EMOTIONS IN EVERYDAY LIFE: THEIR RELATION TO DEPRESSION AND ANXIETY STATES

by

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A thesis submitted in conformity with the requirements for the degree of Masters of Arts
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Abstract

The emotional experiences of depressed, non-depressed, and previously depressed individuals were examined. This thesis was based on the data from a previous research study (Smith, 1995) that primarily focused on the relation between severe life stress and major depression. I extended Smith’s work by examining the emotional variables and conducting a content analysis of thought and memory. The role of ruminative thought and generic memory as they occur in everyday emotional experiences was related to the occurrence of depression.

I found depressed individuals’ emotional experiences to be more similar to those of non-depressed individuals than previously suspected. Key differences were also uncovered. Depressed individuals experienced longer durations of anger and sadness as well as fewer episodes of happiness than non-depressed individuals. Similarly, depressed individuals had significantly higher levels of rumination than non-depressed individuals and most individuals who reported rumination also reported generic memories. Depressed individuals also had significantly higher levels of generic memory. Ruminative thoughts and their associated memories frequently shared common themes. Further studies with larger sample sizes are needed to investigate the issues this study has presented.
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Chapter 1
INTRODUCTION

1.1. Overview

Depression is a problem in society that still remains something of a mystery. One of the key elements to understanding depression is to identify and differentiate emotional patterns that are causally linked to depression from those that are symptoms of depression. By establishing where and how the emotional experience of depressed individuals differs from that of non-depressed individuals, we can begin to gain insight into the occurrence and maintenance of depression. The role that thoughts and memories play in the occurrence and maintenance of depression is another element that is critical to understanding the onset and course of depression.

The current study is a comparative investigation of the emotional experiences of depressed, non-depressed, and previously depressed individuals. The investigation focuses on the frequency, intensity, and duration of everyday emotional experiences as well as the role and function of thoughts and memories. The inclusion in the study of a group of people with a recent previous episode of major depression is essential to the consideration of factors as having either a causal link to the occurrence of depression or as being a symptom of depression. I agree with Brewin (1985) and Smith (1995) who proposed that by examining the differences between the emotional experiences, in a group who have never been depressed, in a group depressed at the time of the study, and the previously depressed group, we will begin to understand the occurrence and maintenance of depression. This in turn will provide insights into the prevention and management of depression.
The first purpose of this study is to examine how depressed, non-depressed, and previously depressed people differ in terms of the frequency, intensity, and duration of their everyday emotional experiences. My second area of investigation lies in the role and function of thoughts and memories in depression. The current study will examine the content and frequency of thoughts and memories reported by depressed and non-depressed individuals in relation to their emotional experiences. This may clarify the way in which thoughts and memories are triggered by emotions and in return operate to prolong the emotional experience that acted as a trigger. This pattern may be partly similar for both depressed and non-depressed individuals but I also expect distinct differences among the groups. For example, I hypothesize that in a depressed individual a sad emotion is likely to result in a higher percentage of negative thoughts and memories than would be experienced by a non-depressed individual. The type of thoughts and memories experienced by depressed and non-depressed individuals is also likely to differ. A review of the relevant areas of research is important in understanding the focus and direction of the current study.

1.2. The role of emotions in depression

Although assumptions have been made about the role of emotions in depression there has been little empirical evidence to support those claims. Furthermore, Oatley and Jenkins (1992) assert that there is a paucity of information about the epidemiology of emotions despite its importance to the understanding of psychology. In spite of this lack of information, researchers and health care professionals continue to make assumptions about the role of emotions in depression. The assumptions generally state that depressed
individuals primarily experience a state of depressed mood that involves the experience of sadness, hopelessness, and despair.

Beck (1976) described depressed individuals as possessing "tunnel vision" that results in the over-interpretation of the negative aspects of daily events while ignoring any positive aspects of the events. He also stated that the depressed individual becomes resistant or insensitive to any stimuli that might arouse pleasant emotions and also becomes hypersensitive to stimuli that provoke unpleasant emotions. Beck suggests that depressed individuals primarily experience feelings of sadness, loss, despair and worthlessness or self-depreciation.

However, Beck used diaries as a part of therapy to demonstrate to depressed clients that they did experience episodes of happiness. This would suggest that Beck believed that the tunnel vision of depressed individuals did not eliminate pleasant emotions but instead failed to make them salient to the individual. I agree with Beck's claim that, while depressed individuals may pay more attention to and place higher importance on the negative aspects of daily events, they still experience positive emotions. Beck (1976) also claimed that depressed individuals would have difficulty experiencing anger. I disagree with this claim and propose that anger is a strong element in depression. Even while individuals are depressed about their state of affairs, I believe that they also experience anger over their situation. I believe that depressed individuals experience an impotent, unproductive anger that fuels their depression. The difference being that when depressed individuals experience anger they are experiencing the emotion as part of their helplessness and inability to change their situation instead of as a an emotion that spurs them into action.
Abramson, Alloy, and Metalsky (1990) identified the “sad affect” as a symptom of depression in their hopelessness theory of depression. The researchers propose that the depressed individual is locked into what they term a “negative outcome expectancy” that results in prolonged sadness. They even explain it in terms of a vicious cycle in which a prolonged mood of sadness results in increasingly negative cognitions which in turn intensifies the sadness.

Similarly, Plutchik (1990) defines depressed individuals as those who have sadness as their dominant emotion and their dominant way of relating to others. Plutchik presents a theory of emotion that identifies “maladjusted” individuals as those who primarily experience one emotion and well adjusted individuals as those capable of experiencing a broad range of emotions. According to Plutchik’s theory of emotion, depressed individuals do not experience, or rarely experience, any emotion other than sadness.

Kellerman (1990) goes even further than Plutchik (1990) as he outlines eight personality types (paranoid, hysteric, passive, aggressive, obsessive, psychopathic, manic, and depressive) and identifies a core emotion for each type. The core emotion of the depressive personality is identified as sorrow or grief. Kellerman implies that the core emotion is the only emotion experienced by an individual exhibiting a given personality type. The core emotions are an important factor in Kellerman’s “emotion-diagnostic” chains. Therefore, it would seem likely that he adheres to Plutchik’s supposition that the experience of one predominant emotion is a symptom of maladjustment. In fact, Kellerman appears to be going even farther than Plutchik by suggesting that emotion “x” is a diagnostic factor for “y” maladjustment.
Greenberg and Safran (1990) contradict both Kellerman and Plutchik by stating that sadness is not the emotional state associated with depression. Instead they insist that despite the occasional conception of depression as a period of heightened emotionality, depression is truly a time of blunted or restricted emotional experience. Interestingly, Greenberg and Safran believe that the processing of emotions becomes blocked in the depressed individual. This indicates that the researchers believe the emotions are still occurring but are not being recognized by or integrated into the individual’s conscious awareness.

The DSM-IV lists prominent and persistent depressed mood and diminished pleasure in activities as two of the diagnostic symptoms of major depression. This seems to fit in with Greenberg and Safran’s (1990) conception of depression as a period of blunted or restricted emotional experience. Interestingly the only other emotional diagnostic criteria mentioned by the DSM-IV is “feelings of worthlessness and guilt” and the other diagnostic criteria consist of physical symptoms.

The way in which the aforementioned researchers perceive emotions and depression present several assumptions about how the emotions of depressed individuals might differ from those of non-depressed individuals in terms of the frequency, intensity, and duration of various emotions. Beck’s (1976) work proposes that depressed individuals experience negative emotions more frequently than positive emotions. This suggests that in a comparison of depressed and non-depressed individuals one would expect to find a high frequency of negative emotions like sadness, anger, and fear among depressed individuals. Beck’s theory that pleasant emotions are less salient to depressed individuals as opposed to non-depressed individuals suggests that the intensities of pleasant emotions would be lower.
among depressed individuals as well as being shorter in duration. In return, as negative emotions would be more salient, one would expect depressed individuals to report higher intensities and longer durations of negative emotions as compared to non-depressed individuals. Abramson et al. (1990) stated that depressed individuals experience prolonged sadness and therefore it follows that one would expect to find longer durations of sadness reported by depressed individuals as opposed to non-depressed individuals. Plutchik (1990) and Kellerman (1990) take this position even further by stating that depressed individuals do not experience any emotion other than sadness. Based on this premise, it would logically follow that depressed individuals would experience higher intensities of sadness, more frequent episodes of sadness, and longer durations of sadness as compared to their experience of any other emotion and as compared to the emotional experiences of non-depressed individuals. In contrast, Greenberg et al. (1990) and DSM-IV suggest that depression is a period of restricted or blunted emotional experience which implies that depressed individuals would report lower frequencies, intensities, and durations for all of their emotions as compared to non-depressed individuals.

In summary, the overall trend among the researchers, with the exception of Greenberg et al (1990) and DSM-IV, is to suggest that one or all of the negative emotions will be reported to have a higher intensity, frequency, and duration by depressed individuals as opposed to non-depressed individuals. While all of the researchers mentioned above have made contributions to the literature on depression, there are still a lot of unanswered questions about the role that emotions play in the occurrence and maintenance of depression. Furthermore, the researchers are far from being in agreement about the definition of
depression or the role that emotions play in depression. Additional avenues of empirical support, such as those offered by daily self-report, would help to resolve the definitional debate.

1.3. The use of emotion diaries

Research using emotion diaries has generated a growing base of knowledge resulting in significant progress towards the establishment of an epidemiology of the everyday experience of emotions. While some researchers question data collected by self-report methods, Oatley and Duncan (1992) have made a strong argument supporting the use of emotion diaries. Further support has come from Myers and Deiner (1996) who reviewed research on happiness which was based on self-report measures. They stated that these measures which were found to be predictive of other signs of well-being, were moderately consistent over years of retesting, and were supported by the observations of family, friends, and psychologist-interviewers. Emotion diaries were used in research as early as the 1920's as when Gates (1926) asked individuals to record instances of anger for a week. The diary method remains an important tool in emotion research. Averill's (1982) study of anger used structured emotion diaries to record targeted emotional incidences. Oatley and Duncan (1992) have argued that Averill's study is one of the most important studies to establish the structured emotion diary as a useful and reliable research tool. The key to the validation of Averill's structured diary was the research design in which one group reported their experiences of anger while another similar group reported their experiences as the targets of anger. There was a high level of agreement between both groups.
Emotion diaries have been used by a number of researchers. Some diaries target one specific emotional experience (e.g. Gates, 1926; Averill, 1982) while others look at emotional experience in relation to everyday events (e.g. Emmons & Diener, 1985; Larsen, Diener & Emmons, 1986; Frijda, Mesquita, Sonnemans & van Goozen, 1991; Oatley & Duncan, 1992; Oatley & Duncan, 1994). The emotion diary used in the current study is modeled after the emotion diary introduced by Oatley and Duncan (1992) and is based on the communicative theory of emotion.

1.4. The Communicative Theory of Emotion

An earlier version of the Communicative Theory of Emotion (Oatley & Johnson-Laird, 1987) proposed that emotions are communicative and are based on non-propositional signals in the brain that set the brain into distinct emotional modes. These modes reflect the evaluation of events that predispose the individual to appropriate classes of action. The evaluations are goal-relevant and serve to maintain the emotional mode or promote transition into another emotional mode. The theory identified five basic emotions: happiness, sadness, fear/anxiety, anger, and disgust. Oatley and Johnson-Laird also made several predictions.

Oatley and Duncan (1994) tested Oatley and Johnson-Laird's (1987) predictions. Their research focused on three main hypotheses: 1) basic emotions as identified by Oatley and Johnson-Laird (1987) are normally elicited by the evaluation of general events that are relevant to a goal, 2) basic emotions occur singly and mixtures of emotions are rare, and 3) positive emotions assist the current plan while negative emotions interfere with the current plan. Hypothesis one was supported as Oatley and Duncan (1994) were able to predict 69% of the emotion episodes correctly by using their classification scheme which identified goal-
relevant elicitors. The third hypothesis was also supported as the researchers were able to establish preliminary evidence that positive emotions assisted plans while negative emotions hindered plans. However, their second hypothesis was refuted: there was a high incidence of emotion mixtures reported in the data. The high incidence of mixtures was particularly relevant as Oatley and Johnson-Laird’s (1987) theory of emotion stated that each of the basic emotions elicit a certain kind of state or readiness that is inhibitive to other states, making the co-occurrence of two emotions unlikely.

The Communicative Theory of Emotion has been revised, Oatley and Johnson-Laird (1996) offer a version of the theory that incorporates the feedback from the tests of its assumptions and hypotheses. Therefore, the revised version differs in a number of significant ways from the earlier version (Oatley & Johnson-Laird, 1987). Instead of five basic emotions, that can occur with non-propositional signals alone, there are four: happiness, sadness, anger, and fear. These emotions are proposed to occur both due to a known cause and without a known cause, although the cause is usually known. There is a new addition in the form of five object-related basic emotions: attachment, parental love, sexual attraction, disgust, and personal rejection. These emotions always have a known object, although the emotion can occur without the individual’s knowing why they feel as they do towards a given object. Thus, nine emotions are proposed in all.

The theory (Oatley & Johnson-Laird, in press) not only outlines a set of empirically testable propositions about the role and function of emotions in everyday life but also makes predictions about adult emotional disorders. Oatley and Johnson-Laird assert that there are a number of factors that may be affected by a psychiatric syndrome. In particular they have
hypothesized that the following five specific variables are likely to be affected: 1) intensity, 2) duration, 3) frequency of emotional episodes, 4) level of individual's comprehension of the emotion, and 5) extent to which emotional episodes trigger memories of previous emotional episodes of a similar type.

Research (Oatley & Duncan, 1992; Oatley & Duncan, 1994) done on an earlier version (Oatley & Johnson-Laird, 1987) of the theory has provided a framework and some preliminary data on the epidemiology of emotions. These provide a base from which an exploratory study, examining how the emotional experiences of depressed individuals differ from those of non-depressed individuals, can be launched. The revised theory (Oatley & Johnson-Laird, 1996) provides the direction and structure of the inquiry.

1.5. Cognition, emotion, and depression

Oatley and Johnson-Laird's (1996) theory has two hypotheses that have provided the underlying theoretical framework for a large portion of this inquiry. The first hypothesis states that most emotional breakdowns occur due to an event that has a direct impact or relation an individual's goals. This implies that there is a cognitive aspect to the breakdown that has an impact on the individual's emotions. Given this premise, it is possible that only the emotions that are connected to this event or to similar past events or goals are affected. Therefore the way in which depressed individuals experience other unconnected emotions may not differ from the way those emotions would be experienced by non-depressed individuals. The second hypothesis extends this logic as it states that emotional modes can be set up which change cognitive processing biases resulting in a self-sustaining cycle. For example, if depression sets a mode of sadness then that affects cognitive processing biases so
that the individual recalls memories of previous losses and failures which in turn prolongs the sadness. Therefore, the depressed individual’s experience of sadness would be markedly different from that experienced by a non-depressed individual.

The researchers (Oatley & Johnson-Laird, 1996) identified five variables that would show the effects of a psychiatric syndrome. Taking the case where depression is being prolonged by the self-sustaining cycle of sadness, one would expect that emotion to differ in intensity from that experienced by non-depressed individuals. One would also expect to find evidence of a significantly longer duration of sadness as the cycle is acting to sustain the emotion. It is also possible that the depressed individual will display more frequent episodes of sadness than the non-depressed individual as the depressed individual’s cognitive biases are actively retrieving or attending to memories and events that sustain the sadness. It would also follow that the sadness experienced by the depressed individual would trigger more memories of previous emotional episodes of a similar type than the non-depressed individual. Oatley and Johnson-Laird also proposed that there would be a difference between the depressed individual’s and the non-depressed individual’s comprehension of their emotion. The researchers seemed to suggest that depressed individuals would have a lower comprehension of their emotion than non-depressed individuals. For example, you would be more likely to find depressed individuals, than non-depressed individuals, who would recount a pleasant memory on request and then say that it made them feel sad but they didn’t know why. If one accepts this view, the role of cognition is essential to understanding the role of emotions in depression.
Other researchers have also established the connection between emotion, cognition, and depression. According to Beck (1976), individuals who are vulnerable to depression have experienced negative events and situations in childhood that have left them with dysfunctional cognitive structures. The dysfunctional cognitive structures result in a tendency to direct the individual’s attention to negative features and thus the individual’s thoughts, memories and perceptions become overwhelmed by negative themes that are consistent with the dysfunctional cognitive structures. While I find Beck’s view of depression to have a lot of merit, I also believe there are some shortcomings. According to Beck’s view, every emotion experienced by a depressed individual would be affected by the dysfunctional cognitive structures. As illustrated by the example above, I believe that Oatley and Johnson-Laird’s Communicative theory of emotion offers a broader more accurate picture when you logically extend its premises. Therefore, while Beck’s contributions have undeniably laid the foundation for research in depression, I would argue that the effect of the dysfunctional cognitive structures is less widespread and more restricted to a particular set of goal-related events and memories of previous events with similar emotional content.

Teasdale (1988) has pointed out that Beck’s Cognitive model is limited in its application as it only addresses the vulnerability to the onset of depression. He has proposed an alternative explanation, the differential activation hypothesis, that he claims addresses both the vulnerability to the onset of depression and the vulnerability to the maintenance of depression. Teasdale’s hypothesis states that a depressed mood is usually caused by an event which is perceived as “highly aversive and uncontrollable”. The depressed mood makes negative memories and negative schemas more accessible which increases the possibility that
unpleasant memories will be recalled and that events will be interpreted in negative ways. This in turn prolongs the depressed mood. Teasdale goes on to suggest that a reciprocal relationship between the cognitive processing of events (past and present) and depression is established with the potential for a positive feedback loop. This would lead to a vicious cycle that maintains depression. According to Teasdale memory plays an important role in this vicious cycle and research on the effects of mood on memory have provided strong evidence of cognitive processes being biased by negative mood.

1.6. Memory and depression

One of Oatley and Johnson-Laird’s (1996) hypotheses was concerned with the degree to which emotional episodes trigger memories of previous emotional episodes of a similar type. The role of memory in depression is a question that has generated a lot of research. Beck (1976) commented on the ability of a depressed individual to easily recall unpleasant past events while the same individual struggled to recall pleasant past events. Other researchers (e.g. Moore, Watts & Williams, 1988; Singer & Salovey, 1988; Williams & Scott, 1988; Williams, Watts, MacLeod & Mathews, 1988; Dalgeish & Watts, 1990) have also commented on this tendency among depressed individuals.

Williams and Scott (1988) assert that not only do depressed individuals preferentially recall negative events but also that they tend to have difficulty in giving specific autobiographical memory accounts. This difficulty is present whether the memory is pleasant or unpleasant, but it becomes significantly more pronounced when the autobiographical account is of a pleasant memory. The researchers believe that this retrieval deficit could be an important element contributing to the vulnerability of previously
depressed individuals to repeated periods of depression. This supposition is based on their interpretation of the findings that suggests that lack of specific detail does not provide the depressed individuals with the context to cope with their problems or to support positive thoughts about their character or situations. However, as it has not been shown that previously depressed individuals experience such deficits when they are not currently experiencing a depressive episode it can not be determined that retrieval deficits operate as a persisting vulnerability factor leading to the preferential recall of negative events.

This leaves us with the question of what role these retrieval deficits, evident in depressed individuals, play in the experience of depression. Singer and Moffitt (1991-1992) have established a reliable scoring system that uses standardized guidelines to distinguish between two types of memory narrative: summary memories and single event memories. Summary memories are memories that have been constructed from parts of memories from different events. Single event memories are memories of a particular event. In a later study (Moffitt, Singer, Nelligan, Carlson & Vyse, 1994) the scoring system was used to investigate the occurrence of single event and summary memory among undergraduates identified as having either low or high depression scores. Based on previous research regarding retrieval deficits among depressed individuals, the researchers hypothesized that when asked to recall a positive memory undergraduates with high depression scores would recall more summary memories than undergraduates with low depression scores. They also hypothesized that the two groups would show little or no difference in type of narrative memory used when recalling a negative memory. Both of the research hypotheses were supported. Moffitt et al.
(1994) suggest that further research on type of memory narrative needs to be undertaken with a clinically depressed population.

While the findings of Moffitt et al. (1994) support the finding of retrieval deficits among depressed individuals, other research (Beck, 1976; Moore, Watts & Williams, 1988; Singer & Salovey, 1988; Williams & Scott, 1988; Williams, Watts, MacLeod & Mathews, 1988; Dalgeish & Watts, 1990) suggests that these retrieval deficits have a stronger affect on the depressed individual's ability to recall specific details when recalling positive memories as opposed to negative events. Singer and Moffitt's (1991-1992) establishment of a standardized scoring procedure for memory narrative types has been important in furthering the research of memory and its relation to depression. However, we are still left with the question of what role the retrieval deficits evident in depressed individuals play in the experience of depression.

Smith (1995) suggests that emotion-related negative memories may act to exacerbate or maintain negative emotions or moods in non-depressed individuals and may also act to exacerbate or maintain depression in depressed individuals. He examined the relation of negative memories to life stress and depression, hypothesizing that life stress has an ongoing influence on daily memory and mood. This hypothesis was supported when he found that, as predicted, individuals who had experienced major life stressors in the past twelve months had a high rate of emotion-elicited memories of the stressor. Furthermore, he found that any one recent major life stressor was twice as likely as a less severe stressor to be reported as an emotion-related memory. Further support of Smith's suggestion about the role of negative memories in depression was offered when he found that depressed individuals reported
significantly higher rates of negative memories and negative memories related to the distant past than either previously depressed or non-depressed individuals. He also found that depressed individuals not only reported an unusually high rate of negative memories associated with stressors from over one year previous but also reported more of these negative memories even when they have experienced recent major life stressors. Smith concluded that emotion-related negative memories are common in the daily emotional experiences of depressed individuals and may play a role in the exacerbation and maintenance of depression.

1.7. **Ruminative thought and depression**

An examination of relevant research in the area of ruminative thought provides some insights into the role of memory in depression. Some of the research in this area freely exchanges the terms ruminative thought and memory as if they were not distinctively different. While the terms are easily confused and have some overlapping qualities, keeping the following simple definition of ruminative thought in mind makes distinguishing between the two terms much easier. Ruminative thought occurs when an individual thinks about something over a prolonged period of time, it may involve a memory but the individual is not just recalling the memory but thinking about it. For example, a woman may recall a memory of her husband’s final days, but be focused on thinking about what he had tried to tell her before he lapsed into a coma. The intertwined nature of thought and memory in ruminative thought makes it necessary to be very precise when discussing ruminative thought so that the discussion does not become one focused on memory. However, there is also the added benefit that ruminative thought may provide insights into the role of memory in depression.
Tait and Silver (1989) conducted a study on the occurrence of ruminative thought among individuals who had experienced a major negative life event. They identified three types of ruminative theme among the reported ruminations: 1) ruminations centered on the negative life event, 2) ruminations centered on aspects of life before the event that had subsequently changed those aspects, and 3) ruminations centered on how life would currently be different had the negative event not happened. Tait and Silver also found ruminations that were various mixtures of two of the three themes. While the correlational nature of their investigation did not lead to any predictions of how ruminative thought affects individuals, their identification of themes within rumination is helpful.

Nolen-Hoeksema and Morrow (1991) looked at symptoms of stress and depression after a natural disaster. In terms of rumination they found that individuals who had a ruminative style of responding to their symptoms before the natural disaster had higher levels of stress and depression at 10 days and 7 weeks after the disaster. They also found that individuals who had ruminations about the disaster during the ten days following the event were more likely to have high levels of stress and depression. The researchers concluded that rumination can act as a factor in prolonging the experience of stress-related and depressive symptoms.

A later study (Nolen-Hoeksema & Morrow, 1993) provided further support for rumination as a factor in prolonging depression when it revealed that rumination resulted in significantly higher levels of depression in depressed individuals. The researchers randomly placed depressed and non-depressed individuals into two conditions: rumination and distraction. In the rumination condition, individuals were asked to focus on how they felt
and what they were like. Individuals in the distraction condition were asked to focus on descriptions of geographic locations. Measures of depression taken after individuals participated in either condition showed that depressed individuals in the distraction condition became significantly less depressed while depressed individuals in the rumination condition became significantly more depressed. Among the non-depressed individuals, measures of depression taken after participation in either condition did not vary from those taken prior to participation. Nolen-Hoeksema and Morrow (1993) argue that ruminative responses to depressed mood act to prolong and exacerbate the depression.

McIntosh, Harlow and Martin (1995) have conducted a study examining the relationship between goals and rumination. The researchers assessed participants on their tendency to link the achievement of lower order goals to the achievement of higher-order goals and then broke the participants into two groups, linkers and nonlinkers. Linkers were found to be more likely to experience depression and rumination than nonlinkers. McIntosh et al. (1995) argue that their finding provides evidence that one of the factors that determines whether or not an individual will ruminate is the extent to which that individual connects the achievement of lower order goals to the achievement of higher order goals.

Martin and Tesser (1989) argue that the possibility of rumination acting to prolong depression is an important reason justifying the study of ruminative thought. They present a motivational and structural theory of ruminative thought that identifies rumination as tied to goal-related information both in memory and based on motivation. For example, when pursuing a goal an individual will access information stored in memory about how previous goals had been achieved or thwarted and the individual's own level of motivation will be a
factor as well. If an individual is strongly motivated to achieve a goal but has strong memories of a similar goal being thwarted, then that individual may engage in a lot of rumination whenever events are perceived not to be proceeding towards goal achievement. Martin and Tesser suggest that ruminative thinking may be triggered by goal blockage which results in the individual reviewing higher-order goals and his/her own characteristics. This review could lead to the start of depression or the maintenance of depression. The researchers have outlined various stages of ruminative thought in their theory, however there are two problems with the theory. The first problem is that the theory is untested and the second problem is that it theorizes about the unconscious elements of goals which presents a problem in testing the theory.

1.8. Summary of hypotheses

Overall, the previous research conducted has set the stage for the current research study. This study focuses on examining the role that emotions play in the onset and maintenance of depression with a particular emphasis on their interaction with cognitive factors such as memory and ruminative thought. The initial focus is on how depressed, non-depressed, and previously depressed individuals differ in terms of the frequency, intensity and duration of their everyday emotional experiences. The underlying theoretical framework for the hypotheses which will be outlined in the following paragraphs has been primarily derived from the communicative theory of emotions (Oatley & Johnson-Laird, 1996) and the differential activation hypothesis (Teasdale, 1988).

Both positions suggest that a negatively interpreted event results in an emotion (e.g. sadness) which negatively biases cognitive schemas resulting in the preferential recall of past
negative events and the activation of a bias to negatively interpret the present environment. This leads to a vicious circle in which the cognitive biases are reinforcing and prolonging the emotion which reinforces the cognitive biases. As Oatley and Johnson-Laird (1996) assert that this vicious circle involves thoughts, memories, and interpretations of events that are similar to the triggering event or its related goal, then it would follow that other emotions that are not related to the triggering event and its associated goal would not be affected. Therefore, depressed individuals who are caught in a vicious circle as described above may have other emotional experiences that are unaffected by the depressive cycle. This study is not only examining the differences in depressed, non-depressed, and previously depressed individuals’ everyday emotional experiences but it will also illustrate that the everyday emotional experiences of depressed individuals are more similar to those of non-depressed individuals than previously suspected.

Several researchers (e.g. Beck, 1976; Abramson et al., 1990; Kellerman, 1990; Plutchik, 1990) have suggested that depressed individuals will report higher frequencies, intensities, and durations of negative emotion as compared to non-depressed individuals. Therefore, I hypothesize that depressed individuals will show significantly higher emotional intensities for anger and sadness when compared to non-depressed and previously depressed individuals. Previously depressed individuals are expected to show significantly higher intensities of anger, sadness, and possibly fear than non-depressed individuals but significantly lower intensities of sadness, anger, and possibly fear than depressed individuals. Depressed, non-depressed, and previously depressed individuals are not expected to differ significantly in terms of their reported emotional intensities of happiness.
Similarly, I expect that depressed individuals will show significantly longer durations of anger, sadness, and possibly fear than either non-depressed or previously depressed individuals. Previously depressed individuals are expected to show significantly longer durations of sadness, anger, and possibly fear than non-depressed individuals, and significantly longer durations of happiness than the depressed at interview group. Non-depressed individuals are expected to show significantly longer durations of happiness than both depressed and previously depressed individuals.

The pattern of similarities and differences in the frequencies of emotions is expected to differ from those of intensity and duration. Non-depressed individuals are expected to show a significantly higher rate of happiness than shown by either depressed or previously depressed individuals. Previously depressed individuals are expected to show a significantly higher rate of happiness than depressed individuals, and a significantly higher rate of sadness and anger than non-depressed individuals. Depressed individuals are expected to show significantly higher rates of anger, sadness, and possibly fear than shown by either depressed or previously depressed individuals.

As an additional research question, the study of the emotion diaries of a previously depressed group may clarify some issues about the etiology and symptomology of depression. Previously depressed individuals offer interesting insights into whether or not certain factors are a symptom of depression, an element of vulnerability to depression, or some combination of vulnerability factor and symptom. I would argue that if the previously depressed group displays a significantly higher level of a factor than either of the other two groups, that factor can be identified as a vulnerability factor. However, if the depressed group displays a
significantly higher level of a factor than either of the other two groups, that factor should be viewed as a symptom of depression that possibly contributes to the maintenance of depression. And if the depressed group only differs significantly from the non-depressed group, then the factor’s role is unclear as it could be a combination of vulnerability and symptom. In each of the three cases, the previously depressed group is instrumental in teasing out the beginning of a pattern that will help make sense of the significance of differences and similarities between depressed and non-depressed individuals’ emotional experience.

The investigation also focuses on the role and function of thought and memory in depression. I will examine the content and frequency of thoughts and memories reported by the three groups in relation to their emotional experiences. Through the use of content analysis, each of the thought and memory entries will be classified. The classification of ruminative thought and generic memory is of particular interest as both have been associated with depressed individuals. I predict that the depressed group will have significantly higher levels of rumination in their thought components than either of the other two groups and that the previously depressed group will show higher levels of rumination than the non-depressed group. I also predict a significantly higher level of generic memories in the depressed group as compared to the other two groups.
Chapter 2

METHOD

2.1. Overview

The current study is based on the data of emotional diaries from a previous research study (Smith, 1995) that focused on the relation between severe life stress and major depression. The previous study tested a Short Life Events and Difficulties Schedule (Smith & Oatley, 1995), a shortened version of the Life Events and Difficulties Schedule (Brown & Harris, 1978) which was also administered to each participant. As only some analyses of the diary data were performed, the current study is a set of further analyses of these data.

The specific contribution that I made in this thesis, therefore was the analysis of the intensity, frequency, and duration of emotions as well as the content analysis of thoughts and memories in everyday emotional experiences. Smith's (1995) analysis of the emotion diary focused on negative memories. In particular, Smith examined the mean number of negative memories reported, the mean number of negative memories associated with major life stressors, and the mean number of negative memories linked to a negative event from the past. In this thesis, I extended Smith's work by examining the emotional variables of the diaries in conjunction with a content analysis and qualitative analysis of the thought and memory components. In particular, I examined the role of ruminative thought and generic memory as they occur in everyday emotional experiences and related them to the occurrence of depression.
2.2. Participants

Smith (1995) recruited 26 participants who were either attendees at a General Practice Clinic or community members and 24 participants from the Mood Disorders Clinic at the Clarke Institute. Two participants withdrew from the study. Each participant was diagnosed with the Scheduled Affective Disorders (SADS) (Endicott & Spitzer, 1978), on the basis of which participants were divided into the following three groups: 1) depressed at time of interview based on the Research Diagnostic Interview and reaching the criteria of DSM-III-R for a major affective disorder 2) depressed during the past year (according to the same criteria) but not at time of interview, and 3) not depressed during the past year. In keeping with the usual gender differences in this area, the participants were predominantly women. Only 29% were men.

2.3. Procedure

Smith (1995) conducted two semi-structured interviews with each of his participants. The first interview was scheduled after the participant expressed interest in the study and the second was scheduled two weeks later. At the first interview participants received a take-home package that included the emotion diary (Smith, 1995; Appendix A). Diaries were completed three times a day at lunch, dinner, and before going to bed for two consecutive days. The take-home packages were either mailed in or returned during the second interview.

As previously mentioned, the specific contribution that I made in this thesis was my approach to the data analysis which involved the following procedure. My approach divided the analysis into two parts, quantitative and qualitative. The quantitative analysis was a
straightforward comparison of scores yielded by the emotion diary as well as scores yielded by the content analysis of thoughts and memories. The qualitative analysis was an in-depth examination of themes and patterns in the thought and memory components of the diaries combined with a descriptive overview of the content analysis. As the qualitative analysis was very detailed, only ruminative thought and generic memory were examined. All of the other factors were considered in the quantitative examination. The distinction between the quantitative and qualitative components has been made as a distinction in approach. The qualitative component utilizes descriptive statistics and therefore has a quantitative element. Each of the analysis components provides an important piece in the puzzle of establishing a significant pattern of similarities and differences between the three groups.

It should be noted that only four (happiness, sadness, anger, and fear) of the five basic emotion classifications were analyzed because it is beyond the scope of the current emotion diary (see Smith, 1995) to establish the occurrence of disgust as defined in the theory (Oatley & Johnson-Laird, 1996). All emotion/mood episodes identified as "none of the above" (i.e. not happiness, sadness, anger or fear) were classified according to the classification scheme developed by Johnson-Laird and Oatley (1989) and entered into the analysis.

The emotion diaries had participants rate the intensity of each emotional episode according to the following scale "0 (not noticeable) to 10 (as intense as I have felt in my life)". Based on this measure, a mean intensity of happiness, sadness, anger and fear was calculated for each participant. Participants also recorded the length of their emotional episodes from which a mean duration of happiness, sadness, anger and fear was calculated for each participant. A frequency or rate of occurrence for each of the four emotion
classifications (happiness, sadness, anger, and fear) was established by dividing the numbers of each kind of emotion by the time allotted to complete the diary.

The diaries elicited descriptions of thoughts and unpleasant memories. Participants were asked to write down any thoughts or unpleasant memories they had experienced during each of their emotional episodes. A categorization manual (Appendix B) was designed for the content analysis of the thought and memory components. The manual was based on a categorization scheme developed by Singer and Salovey (1993) that classified memories as either memory fragments, significant event memories, or a generic memories. It was modified to apply to the thought component and included the addition of two categories. The two new categories (Appendix B) accounted for ruminative thought and were entitled, ruminative thought and ruminative thought with correctives. Two researchers, blind to group and subject identities, coded 20% of the episodes resulting in a reliability of 78% for memories and 75% for thoughts. One of the researchers coded the remaining episodes and her coding was entered into the analysis. The qualitative analysis focused on describing the individuals who reported ruminative thought and those who reported generic memory, both as a group and on an individual basis.
Chapter 3
RESULTS

3.1. Overview

The analysis should be considered in two parts, quantitative and qualitative. The quantitative analysis examined the emotional experiences of depressed, non-depressed, and previously depressed individuals in terms of the scores derived from the emotion diaries. The qualitative analysis focused on the content analysis of the thought and memory components of the emotion diaries. As a large number of univariate F-tests and post hoc t-tests were possible, calculated significance levels of \( p<0.05 \) do not indicate the true significance of these findings, such multiple significance tests, obviously, increase the chances of Type I error. For example, twenty univariate tests were performed and therefore the chances of Type I error multiply so that one in twenty of those tests could be expected to report \( p=0.05 \) purely by chance. I suggest therefore, that these differences be regarded, at this stage, as bases for hypotheses and further testing with larger numbers of subjects. Some post hoc tests, however, were significant at \( p=0.01 \) or \( p<0.01 \); these may be regarded as more firmly based, even with the number of subjects in this study.

3.2. Quantitative analysis

A multivariate analysis of variance was conducted for depression status (i.e. depressed, previously depressed, and not depressed) with four dependent variables for frequency, intensity, and duration as well as three dependent variables for memory, and five dependent variables for thought. The MANOVA yielded no significant main effect as a function of depression status, however there were several significant univariate tests. Table 1 shows the
means and standard deviations of all 23 univariate tests. The significant univariate tests are indicated.

<table>
<thead>
<tr>
<th></th>
<th>Depressed Mean</th>
<th>S.D.</th>
<th>Previously Depressed Mean</th>
<th>S.D.</th>
<th>Non-Depressed Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intensity (0-10)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happiness</td>
<td>3.58</td>
<td>2.76</td>
<td>3.40</td>
<td>3.33</td>
<td>4.02</td>
<td>2.76</td>
</tr>
<tr>
<td>Sadness</td>
<td>2.99</td>
<td>2.92</td>
<td>3.78</td>
<td>3.39</td>
<td>1.50</td>
<td>2.51</td>
</tr>
<tr>
<td>Anger</td>
<td>4.29</td>
<td>3.45</td>
<td>4.45</td>
<td>3.41</td>
<td>3.10</td>
<td>3.12</td>
</tr>
<tr>
<td>Fear</td>
<td>3.06</td>
<td>3.32</td>
<td>1.96</td>
<td>2.92</td>
<td>2.50</td>
<td>2.92</td>
</tr>
<tr>
<td><strong>Duration (minutes)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happiness</td>
<td>51.67</td>
<td>68.87</td>
<td>117.83</td>
<td>127.18</td>
<td>132.43</td>
<td>44.61</td>
</tr>
<tr>
<td>*Sadness</td>
<td>99.58</td>
<td>119.13</td>
<td>56.00</td>
<td>80.94</td>
<td>17.07</td>
<td>37.97</td>
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<tr>
<td>*Anger</td>
<td>202.60</td>
<td>339.67</td>
<td>55.64</td>
<td>57.55</td>
<td>56.21</td>
<td>78.20</td>
</tr>
<tr>
<td>Fear</td>
<td>75.33</td>
<td>127.95</td>
<td>38.06</td>
<td>55.23</td>
<td>62.14</td>
<td>160.25</td>
</tr>
<tr>
<td><strong>Frequency (#/48 hrs)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Happiness</td>
<td>0.42</td>
<td>0.67</td>
<td>0.93</td>
<td>0.80</td>
<td>1.33</td>
<td>1.24</td>
</tr>
<tr>
<td>Sadness</td>
<td>1.17</td>
<td>1.34</td>
<td>0.93</td>
<td>0.80</td>
<td>0.52</td>
<td>0.75</td>
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<tr>
<td>Anger</td>
<td>1.08</td>
<td>1.10</td>
<td>1.13</td>
<td>1.13</td>
<td>0.86</td>
<td>0.91</td>
</tr>
<tr>
<td>Fear</td>
<td>0.92</td>
<td>1.38</td>
<td>0.93</td>
<td>1.39</td>
<td>0.67</td>
<td>0.97</td>
</tr>
<tr>
<td><strong>Memories (#)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fragment</td>
<td>0.25</td>
<td>0.45</td>
<td>0.13</td>
<td>0.35</td>
<td>0.33</td>
<td>0.66</td>
</tr>
<tr>
<td>Significant</td>
<td>0.83</td>
<td>0.84</td>
<td>0.80</td>
<td>0.94</td>
<td>0.57</td>
<td>0.75</td>
</tr>
<tr>
<td>*Generic</td>
<td>1.58</td>
<td>1.56</td>
<td>0.67</td>
<td>0.90</td>
<td>0.57</td>
<td>0.81</td>
</tr>
<tr>
<td><strong>Thoughts</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Ruminative</td>
<td>1.08</td>
<td>1.10</td>
<td>0.67</td>
<td>0.98</td>
<td>0.29</td>
<td>0.64</td>
</tr>
<tr>
<td>Ruminative C</td>
<td>0.08</td>
<td>0.29</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Fragment</td>
<td>0.50</td>
<td>0.67</td>
<td>0.53</td>
<td>0.74</td>
<td>0.43</td>
<td>0.68</td>
</tr>
<tr>
<td>Episodic</td>
<td>0.75</td>
<td>0.87</td>
<td>0.80</td>
<td>0.94</td>
<td>0.71</td>
<td>0.96</td>
</tr>
<tr>
<td>Generic</td>
<td>0.50</td>
<td>0.91</td>
<td>0.40</td>
<td>0.63</td>
<td>0.29</td>
<td>0.46</td>
</tr>
</tbody>
</table>

*significant univariate F ratio, \( p < 0.05 \)

Sadness, \( F(2,45) = 2.85, p = 0.06 \), was the only univariate test for emotional intensity that approached significance. The three groups did not differ significantly in terms of the intensity of their happiness, anger, and fear episodes. There were two significant univariate tests for duration of emotional episodes, sadness, \( F(2,45) = 4.30, p < 0.05 \), and anger, \( F(2,45) = 3.03, p < 0.05 \), respectively. Univariate tests on the rate of the four emotions yielded significant
group differences on the rate of happiness, $F(2,45) = 3.23, p<.05$. The three groups did not differ significantly on their reported incidences of memory fragments and significant event memories but they did differ significantly on reported incidences of generic memory, $F(2,45) = 3.76, p<.05$. This is similar to the results of the univariate tests for thought categories. The three groups did not differ on their reported incidences of thought fragments, episodic thoughts, generic thoughts, and ruminative thoughts with correctives. However, there were significant differences on the reported incidence of ruminative thought, $F(2,45) = 3.42, p<.05$.

Post hoc multiple comparisons were conducted using Fisher's least significant difference test. Only tests that were significant, with the exception of sadness intensity which approached significance, are reported. For each significant result on the post hoc comparisons, I have drawn a histogram of the means. As Figure 1 shows, previously depressed individuals experienced a significantly higher intensity of sadness, critical difference=$1.98, p=0.02$, than non-depressed individuals. The sadness intensity did not differ

**Figure 1. Mean Intensity of Sadness**
significantly between previously depressed and depressed individuals or non-depressed and depressed individuals. In terms of duration, Figure 2 shows that depressed individuals experienced significantly longer episodes of sadness than non-depressed individuals, critical difference=57.15, \( p=0.005 \). The duration of sadness did not differ significantly between previously depressed and depressed individuals or non-depressed and previously depressed individuals.

**Figure 2. Mean Duration of Sadness**

![Bar chart showing mean duration of sadness for depressed, previously depressed, and non-depressed individuals.]

As shown by Figure 3, the anger duration episodes of depressed individuals were significantly higher than those of non-depressed individuals, critical difference=130.28, \( p=0.02 \), and previously depressed individuals, critical difference=139.43, \( p=0.03 \). The frequency of emotion episodes differed significantly only for the frequency of happiness
which was significantly higher for non-depressed individuals than depressed individuals, critical difference=0.73, \( p=0.01 \) (see Figure 4). As shown by Figure 5, depressed individuals
reported significantly more episodes of generic memory than either non-depressed individuals, critical difference=0.78, \( p=0.01 \), or previously depressed individuals, critical difference=0.83, \( p=0.03 \).

**Figure 5. Average Number of Generic Memories**

When it came to ruminative thought (see Figure 6), depressed individuals reported significantly more rumination than non-depressed individuals, critical difference=0.62, \( p=0.01 \).

**Figure 6. Average Number of Ruminative Thoughts**
3.3. Qualitative analysis

The quantitative analysis of the thought and memory components found that group differences occurred for only one of the three memory categories and only one of the five thought categories. Depressed individuals reported significantly more episodes of generic memory than either non-depressed individuals, or previously depressed individuals. The groups also differed on rumination levels as depressed individuals reported significantly more rumination than non-depressed individuals. Due to the small number of participants in the study who were examined in the qualitative analysis, these findings should be regarded as bases for hypotheses and further testing with larger numbers of participants.

3.4.1. Ruminative thought

I never should have taken this job, I’m not good enough, I can’t keep up with the work load, the boss is going to notice, he never liked me, he’ll fire me. If I don’t get this report done on time that’s it, but I can’t get it done, even if I did get it done it won’t be good enough, I’m just not good enough.

Depressed single parent

The examination of ruminative thought focused on two different types (see Appendix B) of rumination: ruminative thought and ruminative thought with correctives. Examining the patterns of ruminative thought in the three groups has provided some insight into the question of why some individuals get stuck in rumination without employing correctives. However, as only one individual out of all the participants in this study reported an episode of ruminative thought with correctives, the focus must be on the pattern of ruminative thought without correctives (hereafter referred to as ruminative thought) among the three groups.
Before moving onto the results from the examination of ruminative thought patterns, it is interesting to note that ruminative thought with correctives was reported frequently in the pilot data used to establish the categorization manual. The participants in the pilot test were graduate students, the majority of whom were not clinically depressed. Table 2 provides some examples of both categories of ruminative thought that were reported. The examples clearly point out the difference between a style of rumination that includes positive ideas and the style of rumination that could create a vulnerability to depression. In the style with correctives, individuals ruminate on a situation and then rumination is corrected by thoughts

<table>
<thead>
<tr>
<th>Type of Thought</th>
<th>Occupation</th>
<th>Sex</th>
<th>Thought Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ruminative with Correctives</td>
<td>Student</td>
<td>Female</td>
<td>That I have too much to do; that I won’t get it all done, that I will fail to do something and it will have terrible results, that I can get it done, that nothing terrible will happen, that I have thought this before and it always worked out fine.</td>
</tr>
<tr>
<td>Ruminative with Correctives</td>
<td>Student</td>
<td>Female</td>
<td>Maybe he “finally” will realize that I can’t write, maybe I’m not cut out for this work, relax you always get this way before knowing how you’ve done and you end up doing fine.</td>
</tr>
<tr>
<td>Ruminative</td>
<td>Student</td>
<td>Male</td>
<td>Maybe I wasn’t being flexible or understanding enough, maybe I was too hard on her, maybe I’ll lose her as a friend, why do I always do this, why can’t I keep any friends, I’ll never see her again, she won’t want to have anything to do with me.</td>
</tr>
<tr>
<td>Ruminative</td>
<td>Student</td>
<td>Female</td>
<td>I’m 27, this is not where I thought I’d be at my age, when will I have children, I still have years ahead before I even finish school, I feel so rushed, why do women have the biological clocks, what if I wait too long, what if I never have children, what have I really done with my life?</td>
</tr>
</tbody>
</table>
that break the ruminative thought cycle. In the rumination without correctives, the individual continues to spiral downward and there appears to be no end to the negative thoughts.

The content analysis of thought components revealed that 37.5% of the participants reported ruminative thought. Only 19% of non-depressed individuals reported ruminative thought as compared to 40% of the previously depressed individuals and 67% of the depressed individuals. Table 3 provides a demographic summary of the individuals. It is interesting to note that three out of the four non-depressed individuals who reported ruminative thought were men who lived alone. The fourth individual was a woman

<table>
<thead>
<tr>
<th>Table 3. Demographic summary of individuals who reported episodes of ruminative thought</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depressed</td>
</tr>
<tr>
<td>Number of Episodes</td>
</tr>
<tr>
<td>Number of Individuals</td>
</tr>
<tr>
<td>Number of Men</td>
</tr>
<tr>
<td>Number of Women</td>
</tr>
<tr>
<td>Living Arrangements</td>
</tr>
<tr>
<td>Living Alone</td>
</tr>
<tr>
<td>Single Parent</td>
</tr>
<tr>
<td>Cohabitating</td>
</tr>
<tr>
<td>Cohabitating (child)</td>
</tr>
<tr>
<td>Parents/Relatives</td>
</tr>
</tbody>
</table>

who was a single parent. It is interesting to speculate that rumination may act as a vulnerability factor. Brown and Harris (1978) identified a lack of social support as a vulnerability factor for depression. The four non-depressed individuals who reported rumination also had an identified vulnerability to depression, although none of them had ever had an episode of major depression.

Overall, eighteen individuals reported episodes of ruminative thought. Thirteen of those individuals also reported experiencing generic memories, while five experienced rumination only. The five individuals consisted of: two depressed individuals, two previously depressed individuals, and one non-depressed individual. All of their ruminations were associated with negative emotions. The thirteen individuals will be examined in detail in the generic memory
section. Table 4 shows the association of rumination to emotion, regardless of whether or not generic memory was also reported.

Table 4. Numbers of ruminative thoughts associated with anger, sadness, fear, happiness, and disgust

<table>
<thead>
<tr>
<th></th>
<th>Depressed</th>
<th>Previously Depressed</th>
<th>Non-Depressed</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anger</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Sadness</td>
<td>6</td>
<td>3</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Fear</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Happiness</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Disgust</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>No emotion reported</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

As shown by Table 4, depressed individuals' ruminations were most often associated with sadness. The next most common emotion was anger which was followed by fear. One individual associated rumination with happiness and another individual associated rumination with disgust. Previously depressed individuals' ruminations were primarily associated with sadness or fear. One individual associated rumination with anger and another individual failed to report an emotion. Non-depressed individuals exhibited an entirely different pattern as their ruminations were most commonly associated with fear followed by anger. Overall, fear was the emotion most commonly associated with rumination followed by sadness, anger, and happiness. A particularly interesting pattern was shown by the distribution of sadness across the three groups. Sadness was not associated with rumination among non-depressed individuals, it was associated in three cases among previously depressed individuals, and it was associated in six cases among depressed individuals.
When all the ruminative thoughts were examined, there were several themes that stood out. Table 5 provides a list of the seven themes complete with examples. The most common theme was that of not being able to see an end to the situation and/or forecasting a terrible future. This theme was present in ten of the eighteen episodes (i.e. 55%) of rumination.

Another common theme focused on not being able to accomplish things or avoiding doing things. It was an element in eight episodes of rumination (44%). Not understanding a situation was a theme present in seven episodes (39%) as was the theme of self-depreciating thoughts. Five episodes (28%) contained the theme of focusing on other people’s actions.

### Table 5. Themes present in ruminative thought and examples of themes in 18 episodes of ruminative thought

<table>
<thead>
<tr>
<th>Theme</th>
<th># of Episodes</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not being able to see an end to the situation and/or forecasting a terrible future</td>
<td>10</td>
<td>That I’m loosing my mind and that I can’t see an end to all this.</td>
</tr>
<tr>
<td>Not being able to accomplish things or avoiding doing things</td>
<td>8</td>
<td>It’s not what I did so much as what I didn’t do. I didn’t do any studying because I really didn’t feel like it. However, that makes me feel lazy and guilty because I think I ought to be studying.</td>
</tr>
<tr>
<td>Not understanding the situation</td>
<td>7</td>
<td>What am I going to do? How do I deal with this situation? How do I explain?</td>
</tr>
<tr>
<td>Self-deprecating thoughts</td>
<td>7</td>
<td>That I couldn’t do anything right or plan things ahead, that I always fly by the seat of my pants, and I never learned anything from past mistakes.</td>
</tr>
<tr>
<td>Other people’s actions</td>
<td>5</td>
<td>Hate my job, don’t want to deal with lazy incompetent summer students, need to get out of here, why do I care more about productivity than my boss?</td>
</tr>
<tr>
<td>Fear of or focus on illness</td>
<td>4</td>
<td>I’m not going to get better, I have some life threatening disease.</td>
</tr>
<tr>
<td>either mental, physical, or both</td>
<td></td>
<td>Thoughts of feeling alone, not liked.</td>
</tr>
</tbody>
</table>
while four episodes (22%) involved a fear or focus on illness (mental or physical). The final theme was of alienation or loneliness and it occurred in three episodes (17%). The majority of ruminative episodes contained more than one theme which was indicative of the complex nature of ruminative thought. In addition, there were no strong patterns of association between themes and emotions except in two cases. When ruminative thought contained the theme of “not being able to see an end to the situation”, it was most often associated (50%) with the experience of fear. Similarly, when the theme of “other people’s actions” was involved, it was most frequently associated (75%) with anger.

One of the most interesting individuals who reported ruminative thought was a depressed woman who was married with children. This woman had three episodes of ruminative thought, two of which were associated with anger while the other was associated with happiness. Each of her ruminations were accompanied by generic memories. All of the generic memories contained the same themes as the ruminations with which they were associated. In fact, the memories appeared to be fueling the ruminations. Even in the episode that was associated with happiness, the rumination and generic memory components were negative. However, this woman was also the only individual to report an episode of ruminative thought with correctives. The corrected rumination was associated with happiness and occurred in her first diary entry. It appeared as if she was consciously trying to break the cycle of ruminative thought as she prefaced each ruminative thought with a corrective instead of correcting the rumination mid-cycle. In her subsequent diary entries she made no attempt to correct the ruminative thought cycle.
Ruminative thought has certainly been shown to be a very complex type of thought. There appear to be distinctive patterns emerging for the three groups and there are definitely distinct themes in the rumination episodes. There is also a tendency for individuals who experience rumination to also experience generic memories, which is discussed in the next section.

3.4.2. Generic memory

In his analysis of the memories reported by participants, Smith (1995) examined the relation of negative memories to life stress and depression, hypothesizing that life stress has an ongoing influence on daily memory and mood. This hypothesis was supported when he found that, as predicted, individuals who had experienced major life stressors in the past twelve months had a high rate of emotion-elicited memories of the stressor. Furthermore, he also found that any one recent major life stressor was twice as likely as a less severe stressor to be reported as an emotion related memory. Further support of Smith's suggestion about the role of negative memories in depression was offered when he found that depressed individuals reported significantly higher rates of negative memories and negative memories related to the distant past than either previously depressed or non-depressed individuals. He also found that depressed individuals not only reported an unusually high rate of negative memories associated with stressors from over one year previous but also reported more of these negative memories even when they had experienced recent major life stressors. Smith concluded that emotion-related negative memories are common in the daily emotional experiences of depressed individuals and may play a role in the exacerbation and maintenance of depression.
In this section I examine the proposition that memory plays a role in the exacerbation and maintenance of depression. In particular, I have focused on the role of generic memory which was reported significantly more often by depressed individuals than either previously depressed or non-depressed individuals. Generic memories are memories that are overgeneralized and are not helpful to making plans.

As hypothesized, the quantitative analysis found that depressed individuals reported significantly more episodes of generic memory than either non-depressed or previously depressed individuals. The content analysis of memories revealed that 42% of the participants reported having generic memories; 67% of the depressed individuals experienced generic memories as compared to 40% of the previously depressed individuals and 29% of the non-depressed individuals. Table 6 provides a demographic summary of the individuals who had generic memories.

Table 6. Demographic summary of individuals who reported episodes of generic memory

<table>
<thead>
<tr>
<th></th>
<th>Depressed</th>
<th>Previously Depressed</th>
<th>Non-Depressed</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Episodes</td>
<td>19</td>
<td>10</td>
<td>9</td>
<td>38</td>
</tr>
<tr>
<td>Number of Individuals</td>
<td>8</td>
<td>6</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td>Number of Men</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Number of Women</td>
<td>7</td>
<td>4</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>Number of Individuals</td>
<td>6</td>
<td>4</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>reporting rumination</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Living Arrangements

<table>
<thead>
<tr>
<th></th>
<th>Depressed</th>
<th>Previously Depressed</th>
<th>Non-Depressed</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Living Alone</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Single Parent</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Cohabitating</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Cohabitating (child)</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Parents/Relatives</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

These findings also support the finding of Williams and Scott (1988), who stated that depressed individuals had difficulty recalling specific memory accounts. I agree with Williams and Scott’s argument that generic memories operate as a vulnerability factor by
failing to provide individuals with a context to cope with their problems or to support positive thoughts about their character or situation. However, I also believe that generic memories provide fuel for ruminative thought and therefore also operate to maintain depression.

As with ruminative thought men outnumber women among the non-depressed individuals reporting generic memories. Three of the four men are the same men who were living alone and reported ruminative thoughts. The fourth man did not report ruminative thoughts and he was married with children. This fourth individual experienced two generic memories both of which were associated with a low intensity sadness. Both memories focused on work situations that the man did not like but seemed resigned to accept. The other three men exhibited different patterns. One of them had two generic memories both of which focused on his parents’ inappropriate behaviour towards him. One episode was associated with a high intensity anger and the other with a moderate intensity fear. Both generic memories followed the same themes as were found in the ruminative thought component associated with the high intensity anger. Another of the men experienced one generic memory that was associated with a low intensity fear. Although there was no rumination associated with that diary entry, the ruminative thought component in a later diary entry shared the same themes and was associated with fear of the same intensity. The third man also had only one generic memory. His memory was associated with a moderate intensity fear and the rumination was on an entirely different theme, sharing fear as its only common element.
The two non-depressed women who reported generic memories were both cohabitating and one of them had children. Neither of the women reported ruminative thoughts. The woman who did not have children had only one episode of generic memory. Her episode was associated with a low intensity sadness and focused on the "accumulation" of her significant other's uncooperativeness. The other woman had two episodes of generic memory, both of which were associated with moderately high intensity anger and focused on how her husband did not take part in the discipline of their children. In both women, there was no evidence of potential problem solving but instead it seemed as if the women had accepted the situation. The woman who experienced sadness seemed more resigned to the situation than the other woman.

In addition to the three non-depressed men, there were ten other individuals who reported experiencing both generic memories and rumination. Four of the ten were previously depressed individuals and the other six were depressed individuals. The four previously depressed individuals consisted of two men and two women. In the two women and one of the men, the rumination and generic memories shared the same themes. In fact, it appeared as if the individuals were supplying memories that fueled the rumination. There were no common themes between the generic memories and rumination expressed by the other man.

The six depressed individuals who experienced both generic memories and rumination, consisted of one man and five women. In one of the women, there were no common themes. In another woman, two of the episodes had no common themes while the other two episodes shared common themes. The other four individuals all exhibited common themes connecting
their generic memories and ruminations. In all of the episodes where there were common themes, the generic memory appeared to be fueling the ruminations. Seven individuals reported generic memories and did not report rumination. One of the individuals was a previously depressed woman, three individuals were non-depressed women, two individuals were depressed women, and one individual was a depressed man. The depressed man and two of the non-depressed women had two generic memories, the others all reported only one generic memory. The generic memories were associated with anger (60%), sadness (30%), and happiness (10%). Table 7 shows the association between generic memories and emotions, regardless of whether or not rumination was also reported.

Table 7. Numbers of generic memories associated with anger, sadness, fear, and happiness

<table>
<thead>
<tr>
<th></th>
<th>Depressed</th>
<th>Previously Depressed</th>
<th>Non-Depressed</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anger</td>
<td>8</td>
<td>4</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>Sadness</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Fear</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Happiness</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

It is interesting to note that all but two of the depressed individuals who experienced rumination also reported generic memories. In all but one of the depressed individuals, generic memories appeared to be fueling the ruminations. Once again, it appears as if there are distinctive patterns emerging between the three groups.

Themes that were associated with generic memories were also examined. The majority of the themes that were found within the ruminative thoughts also applied to the generic memories. Two of the themes did not apply and a new theme that dealt with remembered
emotions had to be added. As shown by Table 8, the most common theme was “other people’s actions” which occurred in twenty-two of the thirty-eight (i.e. 58%) generic memories. The second most common theme involved memories of previously experienced emotions which occurred in eleven (28%) of the memories. The theme of illness occurred in six (16%) of the memories and the theme of not being able to accomplish things occurred in three (8%) of the memories. Self-depreciating thoughts as a theme occurred in only one memory and themes about lack of understanding and about not seeing an end in sight did not occur. When the themes were examined to see if there were patterns of particular emotional associations, only one finding emerged. The theme about other people’s actions was associated with the experience of anger in 56% of the cases.

<table>
<thead>
<tr>
<th>Theme</th>
<th># of Episodes</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other people’s actions</td>
<td>22</td>
<td>How many times in the past Brian has let me down.</td>
</tr>
<tr>
<td>Previously experienced emotions</td>
<td>11</td>
<td>Memories of parental rejection, criticism, fear of loss.</td>
</tr>
<tr>
<td>Fear of or focus on illness either mental, physical, or both</td>
<td>6</td>
<td>Fear of not getting better, memories of fatalistic thoughts about my aids phobia.</td>
</tr>
<tr>
<td>Not being able to accomplish things or avoiding doing things</td>
<td>3</td>
<td>All the times in the past when I had made plans and my subsequent failure to carry them through.</td>
</tr>
<tr>
<td>Alienation, loneliness</td>
<td>2</td>
<td>Times when I’ve been alienated and lost friends because of my illness.</td>
</tr>
<tr>
<td>Self-depreciating thoughts</td>
<td>1</td>
<td>No matter how hard I try I can’t accomplish anything, I can never function normally.</td>
</tr>
</tbody>
</table>
Chapter 4
DISCUSSION

In general, although the number of participants in this study was large as compared with others in the literature that have included full diagnoses of depression to criteria of DSM-III-R, as well as assessment of life events and difficulties according to Brown and Harris’s (1978) LEDS, the numbers were still on the small side for analyses of emotions. The results must be regarded therefore as mostly suggestive rather than conclusive.

The hypothesis that the emotional experiences of depressed individuals would differ widely from those of non-depressed individuals was not supported. Depressed individuals did not experience different intensities of emotion than non-depressed individuals. There were also no significant differences between the groups in the duration of happiness and fear or in the frequency of sadness, anger, and fear. In the MANOVA of all five measures of emotions (frequency, intensity, duration, thoughts, and memories) there was no overall difference as a function of depression status. In light of these broad similarities among aspects of emotion in depressed, previously depressed, and non-depressed participants, I conclude that the emotional experiences of individuals as a function of depression status are markedly more similar than previously supposed. However, in support of Oatley and Johnson-Laird (1996) there were some potentially important differences. While depressed individuals experienced the same frequency and intensity of sadness and anger, their experiences of sadness and anger lasted longer than those of non-depressed individuals. The difference in anger duration was suggestive but the difference in the duration of sadness was firmly supported. Depressed individuals also differed from non-depressed individuals, as they experienced fewer episodes of happiness. This difference was also firmly supported.
Similar results emerged from the examination of thought and memory. Depressed and non-depressed individuals failed to differ on two out of three memory categories and four out of five thought categories. However, consistent with Williams and Scott (1988), I did find that depressed individuals reported more generic memories. While the finding that depressed individuals reported more generic memories than previously depressed individuals was suggestive, the difference between depressed individuals and non-depressed individuals was more firmly supported. My prediction that depressed individuals would report more ruminative thought than non-depressed individuals was firmly supported, but my contention that they would also report more ruminative thought than previously depressed individuals was not supported.

I believe the previously depressed group holds the key to understanding how these differences contribute to the occurrence and maintenance of depression. A comparison of the patterns of previously depressed individuals’ emotional episodes, thoughts, and memories provided interesting insights into whether or not the factors examined in this study were symptoms of depression, vulnerability factors, or some combination of symptom and vulnerability factor. I have argued that a vulnerability factor is identified when the previously depressed group displays a significantly higher level of a given factor than either of the other two groups. Similarly, if the depressed group displays a significantly higher level of a given factor while the other two groups are similar, and low on that factor, then that factor should be viewed as a symptom of depression. All symptoms of depression should be considered as possible contributors to the maintenance of depression until that possibility can be ruled out. When the depressed group’s level of a given factor differs from that of the
previously depressed group, which in turn differs from the non-depressed group, that factor should be viewed as a combination of symptom and vulnerability factor.

Non-depressed individuals experienced significantly more episodes of happiness than depressed individuals but did not significantly differ from previously depressed individuals. This indicates that a decreased rate of happiness may be a symptom of depression. It is interesting that the intensity and duration of happiness did not differ between the groups. It is difficult to establish whether or not a decreased rate of happiness acts as a strong contributor to the maintenance of depression. I think that the decreased rate of happiness is more of a by-product of other contributing factors. It is also possible that, as Beck (1976) suggests, happiness is not as salient to depressed individuals as it is to non-depressed individuals and therefore when an episode of happiness does become salient it does not differ in intensity or duration from that of a non-depressed individual.

Another intriguing result (though because of the possibility of Type I errors, it is only suggestive) was that previously depressed individuals' intensity of sadness tended to be higher than that of the other two groups. There are several possible explanations for this pattern. It is possible that when individuals have been depressed in the past, sadness becomes more salient to them and they therefore tend to ascribe higher intensity levels to their episodes of sadness. The higher intensities could also be the function of an anxiety about becoming depressed again. In that case the intensity may be artificially elevated by the individual's anxiety over experiencing sadness. It is also possible that prior to becoming depressed again people experience elevated sadness intensities and that once depression has set in, those intensities drop back into the range experienced by non-depressed individuals. It
would be necessary to collect larger samples and do a more in-depth analysis of their sadness episodes to begin to discover what is actually taking place.

The role of sadness and anger durations is clearer (though because of the possibility of Type I errors, the difference in the duration of sadness is only suggestive). As depressed individuals experienced significantly longer durations of sadness than the non-depressed group, it suggests that the duration of sadness should be viewed as a symptom of depression. Depressed individuals experienced longer durations of anger than the other two groups, this suggests that the durations of those emotions should be viewed as symptoms of depression. That leaves us with the question of whether or not the prolonged durations act as contributing factors to the maintenance of depression. The results of ruminative thought and generic memory directly address this question.

Depressed individuals were found to experience significantly higher levels of ruminative thought than non-depressed individuals or previously depressed individuals. Generic memories were also significantly higher for depressed individuals than non-depressed individuals but did not differ from previously depressed individuals. I would argue that this is suggestive that ruminative thoughts play a primary role in the maintenance of depression while generic memories play a secondary role. If generic memories were equally important to the maintenance of depression, the previously depressed group would have shown significantly fewer generic memories than the depressed group.

This brings us back to sadness and anger. Depressed individuals were most likely to experience ruminative thought and generic memories with sadness and anger. Furthermore, all but two of the depressed individuals who experienced rumination also reported generic
memories. Distinctive themes were identified in the rumination episodes and these themes were frequently mirrored by the associated episodes of generic memory. In all of the episodes where there were common themes, the generic memories appeared to be fueling the ruminations. This interpretation of the results finds some support in Teasdale's (1988) differential activation hypothesis. Teasdale has proposed that depressed mood makes negative schemas and memories more accessible. He argues that this increased accessibility results in the increased possibility of events being interpreted in negative ways and in the preferential recall of negative memories. This in turn results in a prolonged depressed mood. Teasdale has presented the idea that a vicious cycle is created that maintains depression.

In examining the diaries closely, it appeared that individuals where actually retrieving generic memories that supported and could be seen to fuel the cycle of ruminative thought. In all but one of the depressed individuals, generic memories appeared to be fueling the ruminations. As depressed individuals tended to experience sadness and anger with rumination and generic memories, the increased durations of those emotions could be due to the effect of generic memory on rumination. The results found that the mean duration of sadness was significantly longer for depressed individuals as compared with non-depressed individuals. The number of ruminative thoughts associated with sadness increased linearly from zero, non-depressed individuals had no ruminative thoughts associated with sadness, previously depressed individuals had three associations, and depressed individuals had six. Furthermore, depressed individuals reported significantly longer durations of anger than either of the two groups and depressed individuals had twice as many ruminative thoughts.
associated with anger. Taken together, these finding suggest that a vicious cycle may be operating to maintain the depression.

The qualitative analysis of ruminative thought and generic memory provided interesting insights into the significance of differences between depressed and non-depressed individuals. Due to the small number of participants in the study who were examined in this section, these findings should be regarded as bases for hypotheses and further testing with larger numbers of participants. Combined with the patterns exhibited by previously depressed individuals, ruminative thought and generic memory were able to make worthwhile contributions to the discourse on depression. While the results are preliminary, I believe the previously depressed group is the key to understanding what role emotional experience, ruminative thought, and generic memory play in the occurrence and maintenance of depression. The inclusion of this group has opened new lines of inquiry and sharpened the focus of future investigations. The qualitative analysis of ruminative thought and generic memory has also opened new lines of inquiry and provided a rich source of information on the occurrence and maintenance of depression. This study has begun to untangle the issues of vulnerability and maintenance that have hampered the prevention and management of depression. Further studies with larger sample sizes are needed to investigate the issues this study has presented.
REFERENCES


Appendix A: Emotion Diary cover page and one sample page of six

EMOTION DIARY: Subject # _______

COVER PAGE

We would like you to keep this special diary of your emotions and moods for the next two days, beginning at supper time today. You can recognize and emotion or mood when

* a bodily sensation happens (such as your heart beating faster), or
* you have thoughts coming into your mind that are hard to stop, or
* you find yourself acting or feeling like acting emotionally

You can recognize a mood when:

* you have a feeling of some kind that lasts for more than about one hour

INSTRUCTIONS

Your emotion diary has six pages. We would like you to complete three pages a day for two days in a row. Complete a page at supper time, one before you go to bed, and another at lunch time. You can fill this form before or after your meals.

Every time you complete a form, think about the last noticeable emotion or mood you had. If the last noticeable emotion or mood is a continuation of a mood that has continued since your last scheduled diary entry then complete the diary about that mood. If there has not been a noticeable emotion or mood since the last scheduled diary time, leave the current form blank.

Before you start, would you please complete #1 to #4 on this page.

1. Age ________ 2. Sex (Please check one.) Male □ Female □

3. Living Arrangements (Please check one.)

(a) Living alone; in your own house, apartment, flat or room; not shared □
(b) Living with husband, wife or partner (with child or children) □
   Age of each child __________________________
(c) Living with husband, wife or partner (without children) □
(d) Living as a single parent (with child or children) □
   Age of each child __________________________
(e) Living with parents or relatives □
(f) Living with friend or friends; in a shared house, apartment, flat or room □
(g) Other □ Please describe ____________________________

4. Time and date when you started the diary Time ________ Date ________

THANK YOU VERY MUCH FOR TAKING PART IN THIS RESEARCH
DIARY PAGE - DAY 1 - SUPPER TIME (Clarke Version 8.1)

1. Today's date ________________________________ Time Now __________, □ am □ pm
   If you have not had a noticeable emotion or mood in the previous six hours check here □ and do not fill this page. Leave this page blank and at the next scheduled time go on to the next diary entry. If the last noticeable emotion or mood is part of a mood that has continued since your last scheduled diary entry then complete the diary about that mood.

2. How long ago did your last emotion or mood start? ______ hours ______ minutes

3. How long did the emotion last? (If it is still happening, say how long up to now)
   ______ hours ______ minutes

4. How intense was this emotion or mood? (Circle one below)
   Not noticeable 0 1 2 3 4 5 6 7 8 9 10 As intense as I have felt in my life

5. Did this emotion or mood feel like a mixture, so that there was more than one emotion or mood at exactly the same time? (Check one.) □ No □ Not Sure □ Yes
   If Yes, What were the two main emotions or moods that were in the mixture? ___________________________ and ___________________________

6. If you felt only ONE emotion or mood, what is your name for that emotion or mood?

7. Thinking about either the single emotion, or the strongest of the two emotions if a mixture, would you call it any type of the following? (Check one.)
   □ Happiness / joy □ Sadness / grief □ Anger / irritation
   □ Fear / anxiety □ Disgust □ None of the above

8. Did you have any bodily sensations? (for example, heart beating, feeling hot or cold, etc.) • No • Yes

9. Did thoughts come into your mind that were hard to stop, and make it hard to concentrate on anything else? □ No □ Yes
   Please identify the main thoughts: (briefly indicate what each was about) ___________________________

10. Did you act or feel like acting in some way? (Check one or more.)
    □ Moving closer or touching □ Making an aggressive move
    □ Withdrawing □ Other □ No emotional actions or urges to act

11. Please say what you were doing, and what happened, if anything, to start the emotion/mood.
    _______________________________________________________________________________________
    If the emotion was not caused by anything you were aware of please check here □

12. While experiencing this emotion did you recall something from the past, something that was unpleasant when remembered? (check one) □ No □ Not Sure □ Yes
    IF YES: Please indicate what the most unpleasant of these memories was about.
    _______________________________________________________________________________________
    How unpleasant was this memory? (Circle one below.)
    Not unpleasant 0 1 2 3 4 5 6 7 8 9 10 As unpleasant as I have ever felt

13. Did an unpleasant memory come to mind during this emotion? □ No □ Yes
Appendix B: Clarke Categorization Manual

Memory Component:
This categorization scheme is based on J. Singer and P. Salovey’s *The Remembered Self* as interpreted by Dr. Keith Oatley. There are three categories complete with examples from pilot data. A practice memory reliability set is included.

Categories

MEMORY FRAGMENT
A memory that is a fragment; it is specific in that it refers to a specific event, but is a stray detail that has no apparent meaning or greater significance in remembering or conceptualizing the individual’s life. It shows no evidence of integration or connection to thematic lines of a life story. The scene may be transitory.

EXAMPLES - How great this meal was the last time I prepared it.
Remembered my roommate telling me how clingy this visitor could be.
Past learning about therapy experience, past internship.
Memory of a friend who was wrongfully laid off from a job.

CODE - F

SIGNIFICANT EVENT MEMORY
A memory of a specific incident which hints that the experience has implications for how to handle similar situations in the remembering person’s life. As compared with a memory fragment or generic memory, it has richer nuances and more evidence of emotion, with more investment of the kind which would be significant in the person’s life story.

EXAMPLES - I remembered being in a similar situation and finding my way out.
I remembered all the other times I had small panic attacks re: my performance on a paper and that I ended up doing well.

CODE - S

STEREOTYPED OR GENERIC MEMORY
This is a memory that is not of a specific event but a generic description of repeated events. Alternatively the memory has a stereotyped quality that reveals little of uniqueness or specificity about the remembering individual.

EXAMPLES - Previous e-mail correspondence.
Remembered how much time I had before becoming a parent.
Unpleasant thoughts about disappointing a colleague.

CODE - G
Memory Reliability Set:

1) Being in high school with my friends. Thinking about how long we have known each other and all the things we have done together.

2) One episode in my undergrad when a similar situation occurred, but the professor apologized and rectified it.

3) When I was younger I thought that I would be married and have children but I am doing neither at present.

4) Death of old friends, old girlfriends, crazy things we did in highschool, crazy things happening in our lives.

5) I think that person has a lower opinion of me ever since I took that person’s class (professor) - due to a crappy term paper.

6) Memories of never feeling good enough, memories of being called stupid.

7) I remembered how much easier it was to get work done before the baby, I remembered how much easier my husband’s traveling was before we had the baby.

8) I thought back over how my life has changed in the past 6 months and how my husband’s life doesn’t seem to have changed as much.

9) We talked about events in the past, present, and future that relate to the two of us, our shared past, our families, etc.

10) A previous class or two in that course where the same sort of discussions took place, unproductively in my opinion.
Thought Component:
This categorization scheme is a modified version of the memory categorization offered in J. Singer and P. Salovey’s *The Remembered Self* as interpreted by Dr. Keith Oatley. It has been altered to apply to thoughts and two new categories have been added. Please note that the episodic thought category is derived from the significant event memory category. There are five categories complete with examples from pilot data. A practice thought reliability set is included.

Thought Categories:

RUMINATIVE THOUGHT WITHOUT CORRECTIVES
Ruminative thought is defined as occurring when an individual thinks about something over a prolonged period of time, it may involve a specific event from the past or an event that has occurred recently, or an event that will be occurring in the future. The thought usually has a time reference such as “again” that indicates the individual has had similar thoughts before. The thought also tends to have a haunting or unresolved quality with an emotional element usually present. In this type of ruminative thought there is an absence of correctives, the individual does not alter his/her ruminative thought pattern.

EXAMPLES - That I have too much to do; that I won’t get it all done, that I will fail to do something and it will have terrible results. Maybe he “finally” will realize that I can’t write, maybe I’m not cut out for this work.

CODE - R

RUMINATIVE THOUGHT WITH CORRECTIVES
Ruminative thought is defined as occurring when an individual thinks about something over a prolonged period of time, it may involve a specific event from the past or an event that has occurred recently, or an event that will be occurring in the future. The thought usually has a time reference such as “again” that indicates the individual has had similar thoughts before. The thought also tends to have a haunting or unresolved quality with an emotional element usually present. The thought also has a corrective element. The corrective element occurs when an individual alters his/her ruminative thought pattern by reassuring himself/herself that everything will work out fine or instructing him/herself to stop thinking that way. Correctives may vary but they always serve to alter the ruminative thought pattern.

EXAMPLES - That I have too much to do; that I won’t get it all done, that I will fail to do something and it will have terrible results, that I can get it done, that nothing terrible will happen, that I have thought this before and it always worked out fine. Maybe he “finally” will realize that I can’t write, maybe I’m not cut out for this work, relax you always get this way before knowing how you’ve done and you end up doing fine.

CODE - RC
THOUGHT FRAGMENT
A thought that is a fragment; it is specific in that it refers to a specific event, but is a stray detail that apparently is used only to remember a specific short-term event or detail of a daily event. For example it might be a thought about what to pick up at the market or that it is the individual’s turn to cook dinner. It has no meaning or greater significance in an individual’s life other than the short-term event to which it refers. The thought usually has a transitory element.

EXAMPLES - It is taking me a long time to figure this out but; I’m still learning. Hope he won’t be disappointed by me, hope he likes Toronto. That it was a relief to get home, that Wednesdays are very busy, long days, that now I could relax, that while I was tired a lot of things I wanted to get done I had accomplished.

EXAMPLES OF WISHES, HOPES, AND DESIRES - I wish I could loose weight on this diet. I hope he isn’t late this time. I want to be more organized so I can get more done each week.

CODE - F

EPISODIC THOUGHT
This is a thought that is about a specific event in the present, future, or past that seems significant to the individual’s life. Unlike the ruminative type of thought, it has no references to repetition. It has more evidence of emotion than a thought fragment.

EXAMPLES - I wondered why on earth anyone would make up such a story to accuse my relative, I also thought of how I can support my relative. I hope he doesn’t die. Why is this my responsibility. I can’t believe Dad wants me to “assess” him.

EXAMPLES OF WISHES, HOPES, AND DESIRES - I wish I could loose weight on this diet. I’ve tried so many different ones and I really want to be able to wear my favourite outfit to the party. I hope he isn’t late this time, he’s going to meet my parents. I hope he isn’t late for our date on Saturday. I want to be more organized so I can get more done before the exam.

CODE - E

GENERIC THOUGHT
This is a thought that is not of a specific event but a generic description of repeated events. Alternatively the thought has a stereotyped quality that reveals little of uniqueness or specificity about the individual. There is also no direct tie to a particular event or period of time.

EXAMPLES - Wondering where my life is headed, wanting to just take off and live in Florida. Wondering how my friends were doing and what was new in their lives.

EXAMPLES OF WISHES, HOPES, AND DESIRES - I wish I could loose weight. I hope he isn’t late. I want to be more organized.

CODE - G
Thought Reliability Set:

1) Maybe I wasn’t being flexible or understanding enough, maybe I was a little too hard on her, maybe I’ll lose her as a friend/acquaintance, annoyed that she would not be more flexible, I give a lot more than her she should stretch this time.

2) Thought about how “going out” more makes me happier, felt more hopeful about the future.

3) Wondering how my friends were doing and what was new in their lives.

4) How could someone make such a careless mistake in marking?, How will I tell my prof as she is my supervisor and I don’t want to annoy her and I’m so upset that people will think that I’m petty because I didn’t get an A, but I feel I deserve the marks that are owed to me.

5) Thinking how happy I was for my friends, enjoying their lives, sad about my life and what’s become of me, sad about all the people we have lost contact with over the years.

6) I’m 27, this is not where I thought I would be at my age, when will I have children, I still have a few years left to go in my schooling, why is it that women have to be burdened with a biological clock, it makes me feel unnecessarily rushed.

7) Wondering where my life is heading, wanting to just take off and live in the West Indies.

8) I’m looking forward to my birthday party tomorrow night, I will be able to see all my friends.

9) My thoughts centered around my husband’s traveling and how much his life hadn’t really changed since having the baby, I also felt panicky about getting my work done.

10) Thought I would get started on some school work.