when stressors are seen to be uncontrollable (Folkman & Lazarus, 1980; Lazarus, 1993). For example, in a study concerning the use of coping strategies used by college students during exams, Folkman and Lazarus (1985) reported that problem-focused coping seemed to dominate the stage before the exam was written (a more controllable period), and emotion-focused strategies seemed to be most prominent following the exam (a period of no control). However, it is often the case that a situation may have an uncontrollable outcome but still have controllable aspects. Interestingly, Moskowitz, Folkman, Collette, and Vittinghoff (1996) reported that caregivers of a partner with AIDS still managed to create and complete tasks on “to-do” lists such as changing the partner’s bed linens during the period preceding their partner’s death. These seemingly trivial tasks gave the caregivers a sense of control over the situation, effectively countering the feelings of helplessness (Folkman & Moskowitz, 2000). Of course, determining which strategy is most effective is complex, as both strategies endorsement is in flux and are often used or discarded as they become effective or ineffective (Matheson & Anisman, 2003a).

Coping, Emotions, and Depression

The appraisal and coping process is a complex and dynamic relationship and often both positive and negative emotions simultaneously occur during any given encounter (Folkman & Lazarus, 1988a). Importantly, the emotions serve an adaptive purpose in the face of a stressful encounter. For instance, if positive emotions were elicited during a stressful encounter, it can provide a break and allow the individual to replenish resources (Lazarus et al., 1980). Moreover, these responses also serve to protect against the side effects from chronic stress. By example, it was reported that women who found positive meaning from an adverse event had more adaptive hormonal responses when later stressed in a laboratory setting (Epel, McEwen, & Ickovics, 1998). In effect, finding positive meaning made them more resilient to subsequent stressors and prevented an allostatic load that could have evolved into depressive symptoms (Epel et al., 1998; McEwen, 2003). Alternatively, negative emotions can alert the individual to either 'fight or flight' in response to an adverse situation.

Emotions may be seen as a direct result of the coping strategy used for a particular situation. For example, if problem-focused coping strategies were used in a situation where there was no control over the outcome (a poor choice of coping strategy in this situation), it is likely to generate negative emotions such as frustration and anger (Folkman & Lazarus, 1988b). Thus, coping strategies that are a poor fit for the situation will ultimately have an adverse effect on emotional response. Likewise, emotions can also be seen as a result of how successful coping efforts were during a particular transaction. By example, it was reported that following the resolution of a stressor, positive emotions were experienced, such as happiness and pride (Folkman & Lazarus,

1985).

Emotions may also be indirectly generated from the coping strategies used in a given situation (Folkman & Lazarus, 1988a). For example, if a stressful encounter with another individual was dealt with in a hostile manner, a cascade of emotions might be instigated that would have escalated the situation, and further generated more negative emotions. In contrast, addressing the source of the distress directly, possibly through problem-focused coping and not unjustly blaming others ('other-blame', an example of emotion focused coping), would be more likely to engender solutions and positive emotions. Additionally, if new coping resources were acquired from a stressful encounter, this could elicit positive emotions afterward (Schaefer & Coleman, 1992). Furthermore, finding controllable aspects of a seemingly uncontrollable situation can provide opportunity to generate positive emotions. As in the case of the caregivers of AIDS patients (Billings, Folkman, Acree, & Moskowitz, 2000), their 'to-do' lists gave them a controllable aspect of the situation that, in turn, elicited positive affect and helped the caregivers cope during a period where there was a profound lack of control.

Importantly, the coping process plays a key role in the emergence of depressive symptoms (Hammen, 2005; Folkman et al., 1986). In a nutshell, coping is invoked to manage or reduce anxiety and other distressing emotional states elicited by stressful situations (Menninger, 1963). If negative emotions are not dealt with, or poor choices of coping to deal with the impending stressor have been made, it is possible that this may contribute to the experience of depressive symptoms. For example, in the face of controllable stressors, it has been reported that an increase in emotion-focused coping strategies (Gilbert, 2000), along with a decrease in endorsement of problem-focused

coping strategies (Carver et al., 1993) are linked to depressive symptoms. In addition, emotion-focused coping strategies have been reported to be related to shame and anxiety, as well as depressive symptoms (Gilbert, 2000). However, sequential pathways of this relation involving the appraisal process are still unclear.

The Present Study

Inasmuch as appraisal and coping strategies can elicit an emotional response, emotions have also been reported to influence cognitive functioning. Thus, the possibility was considered that an individual's emotional state might influence appraisal and coping strategies, which in turn might favor the development of depressive symptoms. In the present investigation, we assessed whether particular emotional states, namely anger, anxiety, and shame, would differentially influence appraisal and coping strategies, and subsequently influence depressive symptoms. Specifically, it was hypothesized that negative emotional states (anger, shame, and anxiety) would predict greater appraisals of threat and distress (primary appraisal) in an ambiguous situation and decreased perceived coping abilities (secondary appraisal), and this in turn would predict greater use of emotion-focused coping strategies and negatively predict the use of problem-focused coping strategies among participants. It was also hypothesized that a negative emotional state would be positively related to depressive symptoms, and furthermore, that this relation would be sequentially mediated by appraisals and coping strategies endorsed.

Method

Participants

Participants were undergraduate students recruited online through the SONA system at Carleton University (Appendix A). Participants comprised 34 males (M age =

22.5, $SD = 5.37$) and 102 females ($M age = 19.75$, $SD = 3.66$). A majority of the participants reported their ethnicity to be Caucasian (71.4%, $n = 95$), whereas much smaller proportions identified as Asian (6%, $n = 8$), African American (11.3%, $n = 15$), Arab (2.3%, $n = 3$), Mixed Ethnicity (6%, $n = 8$), South Asian (1.5%, $n = 2$), Latin American (0.8%, $n = 1$), and Other (i.e., an ethnicity not listed in the questionnaire; 0.8%, $n = 1$).

Procedure

The study protocol was approved by the Carleton University Ethics Committee for Psychological Research. Upon providing informed consent (Appendix B), participants completed a short questionnaire package. Upon completion of the questionnaire package, participants were debriefed (Appendix D). Participants were then issued 1.5% in experimental credit through the SONA system at Carleton University.

Measures

Demographics. Demographic information was assessed using a questionnaire inquiring about participants' gender, age, and ethnicity (Appendix C).

Emotional state. Emotional state was assessed using a shortened version of the Positive Affect Negative Affect Scale (19-item PANAS; Kelly, Watson, Clark, & Tellegen, 1988; Appendix E). Participants indicated on a likert scale that ranged from "Not at all" (one) to "Extremely" (seven) the degree to which they were feeling each of the following emotions in the present moment: hopeless, frustrated, worried, anxious, sad, embarrassed, angry, ashamed, confused, relaxed, hostile, unhappy, indifferent, depressed, humiliated, infuriated, happy, helpless, and desolate. As some of these emotions are very similar and may reflect the same constructs, a principle component

analysis with a varimax rotation was performed, as well as the interpretation of the scree plot, to determine the factors this scale could be organized along. Items were included on a factor when loadings were greater than 0.40. The first factor was representative of 'Shame' and comprised embarrassed, ashamed, depressed, and humiliated (Cronbach's $\alpha = 0.91$). The second factor was identified as 'Anxiety' and comprised hopeless, frustrated, worried, anxious, sad, unhappy, helpless, and desolate (Cronbach's $\alpha = 0.93$). The third factor was indicative of 'Anger' and comprised angry, hostile, and infuriated (Cronbach's $\alpha = 0.87$).

Appraisals. Appraisal style was assessed using the Appraisal of Ambiguous Situations Questionnaire (6-item AASQ; Kelly, Matheson, & Anisman, 2003; Appendix F). Participants were presented with six commonly encountered general life ambiguous situations (e.g., 'While doing a presentation, you notice a couple of students at the back of the class laughing'), and then asked to appraise how threatening and distressing the situation was to them, as well as an appraisal of their ability and resources to cope with the ambiguous situation (a measure of secondary appraisal). Both threat and distress items were each answered using a likert scale that ranges from "Not at all" (one) to "Extremely" (five). The coping ability and resources item was answered on a likert scale that ranges from "Not at all" (one) to "Completely" (five). It was found that threat and distress were highly correlated ($r(132) = .84, p < .01$) so to avoid colinearity, a factor analysis was performed. This analysis revealed that in fact threat and distress were representative of one construct, that of primary appraisal. Subscale totals were calculated for primary (Cronbach's $\alpha = 0.85$) and secondary appraisals (Cronbach's $\alpha = 0.75$) by taking the mean across all relevant items.

Coping. Coping strategies were assessed using a shortened version of the Survey of Coping Profile Endorsed (SCOPE; Matheson & Anisman, 2003; Appendix G). The shortened version of the SCOPE is a six-item measure comprised of 13 coping strategies. Respondents first indicated the extent to which they would utilize each of the coping strategies to deal with the ambiguous situations presented in the AASQ on a scale of zero (never) to four (almost always). A principle component analysis with a varimax rotation was performed, as well as the interpretation of the scree plot, and revealed a two factor solution to which this scale could be organized along. Items were included on a factor when loadings were greater than 0.40. Emotion-focused coping comprised rumination, emotional expression, other blame, self blame, emotional containment, and wishful thinking (Cronbach's $\alpha = 0.75$). Problem focused-coping comprised problem solving, cognitive restructuring, active distraction, avoidance, humour, social support seeking, and passive resignation (Cronbach's $\alpha = 0.74$).

Depressive Symptoms. The intensity of depressive symptoms was assessed using the Beck Depression Inventory (BDI-21 item version; Beck & Beck, 1972; Appendix H). For each item, individuals chose the statement that best described their emotional feelings. Lower numbers (e.g., 0) indicated lower intensity of depressive symptoms, while higher number (e.g., 4) were related to greater intensity. The depression intensity was computed by calculating a mean item score and then multiplying it by 21, resulting in scores ranging from 0 to 27, and displayed good reliability (Cronbach's $\alpha = .87$).

Results

Descriptive Statistics

In general, it appeared that participants in the current study were experiencing

higher levels of anxiety than that of anger or shame $F(2, 131) = 57.17, p < .001$ (see Table 1). In contrast, reported levels of shame and anger were equal to one another $t(133) = 10.67, p = .02$ (using a Bonferroni adjusted alpha of .016). When presented with a variety of uncertain situations, it appeared that participants found the ambiguity of the situations to be moderately stressful (primary appraisal) as the mean was higher than the midpoint, yet participants may have felt that although the situation may be threatening, they still had adequate coping resources (secondary appraisals; see Table 1 for means). In this regard, problem-focused strategies were endorsed more often than emotion-focused strategies (Table 1). Finally, it appeared that on average participants did not report experiencing a great amount of depressive symptoms, although considerable variability existed in this (Table 1).

Table 1.

Descriptive Statistics (means and standard deviations) of emotions, appraisals, coping and depressive symptoms with possible range indicated in parentheses.

	Mean	SD
<i>Emotions (1-7)</i>		
Anxiety	4.34	1.5
Shame	3.54	1.8
Anger	3.24	1.57
<i>Appraisals (1-10)</i>		
Primary	6.17	1.53
Secondary	6.97	1.49
<i>Coping (1-4)</i>		
Emotion-focused	1.69	0.62
Problem-focused	2.46	0.55
Depressive Symptoms (1-62)	8.08	6.77

Bivariate Correlations

Correlational analysis indicated that experiencing anger, shame or anxiety was related to appraising ambiguous situations as more threatening and distressing (primary appraisal; Table 2). Likewise, all emotions were negatively related to coping ability and resources (secondary appraisal; Table 2). Indeed, emotions were positively related to the use of emotion-focused coping strategies, and were unrelated to the use of problem-

focused coping. Not surprisingly, feeling anger, shame, or anxiety was positively related to depressive symptoms (Table 2).

Table 2.

Bivariate correlations among emotions, appraisals, coping, and depressive symptoms.

(*N*=134)

	1.	2.	3.	4.	5.	6.	7.
<i>Emotions</i>							
1. Anxiety							
2. Shame	.77**						
3. Anger	.68***	.64***					
<i>Appraisals</i>							
4. Primary	.27**	.23**	.17*				
5. Secondary	-.22**	-.26**	-.23**	-.41**			
<i>Coping</i>							
6. Emotion-focused	.41***	.43**	.36**	.52**	-.36***		
7. Problem-focused	.12	.02	.05	.09	.13	.28**	
8. Depressive Symptoms	.26**	.32***	.27**	.33**	-.41***	.44***	-.22*

* $p < .05$; ** $p < .01$; *** $p < .001$

Indirect Effects Between Emotions, Coping, and Depressive Symptoms

It had been hypothesized that negative emotional states would be associated with greater appraisals of threat and distress (primary appraisal) and a decrease in perceived

coping ability (secondary appraisal) in an ambiguous situation, and that this would be related to greater endorsement of emotion-focused coping strategies. To examine this hypothesis, Hayes and Preacher's (2011) macro for indirect and direct effects was utilized and all emotions were entered as predictor variables, primary and secondary appraisals were entered as mediators, and emotion-focused coping was entered as an outcome variable (see *Figure 1*). Problem-focused coping was not examined in this model as it was not significantly related to either appraisals or emotions. This analysis revealed that emotions were indirectly related to coping through appraisals (*Figure 1*). Specifically, only anxiety positively predicted primary appraisal, which was also positively related to emotion-focused coping (*Figure 2*).

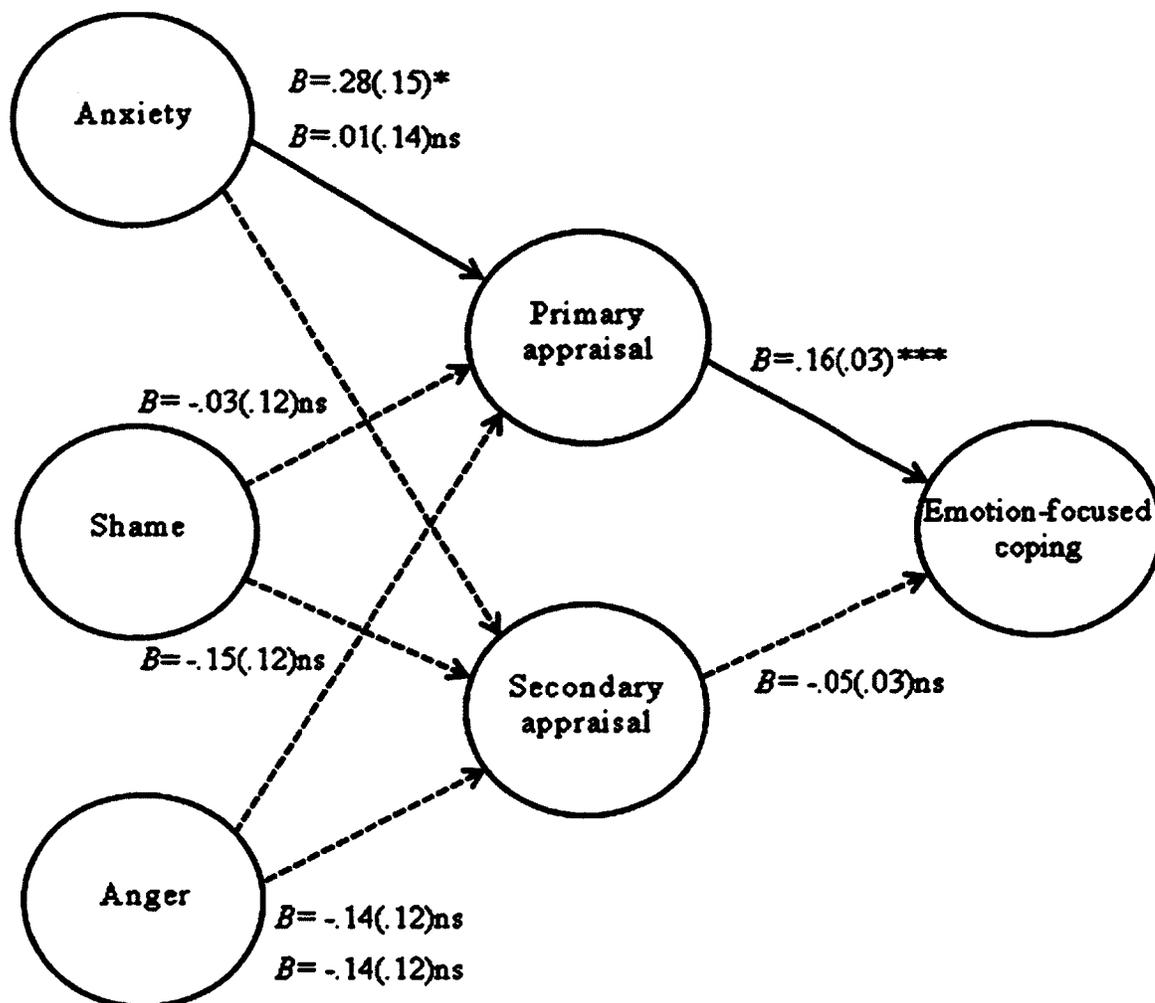


Figure 1. Indirect relationships between emotions and emotion-focused coping.

* $p < 0.06$; *** $p < 0.001$

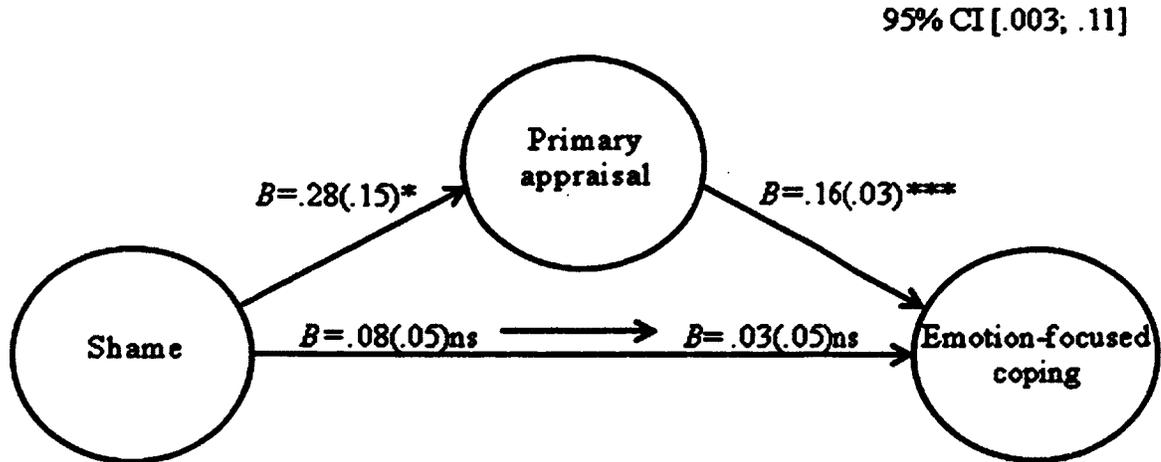


Figure 2. Indirect relationship between anxiety and emotion-focused coping through primary appraisal.

* $p < 0.06$; *** $p < 0.001$

It was further hypothesized that negative emotional states would lead to greater feelings of threat and distress (primary appraisal), and hence greater use of emotion-focused coping strategies which would be predictive of greater depressive symptoms. To examine these relationships, Hayes and Preacher's (2010) macro for sequential mediation was used wherein anxiety (shame and anger were not entered as they were not significant predictors of appraisal; see *Figure 1*) was entered as the predictor, primary appraisal as the first mediator (secondary appraisal was not entered as it did not significantly predict emotion-focused coping; see *Figure 1*), emotion-focused coping as the second mediator, and depressive symptoms as the outcome variable (see *Figure 3*). Primary appraisal itself did not mediate the relationship between anxiety and depressive symptoms (CI= -.12 to .40). However, emotion-focused coping itself did mediate the relationship between

anxiety and depressive symptoms (CI= .13 to .81). Furthermore, sequential mediation was observed suggesting that the relationship between anxiety and depressive symptoms was mediated by primary appraisal and emotion-focused coping sequentially (*Figure 4*). Indeed, in a separate analysis in which emotion-focused coping was considered as the mediator, the relation between primary appraisal and depressive symptoms was mediated (CI= .04 to .68) and the direct relation declined from $B = .84$ to .23.

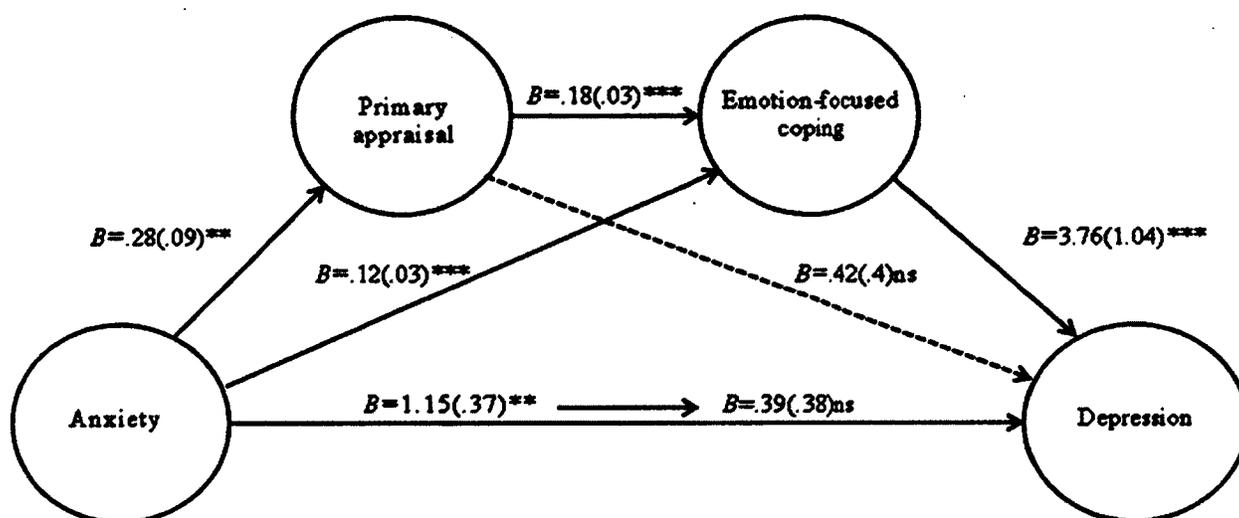


Figure 3. Indirect relationships between anxiety and depressive symptoms through primary appraisal and emotion-focused coping.

** $p < 0.01$; *** $p < 0.001$

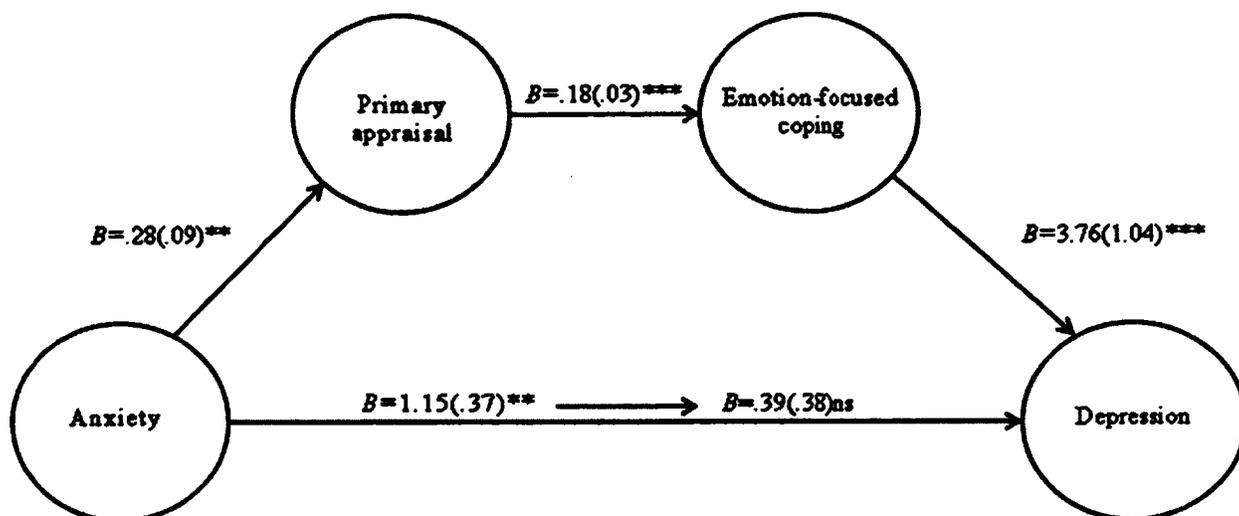


Figure 4. Sequential relationship between anxiety and depressive symptoms through primary appraisal and emotion-focused coping.

** $p < 0.01$; *** $p < 0.001$

Discussion

Appraisal and coping strategies of stressful situations can elicit a variety of emotional responses (Folkman & Lazarus, 1988b) that, in turn, might influence cognitive processing (Lerner & Tiedens, 2006). These relationships might be reciprocal, such that specific emotions could influence appraisal and coping strategies, although this has been assessed less frequently than the alternative pathways. The aim of the present study was to examine the role that current emotional states had on appraisal and coping strategies in response to potential stressors. Furthermore, we examined the sequential role negative emotional states may play on appraisal and coping strategies in predicting depressive symptoms.

Our findings indicated that at the time of testing, participants generally had higher levels of anxiety than that of either anger or shame. These findings are consistent with

previous research indicating that although negative emotions can often occur together (i.e., anger, shame, anxiety), anxiety tends to be predominant (Gilbert & Miles, 2000). Indeed, in the absence for a cause for shame or anger, there is no reason for these emotions to be comparable to that of anxiety, which can be affected by a great number of life events, including attending university and the perturbations associated with this. Moreover, in response to ambiguous threats, participants displayed moderate levels of threat and distress appraisals ('Is this event threatening to me?') as well as moderate levels of perceived ability to cope with these challenges ('Do I have control over this event?'). Essentially, participants found the vignettes to be moderately stressful, yet they felt that they had adequate coping resources to deal with the ambiguity of the potential stressors.

In general, as typically observed (Matheson & Anisman, 2003a), problem-focused coping strategies, which are generally viewed as an adaptive coping method, seemed to be endorsed more often than less 'adaptive' emotion-focused coping strategies. Given the overall use of high problem-focused coping and moderate emotion-focused coping strategies, it would be expected that depression levels would generally be low or moderate. Indeed, although there was appreciable variability between scores, depression levels on average were within a normal range (Beck & Beck, 1972), which is to be expected in an undergraduate sample.

Relationships among Emotions, Appraisals, and Coping

As expected, anger, shame and anxiety were positively related to primary appraisals which comprised both threat and distress in response to a potential stressor that was relatively ambiguous. Conversely, each of these three emotions were negatively related to

secondary appraisals (i.e., the perceived ability to cope with a stressor effectively). In effect, when negative emotional states were present participants self-reported the perception that coping with these events would be difficult. This might be due to emotional states colouring individuals' perception of ambiguous events, making situations appear to be more threatening to well-being or genuinely changing the individuals' sense of their coping ability.

The emotions expressed were also positively related to emotion-focused coping strategies, indicating that higher levels of negative emotions were associated with the apparently less 'adaptive' forms of coping. This is not surprising as strong emotions (e.g., anger) may hinder judgement, and impede an individual's ability to handle a situation rationally (Lerner & Tiedens, 2006). Thus, negative mood states may negatively influence an individual's perception of an ambiguous situation that, in turn, might influence coping strategies (typically involving emotion-focused methods) that are endorsed.

Just as emotions expressed were related to both appraisals and coping methods, it seemed that primary and secondary appraisals were both related to emotion-focused coping strategies. As expected, higher perceptions of threat and distress were associated with greater endorsement of emotion-focused coping. Likewise, perceived coping ability was negatively related to emotion-focused coping strategies, which is predictable given that coping strategies used may be dependent upon what was at stake in a stressful encounter, and what emotions were elicited by that stressor (Folkman et al., 1986). In effect, the use of poor coping strategies might be most prominent as the distress appraisals become increasingly pronounced.

Unlike the relationships evident between emotion-focused coping with both appraisals and emotions, problem-focused coping was not related to stressor appraisals. It may be that since the stressor scenarios were ambiguous, effective problem-focused coping responses might not have been available, and hence could not be predicted by appraisal processes. Alternatively, it might be that as mood changes became more negative, emotion-focused rather than problem-focused coping began to predominate. The greater propensity to use emotion-focused coping is common among individuals with anxiety or depression, and indeed is typically evident even when the characteristics are mild (subsyndromal) (e.g., Matheson & Anisman, 2003a). Why a relationship between appraisals (or mood) and problem-focused coping would not be evident in an otherwise ordinary population is uncertain.

Indirect Relationships between Emotions and Coping

It seems that state anxiety associated with being in a lab context, was related to the use of emotion-focused coping strategies, and that this relation was mediated by the nature of the primary appraisals an individual tended to make across a variety of hypothetical situations. Inasmuch as these situations covered appraisals related to health, academics, and interpersonal issues, it is fairly likely that the appraisal propensity, in fact, was a reflection of a general appraisal style (e.g., seeing events as threatening).

As indicated earlier, emotion-focused coping is typically considered an ineffective method of dealing with stressors as it often closely aligned with depression and anxiety (Matheson & Anisman, 2003a). However, it has also been suggested that under some circumstances, emotion-focused coping maybe useful as it allows for venting of negative emotions and may permit the individual to buy time to develop other more effective

coping methods (Stanton et al., 2000). In the present study, the mediating role of primary appraisals was in a response to ambiguous situations, and thus, as indicated earlier, it could be argued that it would have been unclear what the individual would be coping with, and hence a link to problem-focused coping would be unrealistic, and emotion-focused strategies might have been preferred. In effect, the relation between anxiety and emotion-focused coping may be mediated by particular appraisal styles but these might be situation specific. This is not to say that problem-focused coping strategies cannot be adopted in ambiguous situations, but rather that these situations would be more closely aligned with an emotion-focused method. To be sure, coping strategies vary across a variety of situations (Lazarus, 1993; Folkman & Lazarus, 1980), and it would be expected that appraisals would similarly vary. Moreover, it might be the case that ambiguous situations might promote greater threat appraisals than would unambiguous situations, just as predictable and unpredictable stressors might have different effects in relation to how distressing they are appraised to be (Anisman, 2012).

Like anxiety, both shame and anger were related to primary appraisals of ambiguous situations and to emotion-focused coping strategies. However, possibly owing to the covariance between anger, shame, and anxiety, only anxiety had an indirect effect on emotion-focused coping. This does not mean that only anxiety was linked to this coping method, but rather that shame and anger were subsumed within anxiety, and thus the added contribution of these emotions was negligible.

As anxiety and depression are often comorbid, it has been suggested that anxiety is a precursor of depression (Cole, Peeke, Martin, Truglio, & Seroczynski, 1998). Our results are consistent with this notion in that the linkage between anxiety and depressive

symptoms were sequentially mediated by primary appraisals and emotion-focused coping. Of course, as these data were correlational, a causal link in this regard is not possible. This said, when alternative models for the emotion-appraisal-coping relationship were assessed, these were shown not to be viable. Just as stressful events could promote depression by virtue of individuals using certain appraisal and coping methods, these same factors might be mediating variables that promote depression. Thus, although it is presently inappropriate to suggest that anxiety causes depression or that anxiety causes appraisals that foster depression, the present findings are in line with this perspective.

Limitations and Conclusions

A potential limitation of this study concerns the generalizability of the current sample, as all participants in this study comprised a university undergraduate population. This said, as university undergraduate students are prone to depressive symptoms (Eisenberg, Gollust, Golberstein, & Hefner, 2007), the present findings may be of considerable value to analyses of the processes that might favor mood disorders in this population, in which depression occurs at exceedingly high rates, as does the risk for suicide (Offer & Spiro, 1987; Oldehinkel, Wittchen, & Schuster, 1999).

The present findings showing relationships between anxiety, appraisals and coping methods might well suggest that mood states affect appraisals, just as appraisals might trigger mood states. However, as already indicated, given the correlational nature of the data, causal inferences could not be made. Indeed, it has been suggested that the relationship between these variables is reciprocal (Scherer, Schorr, & Johnstone, 2001). This said, when alternative models for the present data were assessed, it appeared that

they were not especially impressive, and the current model was superior to these alternatives.

Taken together, the data suggest that in the face of ambiguous situations, negative emotional states were associated with greater perceptions of threat and distress (primary appraisals), and lower perceptions of being able to cope with a stressor (secondary appraisals). Likewise, negative emotional states were associated with greater endorsement of emotion-focused coping strategies. Moreover, this study provided support for the hypothesis that negative emotions are linked to depressive symptoms in the face of ambiguous threats, and that this relationship was mediated by primary appraisals and emotion-focused coping.

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Appendix A

SONA Recruitment

Study Name: Psychological factors associated with Stressor Appraisals, Emotions and Coping.

Brief Abstract: This study examines how the interplay between emotions, appraisals and coping patterns, and how these factors relate to physiological functioning.

Detailed Description: We are interested in exploring the relationship between personal characteristics (e.g., demographics, emotions, coping), how individuals appraise (or evaluate) different types of situations, and the how these factors are related to neuroendocrine and cardiovascular functioning. We are further interested in examining how these variables are related to well-being. The session requires completion of a questionnaire package regarding personal characteristics, appraisals, the use of various types of coping strategies, and well-being. We will also ask you to complete a short writing exercise. During the experiment, we will also monitor your heart rate and blood pressure, and ask for saliva samples so that a stress hormone (cortisol) can be measured.

******Please DO NOT eat, drink (other than water) or smoke 1 hour prior to the experiment******

Duration: 1.5 hours

Credits: 1.5% increase

Appendix B

Informed Consent

This research was approved by Carleton University Psychology Research Ethics Board (11-049).

Present study: Psychological factors associated with Stressor Appraisals, Emotions and Coping.

Research personnel. The following people are involved in this research project, and may be contacted at any time if you have questions or concerns: Rob Gabrys (email: rgabrys@connect.carleton.ca, phone: 613-520-2600, ext. 7513), Jesse Howell (email: jhowell1@connect.carleton.ca, phone: 613-520-2600, ext. 7513), Dr. Hymie Anisman (Faculty Sponsor, email: hanisman@connect.carleton.ca), or Dr. Kimberly Matheson (email: kim_matheson@carleton.ca). Should you have any ethical concerns about this research, please contact Dr. Monique Sénéchal, at: monique_senechal@carleton.ca (613-520-2600 ext. 1155). For any other concerns, please contact Dr. Janet Mantler (Chair, Department of Psychology, 613-520-2600, ext. 4171, psychchair@carleton.ca).

Purpose. The purpose of this study is to investigate the relationship between personal characteristics (e.g., demographics, coping style, depressive and anxious symptoms) and how individuals appraise (or evaluate) difficult situations. Specifically, we are interested in examining how differences in appraisal and coping patterns influence physiological functioning and how this is related to health and illness.

Task requirements. We are asking you to fill out a set of questionnaires regarding your background (e.g., demographics), personal characteristics (e.g., how you coping with things in your life) and your wellbeing (e.g., depressive and anxious symptoms). In addition, we would like to assess your heart rate, blood pressure, and saliva cortisol levels, as the latter might give us an idea of your basal stress levels. The study will take about 90 minutes to complete. You will receive a 1.5% increase in your final grade of PSYC 1001, PSYC 1002, PSYC 2001 or PSYC 2002 for participating in this study. Testing will take place at Carleton University.

Potential risk/discomfort. There are no physical risks to participating in this study. Some individuals might feel uncomfortable when asked to recall stressful situations or to answer personal, sensitive questions about the coping strategies they use or feelings of depression they may have experienced. If you feel any discomfort or distress, you may choose *not* to answer specific questions, and you will not be penalized in any way if you do this. The debriefing form at the end of the study provides contact information for local support services that you may contact if you need or want help.

Anonymity/Confidentiality. The data collected in this experiment are strictly confidential. All data are coded such that your name is not associated with the responses you provide. Any identifying information associated with your code will be confined to a single page that will be separated from your questionnaire, and kept in a separate, secured file by the research investigators, who will keep this information confidential.

Right to withdraw. Your participation in this study is entirely voluntary. At any point during the study, you have the right to not complete certain questions, or to withdraw from the study without academic penalty.

Signatures

I have read the above form and understand the conditions of my participation. My participation in this study is voluntary, and I understand that if at any time I wish to leave the experiment, I may do so without having to give an explanation and with no penalty whatsoever. Furthermore, I am also aware that the data gathered in this study are confidential and anonymous with respect to my personal identity. My signature indicates that I agree to participate in this study.

Participant's Name: _____

Participant's Signature: _____

Researcher's Name: _____

Researcher's Signature: _____

Date _____

Appendix C

Demographic Information

Gender: Male Female Age: _____ Years

Ethnicity:

- Asian (e.g., Chinese, Japanese, Korean)
 South Asian (e.g., East Indian, Pakistani, Punjabi, Sri Lankan)
 South East Asian (e.g., Cambodian, Indonesian, Laotian)
 Arab/West Asian (e.g., Armenian, Egyptian, Iranian, Lebanese, Moroccan)
 Black (e.g., African, Haitian, Jamaican, Somali)
 Latin American/Hispanic
 Aboriginal
 White/Euro-Caucasian
 Mixed ethnicity (please specify) _____
 Other (please specify) _____

Level of education (current year of studies)

Undergraduate: 1st Year 2nd Year 3rd Year 4th Year

Relationship status

- Single Partner/Significant other Engaged
 Married Recently separated Divorced

What is your religion, if any? _____

Current Health, Medication and Treatments

The following questions are important for our analysis of hormones and cardiac activity

What time did you wake up today? _____

Have you ever experienced any medical illness (e.g., depression, anxiety, diabetes, hyperthyroidism, heart disease, cancer, etc...)?

- YES NO

If YES, please specific? _____

Are you currently experiencing any medical illness (e.g., depression, anxiety, diabetes, hyperthyroidism, heart disease, cancer, etc...)?

YES NO

If YES, please specific? _____

Are you currently on any sort of medication?

YES NO

a) If YES, please specify (check all that apply):

- a. Antidepressants: _____
- b. Anti-anxiety: _____
- c. Anti-inflammatory: _____
- d. Allergy medication: _____
- e. Other prescription drugs: _____
- f. Other non-prescription drugs: _____

Do you drink? (e.g., beer, wine, or any other types of alcohol)

YES NO

a) If YES, how many drinks do you have in one occasion? _____

b) If YES, how many times per week do you drink? _____

Do you smoke cigarettes?

YES NO

If YES, how many cigarettes do you smoke in a day? _____

Do you exercise (e.g., aerobic training, weight training, etc...)

YES NO

If YES, how many times per week: _____

Are you taking any form of hormonal based contraception (birth control)?

YES NO

If yes, which one?

Standard birth control

Evra Patch

NuvaRing

Depo-Provera Shot

Mini (progestin-only) birth control pill

Other: _____

When did your last period begin? _____ and end? _____

Appendix D

Debriefing

This research was approved by Carleton University Psychology Research Ethics Board (11-049).

What are we trying to learn in this research?

The goal of this research is to learn how emotions, such as sadness, anxiety, and happiness influence peoples' perceptions of stressful events. We are also interested in how appraisals, emotions and coping influence the physiological stress response. Finally, we were also interested in how previous life events impacted these factors. To investigate these relationships, we asked you to complete several questionnaires describing your subjective wellbeing and previous life events. We then asked you to complete two short writing tasks which involved reflecting on a particular situations and describing your thought and feelings. We used these scenarios in order to see if "prime" or induce a particular mood and evaluate how this mood induction influenced your perceptions and coping responses to hypothetical situations. We also examined you heart rate and blood pressure, and took samples of you saliva to determine cortisol concentrations, throughout the experiment. The purpose of these measures is to determine if mood and perception is associated with the physiological stress response.

Why is this important to scientists or the general public?

Previous research has demonstrated that appraisals and coping mediate the effects of stress on health. Less is known, however, about the specific factors that contribute to differences in appraisals and coping. One potential factor that may influence a person's appraisals and coping, and physiological functioning in response to stressful situations, is pre-existing mood or emotional state. Therefore, understanding the impact of specific appraisal, coping and emotional styles on the physiological stress systems may have important implications for health. In addition, identifying the cognitive and affective antecedents of stress responses may be a crucial step towards informing evidence-based interventions designed to improve health.

What are our hypotheses and predictions?

We predict that an individual's pre-existing affective state will influence how they perceive and evaluate stressful encounters, and how they cope with such events. We also predict that their perceptions and emotions will also influence their biological stress response systems, and ultimately health status.

Is there anything I can do if I found this experiment to be emotionally upsetting?

Yes. If you feel any distress or anxiety after participating in this study, please feel free to contact the Carleton University Health and Counselling Services at: 613-520-6674, or the Distress Centre of Ottawa and Region at 613-238-3311 (<http://www.dcottawa.on.ca>).

What if I have questions later?

If you have any remaining concerns, questions, or comments about the experiment, please feel free to contact Rob Gabrys (Principal Investigator), at: rgabrys@connect.carleton.ca (613-520-2600, ext.

7513), Jesse Howell at: jhowell1@connect.carleton.ca (613-520-2600, ext. 7513), Dr. Hymie Anisman (Faculty Sponsor), at: hanisman@connect.carleton.ca, or Dr. Kimberly Matheson, at: kim_matheson@carleton.ca. Should you have any ethical concerns about this research, please contact Dr. Monique Sénéchal at: Monique_senechal@carleton.ca (613-520-2600 ext 1155). For other concerns, please contact Dr. Janet Mantler (Chair, Department of Psychology, 613-520-2600, ext. 2648, psychchair@carleton.ca).

Appendix E

Emotion Rating Scale

This questionnaire consists of adjectives that may describe the way you presently feel, as you imagined yourself in the story. Using the scale below each item, please indicate how much each adjective describes how you currently feel by circling the number that most closely corresponds to your feelings.

	Not at all						Extremely
	1	2	3	4	5	6	7
Hopeless	1	2	3	4	5	6	7
Frustrated	1	2	3	4	5	6	7
Worried	1	2	3	4	5	6	7
Anxious	1	2	3	4	5	6	7
Sad	1	2	3	4	5	6	7
Embarrassed	1	2	3	4	5	6	7
Angry	1	2	3	4	5	6	7
Ashamed	1	2	3	4	5	6	7
Confused	1	2	3	4	5	6	7
Relaxed	1	2	3	4	5	6	7
Hostile	1	2	3	4	5	6	7
Unhappy	1	2	3	4	5	6	7
Indifferent	1	2	3	4	5	6	7
Depressed	1	2	3	4	5	6	7
Humiliated	1	2	3	4	5	6	7
Infuriated	1	2	3	4	5	6	7
Happy	1	2	3	4	5	6	7
Helpless	1	2	3	4	5	6	7
Desolate	1	2	3	4	5	6	7

Appendix F & G

AASQ/SCOPE

The following is a list of situations that you might encounter at one time or another. Please imagine yourself in each situation, and then indicate how threatening and distressing you would find each of these events. Also, try to imagine how much control you would have over the event happening in the first place. As well, please consider the resolution or outcome of the situation and how you would cope with it. We will also be asking you to indicate your thoughts concerning each of these situations. Please note that there are no right answers for each question – we are simply looking for your first reaction to each of these situations.

1) Your professor hands back last week's assignments to everyone but you, and then asks you to stay after class.

a. How threatening would this situation be for you?

1	2	3	4	5	6	7	8	9	10
Not at all									Extremely

b. How distressing would this situation be for you?

1	2	3	4	5	6	7	8	9	10
Not at all									Extremely

c. How much control do you think you would have over this event?

1	2	3	4	5	6	7	8	9	10
No Control									Complete Control

d. Do you think you have the ability and resources to cope effectively with this situation?

1	2	3	4	5	6	7	8	9	10
Not at all									Completely

e. What would you think the professor is most likely to say?

_____ Your assignment was excellent – I just wanted to put a name to a face.

_____ Your assignment was great, but there was one question where you could

have done better.

_____ Is this your assignment? You forgot to put your name at the top.

_____ I'm a little worried that you might not understand the material.

_____ Your assignment was completely unsatisfactory – you should consider dropping this course.

The following are activities that you may have done. After each activity, please indicate the extent to which you would use this as a way of dealing with problem indicated above.

<i>If I were in this situation, I would ...</i>					<i>How effective do you feel this would be in dealing with the situation?</i>					<i>How practical do you think this would be with the resources you have available to you?</i>				
<i>Never</i>	<i>Seldom</i>	<i>Sometimes</i>	<i>Often</i>	<i>Almost always</i>	<i>Not at all</i>	<i>Somewhat</i>	<i>Moderately</i>	<i>Very</i>	<i>Extremely</i>	<i>Not at all</i>	<i>Somewhat</i>	<i>Moderately</i>	<i>Very</i>	<i>Extremely</i>
0	1	2	3	4	0	1	2	3	4	0	1	2	3	4

	<i>If I was in this situation, I would ...</i>	<i>How effective do you feel this would be in dealing with the situation?</i>	<i>How practical do you think this would be with the resources you have available to you?</i>
make plans to overcome my concerns or problems	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
tell myself that other people have problems just like mine	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
move on by getting involved in recreation or pleasure activities.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
try to keep my mind off things that are upsetting me	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
spend a lot of time thinking about my problems	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4

make humorous comments or tell stories about my situation	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
talk with friends or relatives about my problem	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
cry, even in the company of someone else	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
think a lot about who is responsible for my problems (besides me).	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
think about how I have brought these problems on myself	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
hold in my feelings	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
decide to wait and see how things turn out rather than trying to change anything	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
wish the situation would just go away or be over with	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4

2) There is an outbreak of a new strain of flu and the government is only able to immunize a portion of the population. The criteria for immunization have not been disclosed.

a. How threatening would this situation be for you?

1 2 3 4 5 6 7 8 9 10

Not at
all

Extremely

b. How distressing would this situation be for you?

1	2	3	4	5	6	7	8	9	10
Not at all									Extremely

c. How much control do you think you would have over this event?

1	2	3	4	5	6	7	8	9	10
No control									Complete control

d. Do you think you have the ability and resources to cope effectively with this situation?

1	2	3	4	5	6	7	8	9	10
Not at all									Completely

f. What would you be most likely to think of this possible outbreak of flu?

- _____ I'm sure that I'm safe – I will be immunized
- _____ Though I can't guarantee it, I'm fairly certain I'll be safe
- _____ It's too hard to say either way what will happen
- _____ Knowing my luck, I probably won't meet the criteria – I might be in danger
- _____ I'm positive that I won't be picked – my life is in serious jeopardy

The following are activities that you may have done. After each activity, please indicate the extent to which you would use this as a way of dealing with problem indicated above.

If I were in this situation, I would ...					How effective do you feel this would be in dealing with the situation?					How practical do you think this would be with the resources you have available to you?				
<i>Never</i>	<i>Seldom</i>	<i>Sometimes</i>	<i>Often</i>	<i>Almost always</i>	<i>Not at all</i>	<i>Somewhat</i>	<i>Moderately</i>	<i>Very</i>	<i>Extremely</i>	<i>Not at all</i>	<i>Somewhat</i>	<i>Moderately</i>	<i>Very</i>	<i>Extremely</i>
0	1	2	3	4	0	1	2	3	4	0	1	2	3	4

	<i>If I was in this situation, I would ...</i>	<i>How effective do you feel this would be in dealing with the situation?</i>	<i>How practical do you think this would be with the resources you have available to you?</i>
make plans to overcome my concerns or problems	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
tell myself that other people have problems just like mine	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
move on by getting involved in recreation or pleasure activities.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
try to keep my mind off things that are upsetting me	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
spend a lot of time thinking about my problems	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
make humorous comments or tell stories about my situation	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
talk with friends or relatives about my problem	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
cry, even in the company of someone else	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
think a lot about who is responsible for my problems (besides me).	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
think about how I have brought these problems on myself	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
hold in my feelings	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
decide to wait and see how things turn out rather than trying to	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4

change anything			
wish the situation would just go away or be over with	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4

3) While doing a presentation, you notice a couple of students at the back of the class laughing.

a. How threatening would this situation be for you?

1	2	3	4	5	6	7	8	9	10
Not at all									Extremely

b. How distressing would this situation be for you?

1	2	3	4	5	6	7	8	9	10
Not at all									Extremely

d. How much control do you think you would have over this event?

1	2	3	4	5	6	7	8	9	10
No control									Complete control

c. Do you think you have the ability and resources to cope effectively with this situation?

1	2	3	4	5	6	7	8	9	10
Not at all									Completely

f. What would you think that they would be most likely laughing about?

_____ I must have said something funny – this presentation is going rather well.

_____ Something that happened in the last person’s presentation.

_____ Something that happened last night and has nothing to do with my presentation.

_____ My presentation in general – it’s probably not that great.

_____ I must look like a complete idiot up here, who has no idea what they are talking about.

The following are activities that you may have done. After each activity, please indicate the extent to which you would use this as a way of dealing with problem indicated above.

<i>If I were in this situation, I would ...</i>					<i>How effective do you feel this would be in dealing with the situation?</i>					<i>How practical do you think this would be with the resources you have available to you?</i>				
<i>Never</i>	<i>Seldom</i>	<i>Sometimes</i>	<i>Often</i>	<i>Almost always</i>	<i>Not at all</i>	<i>Somewhat</i>	<i>Moderately</i>	<i>Very</i>	<i>Extremely</i>	<i>Not at all</i>	<i>Somewhat</i>	<i>Moderately</i>	<i>Very</i>	<i>Extremely</i>
0	1	2	3	4	0	1	2	3	4	0	1	2	3	4

	<i>If I was in this situation, I would ...</i>	<i>How effective do you feel this would be in dealing with the situation?</i>	<i>How practical do you think this would be with the resources you have available to you?</i>
make plans to overcome my concerns or problems	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
tell myself that other people have problems just like mine	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
move on by getting involved in recreation or pleasure activities.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
try to keep my mind off things that are upsetting me	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
spend a lot of time thinking about my problems	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
make humorous comments or tell stories about my situation	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4

talk with friends or relatives about my problem	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
cry, even in the company of someone else	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
think a lot about who is responsible for my problems (besides me).	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
think about how I have brought these problems on myself	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
hold in my feelings	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
decide to wait and see how things turn out rather than trying to change anything	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
wish the situation would just go away or be over with	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4

4) You are applying some sun tan lotion when you notice a small mass on your neck. Your physician performs a small biopsy and says it's probably nothing, but that he can't be sure until the test results come back in a week.

a. How threatening would this situation be for you?

1	2	3	4	5	6	7	8	9	10
Not at all									Extremely

b. How distressing would this situation be for you?

1	2	3	4	5	6	7	8	9	10
Not at all									Extremely

c. How much control do you think you would have over this event?

1	2	3	4	5	6	7	8	9	10
No control									Complete control

d. Do you think you have the ability and resources to cope effectively with this situation?

1	2	3	4	5	6	7	8	9	10
Not important									Very important

e. What would be most likely to be your first thought?

_____ It's definitely nothing to be concerned about

_____ I'm a little concerned, but it's probably nothing

_____ I'm not sure what to make of this

_____ I'm pretty worried about this – I don't have a good feeling about it.

_____ It's definitely something life-threatening– why else would they bother with a biopsy?

The following are activities that you may have done. After each activity, please indicate the extent to which you would use this as a way of dealing with problem indicated above.

<i>If I were in this situation, I would ...</i>					<i>How effective do you feel this would be in dealing with the situation?</i>					<i>How practical do you think this would be with the resources you have available to you?</i>				
<i>Never</i>	<i>Seldom</i>	<i>Sometimes</i>	<i>Often</i>	<i>Almost always</i>	<i>Not at all</i>	<i>Somewhat</i>	<i>Moderately</i>	<i>Very</i>	<i>Extremely</i>	<i>Not at all</i>	<i>Somewhat</i>	<i>Moderately</i>	<i>Very</i>	<i>Extremely</i>
0	1	2	3	4	0	1	2	3	4	0	1	2	3	4

	<i>If I was in this situation, I would ...</i>	<i>How effective do you feel this would be in dealing with the situation?</i>	<i>How practical do you think this would be with the resources you have available to you?</i>
make plans to overcome my concerns or problems	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
tell myself that other people have problems just like mine	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
move on by getting involved in recreation or pleasure activities.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
try to keep my mind off things that are upsetting me	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
spend a lot of time thinking about my problems	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
make humorous comments or tell stories about my situation	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
talk with friends or relatives about my problem	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
cry, even in the company of someone else	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
think a lot about who is responsible for my problems (besides me).	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
think about how I have brought these problems on myself	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
hold in my feelings	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
decide to wait and see how things turn out rather than trying to	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4

change anything			
wish the situation would just go away or be over with	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4

5) You were really drunk at a party last Friday night, the events are hazy but you know you've stepped on a few toes/made a fool of yourself and you have to face the class/ friends on Monday.

a. How threatening would this situation be for you?

1 2 3 4 5 6 7 8 9 10

Not at
all

Extremely

b. How distressing would this situation be for you?

1 2 3 4 5 6 7 8 9 10

Not at
all

Extremely

c. How much control do you think you would have over this event?

1 2 3 4 5 6 7 8 9 10

No
control

Complete
control

d. Do you think you have the ability and resources to cope effectively with this situation?

1 2 3 4 5 6 7 8 9 10

Not at
all

Completely

e. What would you be most likely to think that would happen?

_____ My friends are going to think I'm a party animal and fun to hang out with.

_____ I'm probably going to get made fun of but everyone will probably understand.

_____ It's hard to say – some people might have been mildly offended, but maybe I'm exaggerating.

_____ I'm pretty sure I've damaged a few friendships – things will definitely be awkward for a while.

_____ I'm going to be thought of as an idiot and I've definitely ruined a lot of friendships.

The following are activities that you may have done. After each activity, please indicate the extent to which you would use this as a way of dealing with problem indicated above.

<i>If I were in this situation, I would ...</i>					<i>How effective do you feel this would be in dealing with the situation?</i>					<i>How practical do you think this would be with the resources you have available to you?</i>				
<i>Never</i>	<i>Seldom</i>	<i>Sometimes</i>	<i>Often</i>	<i>Almost always</i>	<i>Not at all</i>	<i>Somewhat</i>	<i>Moderately</i>	<i>Very</i>	<i>Extremely</i>	<i>Not at all</i>	<i>Somewhat</i>	<i>Moderately</i>	<i>Very</i>	<i>Extremely</i>
0	1	2	3	4	0	1	2	3	4	0	1	2	3	4

	<i>If I was in this situation, I would ...</i>	<i>How effective do you feel this would be in dealing with the situation?</i>	<i>How practical do you think this would be with the resources you have available to you?</i>
make plans to overcome my concerns or problems	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
tell myself that other people have problems just like mine	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
move on by getting involved in recreation or pleasure activities.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
try to keep my mind off things that are upsetting me	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
spend a lot of time thinking about my problems	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4

make humorous comments or tell stories about my situation	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
talk with friends or relatives about my problem	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
cry, even in the company of someone else	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
think a lot about who is responsible for my problems (besides me).	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
think about how I have brought these problems on myself	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
hold in my feelings	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
decide to wait and see how things turn out rather than trying to change anything	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
wish the situation would just go away or be over with	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4

6) You have asked someone out on a date and they said “yes”; but, the next time you see them they seem distracted, in a bad mood, and essentially ignore you.

a. How threatening would this situation be for you?

1 2 3 4 5 6 7 8 9 10

Not at
all

Extremely

b. How distressing would this situation be for you?

1	2	3	4	5	6	7	8	9	10
Not at all									Extremely

c. How much control do you think you would have over this event?

1	2	3	4	5	6	7	8	9	10
No control									Complete control

d. Do you think you have the ability and resources to cope effectively with this situation?

1	2	3	4	5	6	7	8	9	10
Not at all									Completely

e. What would think is the most likely reason that they are acting this way?

- _____ No big deal - they are just in a bad mood, and it has nothing to do with me.
- _____ They are in a bad mood unrelated to me, but maybe I aggravated things by appearing suddenly.
- _____ It's hard to say...it could be about me, but maybe not.
- _____ The person is now unsure about me and is feeling awkward.
- _____ They didn't really want to say "yes" to the date in first place and are trying to let me know.

The following are activities that you may have done. After each activity, please indicate the extent to which you would use this as a way of dealing with problem indicated above.

<i>If I were in this situation, I would ...</i>					<i>How effective do you feel this would be in dealing with the situation?</i>					<i>How practical do you think this would be with the resources you have available to you?</i>				
<i>Never</i>	<i>Seldom</i>	<i>Sometimes</i>	<i>Often</i>	<i>Almost always</i>	<i>Not at all</i>	<i>Somewhat</i>	<i>Moderately</i>	<i>Very</i>	<i>Extremely</i>	<i>Not at all</i>	<i>Somewhat</i>	<i>Moderately</i>	<i>Very</i>	<i>Extremely</i>
0	1	2	3	4	0	1	2	3	4	0	1	2	3	4

	<i>If I was in this situation, I would ...</i>	<i>How effective do you feel this would be in dealing with the situation?</i>	<i>How practical do you think this would be with the resources you have available to you?</i>
make plans to overcome my concerns or problems	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
tell myself that other people have problems just like mine	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
move on by getting involved in recreation or pleasure activities.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
try to keep my mind off things that are upsetting me	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
spend a lot of time thinking about my problems	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
make humorous comments or tell stories about my situation	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
talk with friends or relatives about my problem	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
cry, even in the company of someone else	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
think a lot about who is responsible for my problems (besides me).	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
think about how I have brought these problems on myself	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
hold in my feelings	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
decide to wait and see how things turn out rather than trying to	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4

change anything			
wish the situation would just go away or be over with	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4

Appendix H

Beck Depression Inventory (BDI) 21 item scale

On this questionnaire are groups of statements. Please read the entire group of statements in each category. Then pick out ONE statement in that group which best describes the way you feel. Check off the number beside the statement you have chosen.

1. 0 = I do not feel sad
 1 = I feel sad or blue
 2a = I am blue or sad all of the time and I can't snap out of it
 2b = I am so sad or unhappy that it is very painful
 3 = I am so sad or unhappy that I can't stand it

2. 0 = I am not particularly pessimistic or discouraged about the future
 1 = I feel discouraged about the future
 2a = I feel I have nothing to look forward to
 2b = I feel I won't ever get over my troubles
 3 = I feel that the future is hopeless and things cannot improve

3. 0 = I do not feel like a failure
 1 = I feel I have failed more than the average person
 2a = I feel I have accomplished very little that is worthwhile or that means anything
 2b = As I look back on my life, all I can see is a lot of failures
 3 = I feel I am a complete failure as a person

4. ___ 0 = I am not particularly dissatisfied
___ 1a = I feel bored most of the time
___ 1b = I don't enjoy things the way I used to
___ 2 = I don't get satisfaction out of anything anymore
___ 3 = I am dissatisfied with everything
5. ___ 0 = I don't feel particularly guilty
___ 1 = I feel bad or unworthy a good part of the time
___ 2a = I feel quite guilty
___ 2b = I feel bad or unworthy practically all of the time now
___ 3 = I feel as though I am very bad or worthless
6. ___ 0 = I don't feel I am being punished
___ 1 = I have a feeling that something bad may happen to me
___ 2 = I feel I am being punished or will be punished
___ 3a = I feel I deserve to be punished
___ 3b = I want to be punished
7. ___ 0 = I don't feel disappointed in myself
___ 1a = I am disappointed in myself
___ 1b = I don't like myself
___ 2 = I am disgusted with myself
___ 3 = I hate myself
8. ___ 0 = I do not feel I am any worse than anybody else
___ 1 = I am very critical of myself for my weaknesses or mistakes
___ 2a = I blame myself for everything that goes wrong

- ___ 2b = I feel I have many bad faults
9. ___ 0 = I don't have thoughts of harming myself
 ___ 1 = I have thoughts of harming myself but I would not carry them out
 ___ 2a = I feel I would be better off dead
 ___ 2b = I have definite plans about committing suicide
 ___ 2c = I feel my family would be better off if I were dead
 ___ 3 = I would kill myself if I could
10. ___ 0 = I don't cry anymore than usual
 ___ 1 = I cry more now than I used to
 ___ 2 = I cry all the time now. I can't stop it
 ___ 3 = I used to be able to cry but now I can't cry at all even though I want to
11. ___ 0 = I am no more irritable than usual
 ___ 1 = I am more irritable than usual
 ___ 2 = I am much more irritable than usual
 ___ 3 = I am irritable all the time
12. ___ 0 = I have not lost interest in other people
 ___ 1 = I am less interested in other people than I used to be
 ___ 2 = I have lost most of my interest in other people and I have little feeling for them
 ___ 3 = I have lost all my interest in other people and don't care about them at all
13. ___ 0 = I make decisions about as well as ever
 ___ 1 = I am less sure of myself now and try to put off making decisions
 ___ 2 = I can't make decisions anymore without help

- ___ 3 = I can't make decisions at all anymore
14. ___ 0 = I don't feel I look any worse than I used to
 ___ 1 = I am worried that I am looking old or unattractive
 ___ 2 = I feel that there are permanent changes in my appearance and they make me
 look unattractive
 ___ 3 = I feel that I am ugly or repulsive looking
15. ___ 0 = I can work about as well as before
 ___ 1a = It takes extra effort to get started at doing something
 ___ 1b = I don't work as well as I used to
 ___ 2 = I have to push myself very hard to do anything
 ___ 3 = I can't do any work at all
16. ___ 0 = I can sleep as well as usual
 ___ 1 = I wake up more tired in the morning than I used to
 ___ 2 = I wake up 1-2 hours earlier than usual and find it hard to get back to sleep
 ___ 3 = I wake up early every day and can't get more than 5 hours sleep
17. ___ 0 = I don't get anymore tired than usual
 ___ 1 = I get tired more easily than I used to
 ___ 2 = I get tired from doing anything
 ___ 3 = I get too tired to do anything
18. ___ 0 = My appetite is no worse than usual
 ___ 1 = My appetite is not as good as it used to be
 ___ 2 = My appetite is much worse now
 ___ 3 = I have no appetite at all any more

19. ___ 0 = I haven't lost much weight, if any, lately
___ 1 = I have lost more than 5 pounds
___ 2 = I have lost more than 10 pounds
___ 3 = I have lost more than 15 pounds
20. ___ 0 = I am no more concerned about my health than usual
___ 1 = I am concerned about aches and pains or upset stomach or constipation or other unpleasant feelings in my body
___ 2 = I am so concerned with how I feel or what I feel that it's hard to think of much else
___ 3 = I am completely absorbed in what I feel
21. ___ 0 = I have not noticed any recent change in my interest in sex
___ 1 = I am less interested in sex than I used to be
___ 2 = I am much less interested in sex now
___ 3 = I have lost interest in sex completely