

The Effect of Parental Depression on Cognitive Vulnerability

By

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### Abstract

This paper reports on research on the effect of parental depression on cognitive vulnerability to depression. Although there is extensive literature to suggest that parental depression confers depressotypic cognitive thinking in children, no research has examined the effect of this vulnerability factor in young adults. Data were collected from 38 college-age students, who, after being given a negative mood prime, were measured for dysfunctional attitudes, irrational beliefs, and information processing biases. Results showed a difference between the groups on measures of attributional style and endorsement of depressogenic words. High-risk individuals displayed greater depressotypic cognitive thinking. Implications and potential underlying mechanisms are discussed.

## The Effect of Parental Depression on Cognitive Vulnerability

Depression and related mood disorders are considered among the most prevalent and disabling of all psychological illnesses. The World Health Organization (WHO) has calculated that unipolar depression is the third leading cause of disability worldwide, and by the year 2030 it will be the leading cause of burden of disease (World Health Organization, 2004). Not surprisingly, because of the widespread and serious nature of this disorder, there has been much research on depression. Although a number of different aspects of depression have been the focus of research, one important area of inquiry concerns the origins of depression, or more specifically, the factors that render individuals vulnerable to depression.

A variety of vulnerability factors may be associated with depression (e.g., genetic factors), but the current project focuses on cognitive risk variables. Accordingly, the first part of this paper examines the predominant cognitive model of depression, specifically the model proposed by Beck (1967). Next this paper addresses the manner in which vulnerable individuals can be identified. In particular, the focus is on a parental history of depression as a risk indicator. Within the context of this discussion, research on cognitive vulnerability and the importance of inducing a negative mood state when assessing depressotypic cognition is reviewed.

### **Beck's Cognitive Model**

Beck's cognitive model has been used to explain the cause, continuation, and relapse of depressive episodes, and in fact this model has been extensively empirically supported (for reviews, see Haaga, Dyck, & Ernst, 1991; Ingram, Miranda, & Segal, 1998; Segal, 1988). According to Beck's cognitive model, cognitive vulnerability is defined in terms of maladaptive schemas (Beck, 1967; Beck, Rush, Shaw, & Emery, 1979; Clark, Beck, & Alford, 1999). Schemas are stable cognitive structures that organize knowledge and assumptions about oneself

and the world, and are developed early in life in response to childhood experiences. In the context of depression vulnerability, these schemas are proposed to perpetuate a pattern of negative or “nonpositive” biased self-referent thinking. These negative biases in information processing are at the core of depressogenic cognitive thinking, and, when combined with environmental stressors, can lead to depressive symptoms.

### **Diatheses and Stress in Cognitive Models**

In line with diathesis-stress perspectives, Beck theorizes that these dysfunctional schemas can lead to the development of depressive symptoms in response to life stress. Schemas are hypothesized to remain inactive when the person is in a nondepressed state (Beck et al., 1979). According to Beck, these latent schemas must be activated by internal or external stimuli before they can negatively bias information processing, a process that has been referred to as the “mood-state hypothesis” (Persons & Miranda, 1992; Segal & Ingram, 1994). Hence, a stressful life event, or a negative mood state primes these otherwise quiescent depressotypic cognitions making them accessible (Teasdale, 1988).

In experimental studies, negative schemas are often activated by means of mood priming (Segal & Ingram, 1994) in which the priming mimics the mood created by stressful life events. Using this methodology, numerous experiments have detected underlying negative schemas in at-risk individuals (e.g., Jaenicke et al., 1987; Miranda & Persons, 1988; Teasdale & Dent, 1987). However, when studies have not used a mood induction paradigm they have often found no difference in cognitive style between depression vulnerable individuals and nonvulnerable individuals (for reviews see Barnett & Gotlib, 1988; Haaga, et al., 1991; Just, Abramson, & Alloy, 2001). This pattern of findings suggests that a dysphoric mood prime is necessary to access latent schemas in high-risk individuals.

### **Parental History of Depression**

A common way researchers operationally define “at-risk” is to examine the depression history of parents. Research has shown that offspring of depressed parents are at heightened risk of psychopathology, including depression (Downey & Coyne, 1990; Gelfand & Teti, 1990; Goodman & Gotlib, 2002; Ingram et al., 1998; Weissman, Warner, Wickramaratne, Moreau, & Olfson, 1997). One possible underlying mechanism behind this relationship is disruptions in care in childhood that results from having a depressed parent (e.g., Ingram & Ritter, 2000; Taylor & Ingram, 1999). As viewed from a cognitive perspective, it is important to note that schemas are theorized to develop from childhood experiences (Beck, 1967, 1987). In particular, if early life experiences are characterized by chronic stress and negativity, then this increases the risk of developing depressogenic cognitive schemas (Beck, 1967; Ingram et al., 1998).

There has also been extensive research into future outcomes of children with parental depression (for a review see Hammen, 2009). Rhode, Lewinsohn, Klein, and Seely (2005) studied youths and found that maternal depression was associated with higher depression reoccurrence and severity. Similarly, in the Sequenced Treatment Alternatives to Relieve Depression (STAR\*D) multisite trial, Pilowsky and colleagues (2006) found that maternal atypical depression and history of maternal suicide were associated with increased risk of depression in offspring. In addition, depressed offspring of depressed parents have longer episodes of depression, earlier onset, more severity, and greater impairment than depressed individuals without depressed parents (Beardslee, Keller, Lavori, Staley, & Sacks, 1993; Weissman, Warner, Wickramaratne, Moreau, & Olfson, 1997; Weissman et al., 2006).

## **Cognitive Vulnerability in Childhood**

There is a considerable literature examining risks and outcomes for children with depressed parents (for review see Hammen, 2009). However, there have been far fewer studies that have focused on cognitive vulnerability in this at-risk group. The measures used in these studies have been either self-report measures or performance measures. Self-report measures are aimed at assessing the content of cognitions, and have been widely used with positive results. Two of the most commonly used self-report measures are the Dysfunctional Attitudes Scale (DAS; Weissman & Beck, 1978) and the Attributional Style Questionnaire (ASQ; Peterson et al., 1982). Research using these types of self-report measures has largely found that children of depressed parents have more dysfunctional attitudes, less positive self-concept and self-esteem, more negative automatic thoughts, and greater hopelessness compared to children of never depressed parents. For example, Hirsch, Moos, and Reischl (1985) found that children of depressed parents reported lower self-esteem than offspring of nondepressed parents, although the depressed parents' children also had higher levels of depressive symptoms compared to controls. Similarly, Goodman, Adamson, Riniti, and Cole (1994) tested whether the association between mother's depression and child's self-esteem is modified by one's mother's expressed critical attitudes and found that children of depressed mothers reported significantly lower perceived global self-worth than did children of well mothers. It is important to note, however, that some studies have failed to find a relationship between self-concept and parental history of depression. Goodman, Brogan, Lynch, and Fielding (1993) studied the relationship between maternal unipolar major depression and children's self-concept, and they found that maternal depression alone was not related to less positive self-concept in children.

One limitation of the above studies is that they did not control for current depression symptoms in the children; when studies have controlled for this variable they have detected depressotypic cognitive thinking. For instance, Garber and Robinson (1997) found that high-risk children reported lower self-worth, lower perceived competence, more depressotypic attributional style, greater hopelessness, and more negative automatic thoughts. In a longitudinal study over 3 years, Garber and Flynn (2001) examined the contribution of maternal history of depression, mothers' cognitive style, mothers' parenting style, and stressful life events to self-worth, attributional style, and hopelessness in adolescents and found that maternal history of depression was associated with all of the measured depressogenic cognitions in offspring. In summary, research using self-report measures has found that depressotypic thinking is associated with children of parents with depression history compared to children of well parents.

Performance measures, which are typically used to measure information processing biases and include endorsement of negative trait words and recall tasks, have also been used in research with children of depressed parents. Jaenicke and colleagues (1987) used a self-referent encoding task with children of unipolar mothers and found that they had less positive self-schemas, more negative attributional style, and more negative self-concept than children of medically ill and well mothers. However, similar to several studies that used self-report measures, Jaenicke and colleagues failed to control for current level of depression symptoms in the children.

It is important to note that these studies did not use a mood induction paradigm. Garber and Martin (2002) suggest that certain measures may work as mood primes themselves, which may explain the positive results found in the previous studies. In the first “children of depressed mothers” study that used a mood prime when measuring cognitive vulnerability, Taylor and



Ingram (1999) assessed self-referent encoding by examining the endorsement and recall of depressive adjectives. The high-risk children showed more negative information processing than low-risk children; specifically they found that children showed less positive self-concept and enhanced processing of negative self-referent information. In another study, Murray, Woolgar, Cooper, and Hipwell (2001) used a card game to create mild stress in children who had or had not been exposed to maternal depression and found that high-risk children were more likely than low-risk children to endorse depressive cognitions such as hopelessness, pessimism, and low self-worth following the stressful task. Joorman, Talbot, and Gotlib (2007) used a mood induction and an emotional dot-probe task to study daughters of formerly depressed and never depressed mothers and found that high-risk daughters selectively attended to negative emotional stimuli more than low-risk daughters. Overall, research assessing the offspring of depressed parents suggests that high-risk children have more depressotypic cognitive thinking compared to children without a parental history of depression.<sup>1</sup>

According to Beck's cognitive model, individuals at risk for depression possess depressogenic cognitive schemas that are activated by a negative mood state. There is extensive evidence indicating that high-risk children, defined as having a parental history of depression, are at increased risk for poorer outcomes, such as increased depression reoccurrence and greater impairment. In addition, past literature using self-report and performance measures has shown that children with this risk factor have greater cognitive vulnerability, operationally defined as dysfunctional attitudes, irrational beliefs, and information processing biases, than low-risk children when exposed to a mood prime. However, there has been no study to date that examines the effect of this vulnerability factor on depressotypic cognition in young adults.

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<sup>1</sup> All of the previous studies focused only on depressed mothers.

## **The Current Study**

Although it has been shown that parental depression can lead to depressotypic thinking in children, it is yet unclear what long-term impact this vulnerability factor may play in cognitions. By examining the relationship between parental depression and cognitive vulnerability in young adults we hope to learn more about how the impact of vulnerability factors develops and changes within the context of cognitive variables. Even as evidence supports cognitive vulnerability forming a pathway between parental depression and offspring's depression (e.g., Ingram & Ritter, 2000), little is known about the relationships among these variables in young adults. We hope that the results of this study will add to the field's knowledge of the time course of depression and the cognitive variables that play a part in its development.

The purpose of the present study was to assess whether young adults with a parental history of depression would show significantly greater irrational beliefs, dysfunctional attitudes, and biased information processing than individuals without this risk factor. To test this hypothesis, this study examined high-risk individuals with a parental history of depression and compared them to low-risk individuals with no history. Individuals were given a negative mood prime to mimic stressful life events and activate latent depressotypic schemas. Cognitive structures were assessed through a modified self-referent encoding task and questionnaires designed to assess attitudes and attributions.

## **Method**

### **Participants and Design**

Participants were 38 individuals (50% female, 50% male) recruited from the Introductory Psychology courses at a large Midwestern university in exchange for partial fulfillment of course requirements. The mean age of the subjects was 19.82 years, with a range from 18-30 years.

Ethnic backgrounds consisted of 74% Caucasian, 3% African-American, 10% Asian, 8% Hispanic, and 5% identifying as multi- or biracial. 53% of individuals reported having corrected vision. Participants were recruited based on risk status; twenty participants were identified as low-risk and 18 as high-risk. Of those with parental depression, ten reported that their mother had experienced at least one previous depressive episode, three reported that their father had had depression, and five reported that both parents had experienced depression.

In order to determine status of parental depression and to exclude possible confounding variables, participants were pre-screened using questions from the Beck Depression Inventory-II (BDI-II; Beck, Brown, & Steer, 1996), a modified version of the Family History Screen (FHS; Weismann et al., 2000), and The Inventory to Diagnose Depression, Lifetime version (IDD-L; Zimmerman & Coryell, 1987). Individuals with current depression, as indicated by a score of 10 or above on the BDI, were not included in the study. The modified version of the FHS assessed whether the participants' parents have ever been depressed, and the IDD-L assessed whether the participants have ever had a depressive episode. Those who had experience a previous episode of depression, as indicated by a score of 40 or above on the IDD-L, were omitted from analyses.

## **Measures**

**Depressive symptomatology.** The participants were assessed for both current and past depressive symptomatology.

**Current depression.** The participants were administered the BDI-II during the study in order to rule out current depression. The BDI-II is a self-report questionnaire used to measure depressive symptomatology and consists of 21 items, each rated on a 4-point scale. Respondents are asked to read a group of statements and then pick out the one statement in each group that best describes the way they have been feeling during the past 2 weeks. The total range of scores

is from 0–63, with higher scores equaling greater depressive symptom severity. Research has indicated test–retest reliability is sufficient and the BDI-II has been found to be valid among nonpsychiatric samples (Beck et al., 1996; Beck, Steer, & Garbin, 1988). A copy of the BDI can be found in Appendix A.

***Past depression.*** In order to assess whether the participant has been depressed in the past, The Inventory to Diagnose Depression, Lifetime version (IDD-L; Zimmerman & Coryell, 1987) was administered. The IDD-L is a 22-item self-report measure in which each item is rated on a 0–3 scale. The scores range from 0 to 96 with a score of 40 or above suggestive of a past depressive episode. The respondents are instructed to focus on the week in their life when they felt the most profoundly sad or depressed when filling out the questionnaire. The IDD-L is comparable in validity to the Diagnostic Interview Schedule and has been shown to have good reliability (Zimmerman & Coryell, 1987). A copy of the IDD-L can found in Appendix B.

***Current and past psychopathology.*** Participants were also assessed for psychopathology other than depression. Participants who indicated they are currently or had previously experienced psychopathology were not included in the study.

***Anxiety symptomatology.*** Participants were administered the Beck Anxiety Inventory (BAI; Beck & Steer, 1990) in order to rule out anxiety. The BAI is identical in structure to the BDI-II except it is used to assess anxious symptomatology. The BAI demonstrates high reliability and is well validated with nonpsychiatric populations (Beck, Epstein, Brown, & Steer, 1988). A copy of the BAI can found in Appendix C.

***Other psychopathology.*** The participants filled out a brief questionnaire based on the screening module from the Structured Clinical Interview for DSM-IV-TR Axis I Disorders (SCID-I; First et al., 2002), specifically to screen for mania, anxiety disorders, substance abuse,

eating disorders, and psychotic features. For example, to screen for mania the respondents were asked if they have experienced an abnormally and persistently elevated mood or irritable mood lasting at least one week. If on any of these questionnaires the participants gave a borderline score, i.e., they had scores that could possibly qualify them for the corresponding DSM diagnosis, they were not included in the study. A copy of the modified self-report SCID-I can be found in Appendix D.

**Parental depression.** Participants were administered a modified version of the Family History Screen (FHS; Weismann et al., 2000) in a self-report format, focusing on parental history of depression. The FHS is a 31-question interviewer-administered inventory that documents family psychiatric history. It collects information on 15 psychiatric disorders in respondents' first-degree relatives, but for the purposes of this study only the questions pertaining to depression were asked. In addition, information was obtained regarding whether the parents received pharmacological and/or psychological treatment. The test-retest reliability of this measure is adequate and the validity, especially for detecting depression, is high (Weismann et al., 2000). A copy of the modified version of the FHS can be found in Appendix E.

**Parental bonding.** Participants were given the Parental Bonding Instrument (PBI; Parker, Tupling, & Brown, 1979) to assess the bond between the participants and their parents. The PBI is a 25 item self-report questionnaire that measures on a 4-point scale parental attitudes and behaviors during the participants' first 16 years as recalled by the participant. Parenting style is then determined by the scores on each subscale: Caring (comprised of 12 items) and Protection (13 items). The mother and father are measured separately. The PBI has been shown to have adequate reliability and validity (Parker, 1989, 1990). Additionally, parental bonding as assessed

by the PBI has been found to correspond to actual parental behaviors and compare to parents' own reports (Parker, 1981, 1984). A copy of the PBI can be found in Appendix F.

**Visual Analog Scale (VAS).** A VAS was used as a measure the participants' moods at specific times during the study in order to determine whether the mood inductions were effective. The VAS consists of two 100 mm lines: one line has "not sad at all" on one end and "very sad" on the other, and the other line has "not happy at all" on one end and "very happy" on the other. The participants were instructed to place an X on each line which most closely corresponds to their moods at that moment. A copy of the VAS can be found in Appendix G.

**Short Form of the Profile of Mood States (Shacham, 1983; POMS-SF).** The POMS-SF was also used to measure mood. The POMS-SF consists of 37 adjectives that assess a wide range of moods. Respondents indicate the degree to which each adjective describes them using a 5-point Likert scale. Depressed mood is determined by the score on the depression subscale of the POMS-SF, which consists of 8 adjectives, and ranges from 0 to 32. The POMS-SF has been shown to have good internal consistency and validity (Curran et al., 1995). A copy of the POMS-SF can be found in Appendix H.

**Self-referent task.** This task was a modified version of the self-referent encoding task (SRET), which, together with incidental memory, is thought to reflect the operation of the self-schemas (Ingram, Partridge, Scott, & Bernet, 1994). The stimuli for this task consisted of 15 negative trait words and 15 neutral trait words. Participants were presented with these stimuli one at a time on a computer, and they were asked to rate how closely they think each word described them. The rating scale used three qualitative choices: that the word "describes them very much", "describes them a little", or "never describes them." Each of these responses was randomly assigned to one of three buttons on a response pad. Their responses on these items, as

well as their response times, were recorded electronically. Each response was coded (1 = “never,” 2 = “a little,” 3 = “very”) and the mean value of endorsement was calculated for each participant. After the completion of the self-descriptiveness judgment task, participants were asked to recall as many words as possible from the previous task. Participants will be given 5 minutes to complete this task using paper and pencil. A copy of the stimuli words can be found in Appendix I.

**Dysfunctional attitudes.** The Dysfunctional Attitudes Scale (DAS; Weissman & Beck, 1978) consists of a 40-item questionnaire that assesses on a 7-point Likert scale participants' agreement with items related to perfectionism, rigid ideas, and concern about the judgment of others. Score can range from 40-280 with the higher the score the more dysfunctional the attitudes. In addition, there are two subscales of the DAS that measure performance evaluation (DAS-P) and need for approval (DAS-NA). Although the DAS comes in two forms (Form A and B), DAS-A has been predominately used in previous research and was used in the current study. The DAS has been shown to have adequate validity and good internal consistency (Olinger et al. 1987; Weissman, 1979). It has also been shown that mood has an impact on attitudes as measured by the DAS (Miranda & Persons, 1988). A copy of the DAS can be found in Appendix J.

**Attributional style.** Attributional style was assessed by the Attributional Style Questionnaire (ASQ; Peterson et al., 1982). The ASQ is a self-report questionnaire that presents respondents with 6 positive and 6 negative hypothetical situations, and then asks for the cause of each event. Participants indicate their responses for each event on three 7-point Likert scales that demonstrates the extent to which they make internal, global, and stable attributions. A 1 indicates an external, specific, and unstable attribution, while a 7 indicates an internal, global, and stable

attribution. Higher scores on the negative event scale reflect a more depressogenic attributional style, while higher scores on the positive event scale represent a less depressogenic attributional style. Peterson et al. (1982) reported acceptable internal consistency and test-retest reliability for the ASQ. A copy of the ASQ can be found in Appendix K.

### **Procedure**

We contacted participants who met initial study criteria and asked them if they would be interested in participating in the study. After giving informed consent, the participants were first given the BDI-II, BAI, and the brief self-report version of the SCID. The participants were administered the VAS followed by the negative mood induction. The mood induction used an audio CD that was listened to through headphones. The mood induction was the same as used by Ingram and Ritter (2000) and consisted of sad music from the movie *Field of Dreams*, and instructions for the participants to focus on a sad event from their lives. Following the mood induction, participants filled out the VAS and POMS as a manipulation check. Participants then completed the self-referent task on the computer, and subsequently filled out another VAS. Mood was then re-induced through the same methods described above, and the VAS was once again given. Mood re-induction has shown to be effective in sustaining the mood created by the first induction (Gilboa, Roberts & Gotlib, 1997). The participants were given the DAS and ASQ, the order of which was counter-balanced. Participants were then instructed to write about a happy memory as a positive mood induction, and were then given one last VAS. The PBI, IDD-L, and FHS were administered last. Finally, the participants were debriefed and given the appropriate amount of credits as payment.



## Results

### Plan of Analysis

Analysis focused on testing the effect of having a depressed parent or not on attribution style, dysfunctional attitudes, and biased information processing, using t-tests. Listwise deletion procedures were conducted for missing data. First participant and experiment variables, including age, sex, ethnicity, questionnaire order, and button order were examined to determine whether any differences existed between the two groups. Next the effect of the mood induction and re-induction was examined using repeated measures analysis of variance (ANOVA) on the VAS scales. T-tests were then conducted to see the effect of risk status on each dependent variable. In addition, the relationship between parental depression and possible moderating variables, specifically level of past depression symptoms and parental bonding, were assessed. Finally, the effect of a parent receiving treatment for his or her depressive episode on the outcome variables was also examined.

### Preliminary Analyses

**Participant and experiment variables.** Demographic and participant characteristics are presented in Table 1. There were no significant group differences in age, ethnicity, or sex. In addition to these participant variables, no significant difference were found between the control group and the at-risk group for the order in which the ASQ and DAS were given, nor the order of the buttons during the self-referent encoding task.

**Effect of mood induction.** A repeated measures ANOVA using the VAS scales was used to assess the effect of the mood induction, with group (control, parental depression) as the between subjects factor and time point (before the mood induction, after the mood induction, before the re-induction, after the re-induction, and at the end of the study) as the within subjects

factor. A great number indicated a greater dysphoric mood state. This analysis showed a main effect of time,  $F(4, 140) = 17.85, p < .001$ , but no main effect of group nor a time by group interaction. The means of the mood ratings are shown in Table 2. Follow-up analyses using t-tests indicated that individuals rated their mood as significantly sadder following the mood induction (an increase from 14.03 to 28.86;  $t(36) = 5.53, p < .001$ ), and the re-induction (an increase from 21.45 to 31.76;  $t(37) = 4.53, p < .001$ ). The mood induction and re-induction were thus effective for both participant groups. In addition, participants rated their mood as significantly improved following the positive mood induction at the end of the study,  $t(37) = 2.38, p < .05$ , as compared to their mood after the re-induction (a decrease from 31.76 to 26.47).

### **Effect of Parental Depression on Outcome Variables**

**Information processing variables.** T-tests were conducted to assess the effect of having a parental history of depression on information processing, specifically the endorsement of depressed words, the reaction time when presented with depressed words, and the recall of depressed words. The mean values are shown in Table 3. As results pertain to the endorsement of depressed words, those high-risk individuals differed from controls in their response of how frequently depressed words described them  $F(1, 36) = 8.91, p < .01$ ). As seen in Figure 1, individuals in the at-risk group endorsed depressed words as describing them more frequently than the control group. No significant effects were found for the reaction time to depressed words or the recall of depressed words.

**Attributional style.** The effect of being at risk on depressotypic attributional style is shown in Table 4. Although no individual scale of depressogenic attribution was significant, the overall composite measure approached significance,  $F(1, 36) = 3.75, p = .06$ . High-risk

individuals showed a depressotypic attribution style more frequently than those in the control condition.

**Dysfunctional attitudes.** T-tests were conducted to assess the effect of being at-risk on dysfunctional attitudes. The total score of dysfunctional attitudes was examined, as well as the subscales of performance evaluation (DAS-P) and need for approval (DAS-NA). No significant effects were found for the total score and for the subscales.

**Reaction time.** As seen in Table 3, there was no difference in reaction time to depressed words between the two groups. However, reaction times for both depressed and nondepressed words were also examined in a 2x2 design to establish if, for each group, there was a significant difference between the reaction time to depressed and nondepressed words which is indicative of a different pattern of response. The means of the reaction times are shown in Table 6. For each condition, the reaction times differed significantly between the depressed and nondepressed words (for control condition,  $t(19) = 19.29, p < .001$ ; for at-risk condition,  $t(17) = 14.78, p < .001$ ). As shown in Figure 2, those with parent depression reacted significantly more quickly to depressed words than to nondepressed words, and those in the control condition reacted significantly more quickly to nondepressed words than to depressed words.

### **Moderating Variables**

Several variables were assessed that could possibly effect the relationship between having a parental history of depression and measures of cognitive vulnerability. Level of past depression symptoms, quality of parental bonding, and treatment status of the parents were assessed.

**Past depression symptoms.** Past depression symptoms were measured as a possible moderating variable between parental depression and cognitive vulnerability. The level of past

depression symptoms differed significantly between the two groups,  $t(1, 36) = 4.28, p < .001$ . As shown in Figure 3, high-risk individuals show significantly higher levels of past depression symptomatology. In addition, regression analyses were run with past depression symptoms predicting the outcome variables that had previously been found to be significant (endorsement of depressed words and ASQ results). These were conducted to assess for direct effects of past depression symptoms. The results are shown in Table 6. The intercept estimate for the composite measure of the ASQ was significant ( $p < .001$ ), although the linear term was not. For the endorsement model, the intercept estimate was significant ( $p < .05$ ), and the linear term was nearly significant ( $p < .06$ ). This indicates that as the level of past depression symptoms increased, participants more frequently responded that a depressed word described them.

**Parental bonding.** The relationship between the quality of parental bonding and at-risk status was examined to assess for possible moderating effects. There was no significant relationship found between quality of parental bond and whether an individual had a parental history of depression.

**Treatment status of parents.** The effect of whether a depressed parent had received treatment was assessed as a possible moderating variable. Of those 18 individuals who reported a parental history of depression, nine reported that the depressed parent had received treatment (either psychotherapy or medication), and nine reported that the depressed parent had not received treatment. Treatment status was not found to significantly impact the effect of parental depression on any of the outcome variables.

## Discussion

Despite a growing literature examining the depression vulnerability in children of depressed parents, relatively little is known about this vulnerability once the children reach

young adulthood. The purpose of this study was to evaluate in young adults the effect of having a parental history of depression on cognitive vulnerability, which was operationalized as depressotypic information processing, dysfunctional attitudes, and negative attributions. Consistent with Beck's cognitive model and existing literature, a negative mood induction was used to prime latent negative schemas. Results partially supported the hypotheses. Data indicated that at-risk individuals showed more negative information processing through the endorsement of negative self-referent words and overall more depressogenic attributions. However, there were no differences between the two groups on other outcome measures, including other information processing variables such as reaction time and recall, as well as dysfunctional attitudes.

In line with findings such those by Garber and Robinson (1997), we found evidence approaching significance ( $p=.06$ ) that young adults with a parental history of depression experience greater depressotypic attributional style than adults without this history. High-risk individuals viewed negative events to be more global, stable, and internal than low-risk individuals. In addition, similar to findings by Taylor and Ingram (1999), we found that those in the high-risk group endorsed depressive words at a higher rate than those in the low-risk group, which is suggestive of a less positive self-concept.

It is unclear why we found a relationship between parental depression and only a few cognitive vulnerability measures. Several possible factors that might impact these findings, such as quality of parental bond and treatment history of depressed parents, were found not to be related to at-risk status. However, level of past depressive symptoms did differ between the two groups, with those in the high-risk group experiencing significantly higher levels of past depressive symptoms than those in the low-risk group, although none of the participants had a past major depressive episode. In line with theories such as the "scar hypothesis" (Lewinsohn,

Steinmetz, Larson, & Franklin, 1981), this perhaps points to past depressive symptoms playing a role in the cognitive vulnerability that was measured, rather than parental depression. Individuals with parental history of depression tend to have much poorer outcomes, including earlier onset and more severe episodes (for a review see Hammen, 2009). By excluding those individuals who have already experienced a depressive episode, we may have also excluded those with greater cognitive vulnerability. Compared to this group, those who have a parental history of depression but have not yet experienced a depressive episode may have less negative thinking. It makes sense that those with the most severe cognitive vulnerability would experience an earlier onset of depression (in adolescence), and would therefore be excluded from our analyses. Because our sample excluded those with a past depressive episode, we may have truncated our range of vulnerability and made it more difficult to detect differences between the two groups. These are obviously “post hoc” explanations for the pattern of findings; more research is needed in this area to explore this possible explanation for this relationship.

### **Limitations**

There are several limitations with the present research. One limitation is the fact that all participants received the negative mood induction. Our sample size did not allow for randomly assigning some individuals to receive a neutral mood induction and comparing their cognitive vulnerability to those who received a negative mood induction. This lack of randomization may have obscured some group differences that exist when depressotypic schemas remain latent. Past research indicates that, for those at-risk, differences emerge in manifest negative thinking when a negative mood induction is used (for reviews see Barnett & Gotlib, 1988). If we had been able to compare the participants before and after a negative mood induction, then some differences may have emerged between these two groups.

Another limitation is the indirect way in which the parental depression was assessed. Studies that have examined the impact of parental depression in children have usually assessed the parents directly for psychopathology, while our study relied on retrospective report of the adult children. Although the validity of the FHS is good (Weismann et al., 2000), it is possible that this decreased our accuracy in diagnosis, as compared to past research. Future studies would benefit from bringing in the parents and assessing them directly for past depression.

Another limitation is the correlational nature of the data gathered. As with all correlational models, one must be careful to make causal interpretations of the data. Although the nature of the study implies a causal connection (the FHS assessed for parental depression in childhood and the cognitive vulnerability measures assessed current thinking patterns), the role of parental depression as a time-specific predictor is not certain. It will therefore be important for this research question to be explored further using a longitudinal method to determine the casual nature of the relationship between parental depression and cognitive variables in young adulthood.

### **Future Directions**

There are numerous future directions that are suggested by the current data. One future study might include adults with a parental history of depression who also have experienced a past depression episode. This might shed light on the role that past depressive symptoms play in creating cognitive vulnerability for those with a parental history of depression. A next step would be to examine those with a parental history of depression for what differences might exist between individuals who do develop depression and those who do not. This would add to the growing literature on how risk and protective factors interact with an existing depression diathesis to lead to or prevent the development of depression.

Another future direction would be to explore what specific mechanisms underlie the increased cognitive vulnerability for individuals with a parental history of depression. Mechanisms that have been explored include the parental bond (for review see Gladstone & Parker, 2005), a mother's critical attitudes (Goodman et al., 1994), and maternal cognitive style (Garber & Flynn, 2001). Recent research suggests that genetic mechanisms may also be at play in conferring cognitive vulnerability to depression (Beevers, Scott, McGeary, & McGeary, 2009; Hayden et al., 2008; Sheikh et al., 2008). Although genetics have been studied within the context of those with a past history of depression, no research has yet to study genetic mechanisms for those with a parental history of depression.

In sum, the present study found that young adults with a parental history of depression endorsed more negative self-referent words and reported more negative cognitions about the causes of events than individuals without this history. These results are consistent with past studies that have found greater negative cognitions among high-risk children. By examining cognitive vulnerability in young adults, these data provide a greater understanding of how depressogenic vulnerability factors continue to impact cognitions into adulthood. We hope these findings will contribute to the field's knowledge regarding the interplay between risk factors and the development and maintenance of depression.



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Table 1  
*Characteristics of Participants*

Characteristic	Group					
	Control (n = 20)			Parental Depression (n = 18)		
	<i>M</i>	<i>SD</i>	%	<i>M</i>	<i>SD</i>	%
Age	19.10	.85		20.61	3.517	
Female			40%			61%
Caucasian			85%			61%
Corrected vision			50%			56%

Table 2  
*Mean Mood Ratings Before and After Mood Inductions*

Time Point	<i>M</i>	<i>SD</i>
Before induction	14.03	13.34
After induction	28.86	19.71
Before re-induction	21.45	18.56
After re-induction	31.76	20.69
End of session	26.47	20.99

Table 3  
*Mean Values for Information Processing Outcome Variables*

	Group			
	Control		Parental Depression	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Reaction Time to Depressed Words	1943.91	586.18	1875.50	538.30
Endorsement of Depressed Words**	17.55	3.00	19.72	5.37
Recall of Depressed Words	3.15	1.63	3.56	2.20

Note: \*  $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ . Reaction times are given in milliseconds; all other numbers are frequencies. The results of the nondepressed stimuli were nonsignificant and are not shown.

Table 4  
*Mean Values for Attributional Style to Negative Situations*

Time Point	Group			
	Control		Parental Depression	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Internal Attribution	25.90	4.71	26.83	5.89
Stable Attribution	23.85	4.15	22.89	4.38
Global Attribution	22.55	5.04	25.78	6.015
Composite Attribution <sup>+</sup>	72.30	7.98	75.50	11.18

Note: + $p = .06$  \*  $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 5  
*Mean Reaction Times (in milliseconds)*

Word	Group			
	Control		Parental Depression	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Depressed	1943.91	586.18	1875.49	538.30
Nondepressed	1890.16	438.23	1939.63	164.52

Table 6  
*Unstandardized Parameter Estimates for the Past Depression Symptoms Model*

	Intercept	Past Depression Symptoms
Endorsement of Depressed Words	2.146*	.096 <sup>+</sup>
ASQ	71.470***	.193

Note: + $p < .06$ , \*  $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Figure 1  
*Frequency of Endorsement of Depressed Words*

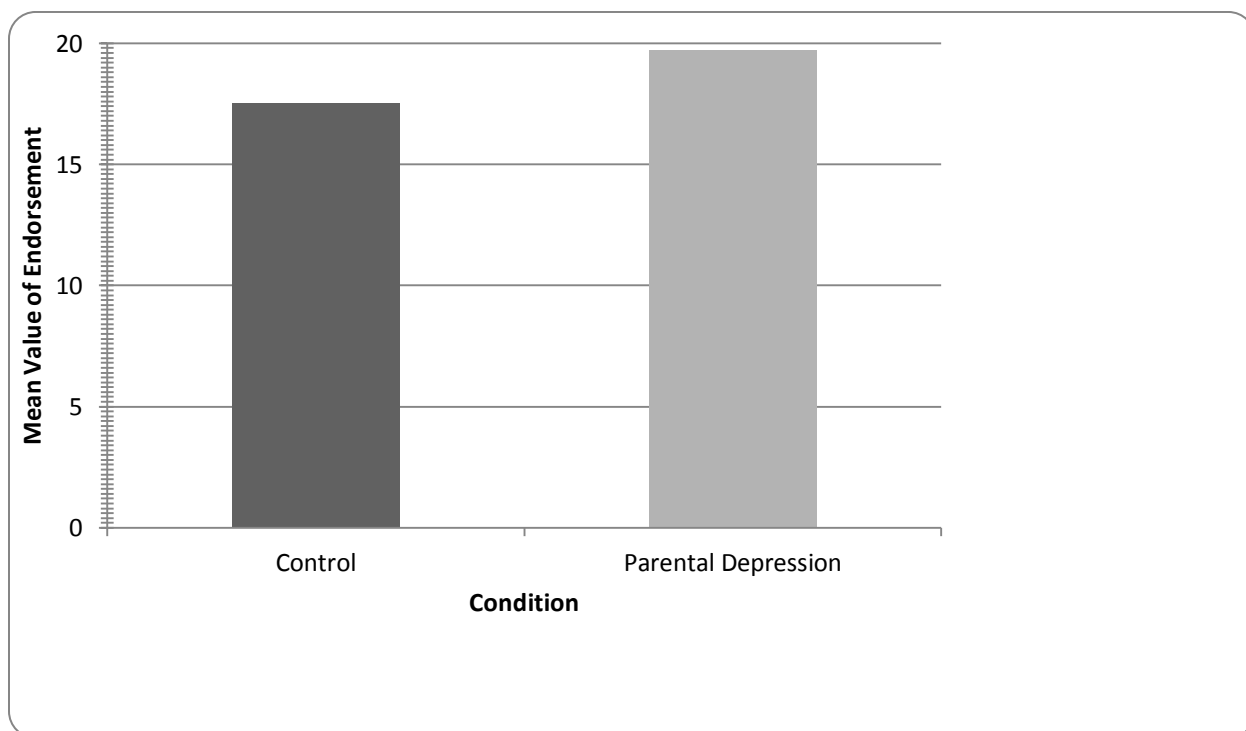


Figure 2  
*Reaction Time for Each Condition of the Independent Variable*

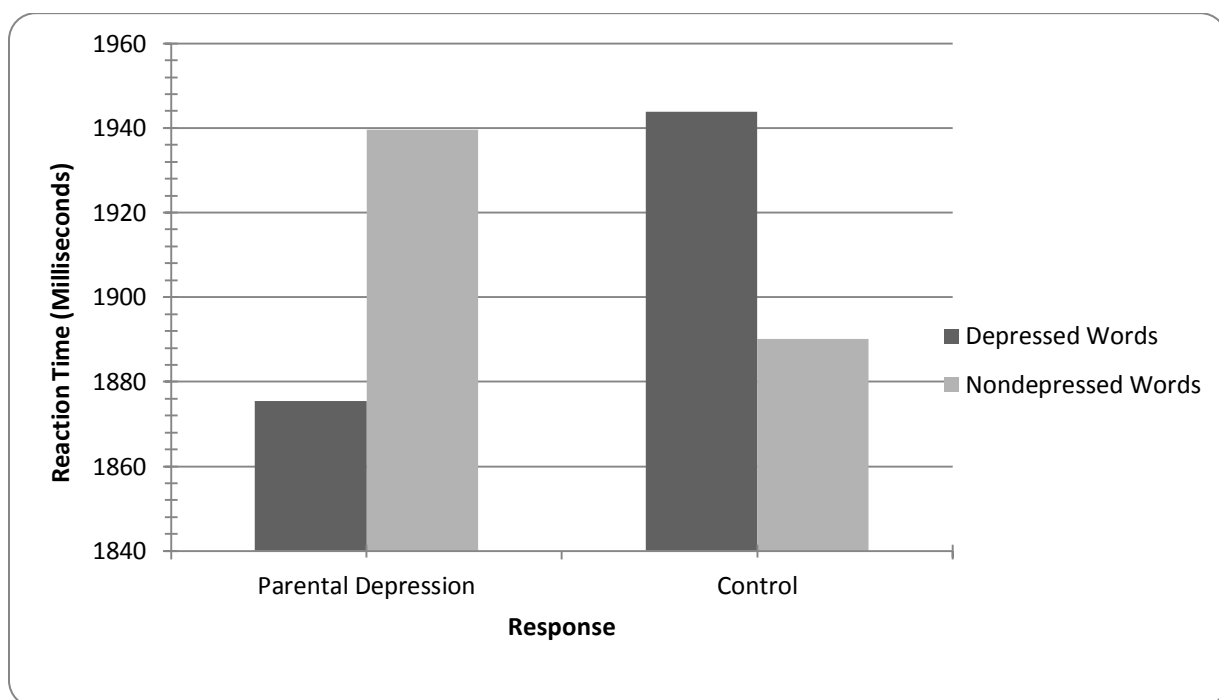
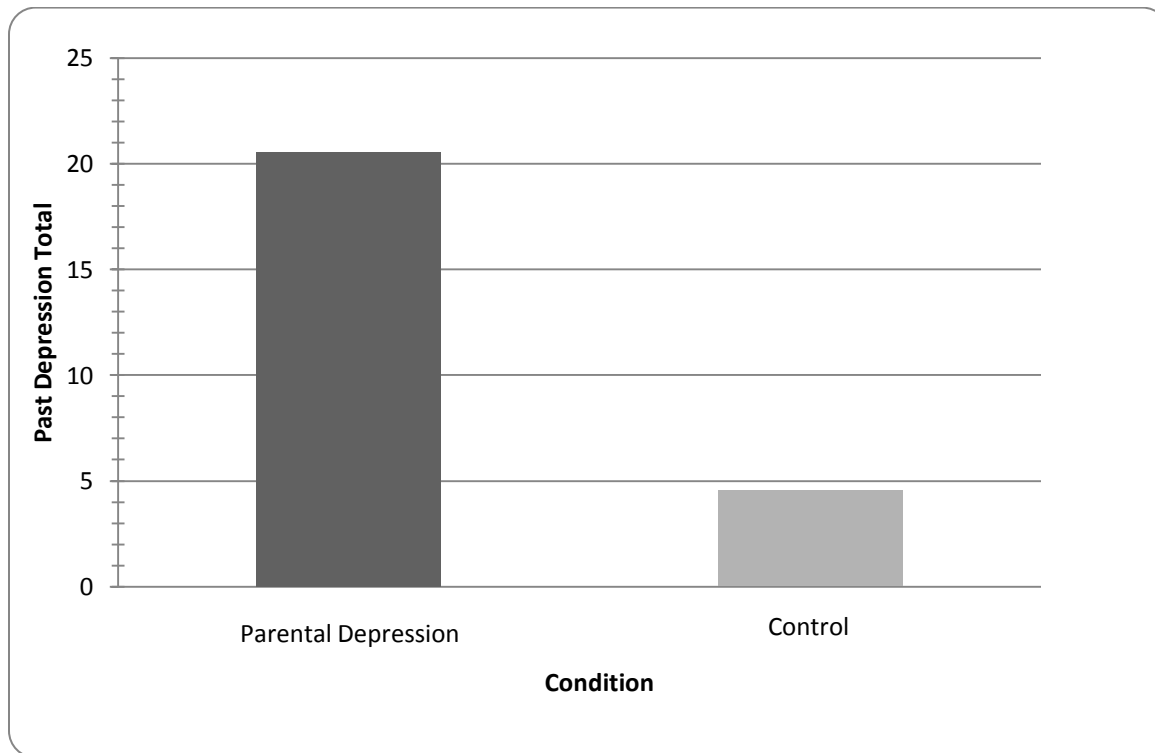


Figure 3  
*Mean Past Depression Totals*



## Appendix A: Beck Depression Inventory

**BDI-II**

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the **one statement** in each group that best describes the way you have been feeling during the **past two weeks, including today**. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including item 16 (Changes in Sleeping Pattern) or item 18 (Changes in Appetite).

## 1. Sadness

- 0 I do not feel sad.
- 1 I feel sad much of the time.
- 2 I am sad all the time.
- 3 I am so sad or unhappy that I can't stand it.

## 2. Pessimism

- 0 I am not discouraged about my future,
- 1 I feel more discouraged about my future than I used to be.
- 2 I do not expect things to work out for me.
- 3 I feel my future is hopeless and will only get worse.

## 3. Past Failure

- 0 I do not feel like a failure.
- 1 I have failed more than I should have.
- 2 As I look back, I see a lot of failure.
- 3 I feel I am a total failure as a person.

## 4. Loss of Pleasure

- 0 I get as much pleasure as I ever did from things I enjoy.
- 1 I do not enjoy things as much as I used to.
- 2 I get very little pleasure from the things I used to enjoy.
- 3 I can't get any pleasure from the things I used to enjoy.

## 5. Guilty Feelings

- 0 I don't feel particularly guilty.
- 1 I feel guilty over many things I have done or should have done.
- 2 I feel quite guilty most of the time.
- 3 I feel guilty all of the time.

## 6. Punishment Feelings

- 0 I don't feel I am being punished.
- 1 I feel I may be punished.
- 2 I expect to be punished.
- 3 I feel like I am being punished.

## 7. Self-Dislike

- 0 I feel the same about myself as ever.
- 1 I have lost confidence in myself.
- 2 I am disappointed in myself.
- 3 I dislike myself.

## 8. Self-Criticalness

- 0 I don't criticize or blame myself more than usual.
- 1 I am more critical of myself than I used to be.
- 2 I criticize myself for all of my faults.
- 3 I blame myself for everything bad that happens.

## 9. Suicidal Thoughts or Wishes

- 0 I don't have any thoughts of killing myself.
- 1 I have thoughts of killing myself, but I would not carry them out.
- 2 I would like to kill myself.
- 3 I would kill myself if I had the chance.

## 10. Crying

- 0 I don't cry anymore than I used to.
- 1 I cry more than I used to.
- 2 I cry over every little thing.
- 3 I feel like crying, but I can't.

## 11. Agitation

- 0 I am no more restless or wound up than usual.
- 1 I feel more restless or wound up than usual.
- 2 I am so restless or agitated that it's hard to stay still.
- 3 I am so restless or agitated that I have to keep moving or doing something.



## 12. Loss of Interest

- 0 I have not lost interest in other people or activities.
- 1 I am less interested in other people or things than before.
- 2 I have lost most of my interest in other people or things.
- 3 It's hard to get interested in anything.

## 13. Indecisiveness

- 0 I make decisions about as well as ever.
- 1 I find it more difficult to make decisions than usual.
- 2 I have much greater difficulty in making decisions than I used to.
- 3 I have trouble making any decisions.

## 14. Worthlessness

- 0 I do not feel like I am worthless.
- 1 I don't consider myself as worthwhile and useful as I used to.
- 2 I feel more worthless as compared to other people.
- 3 I feel utterly worthless

## 15. Loss of Energy

- 0 I have as much energy as ever.
- 1 I have less energy than I used to have.
- 2 I don't have enough energy to do very much.
- 3 I don't have enough energy to do anything.

## 16. Changes in Sleeping Pattern

0 I have not experienced any change in my sleeping pattern.

---

1a I sleep somewhat more than usual.

1b I sleep somewhat less than usual.

---

2a I sleep a lot more than usual.

2b I sleep a lot less than usual.

---

3a I sleep most of the day.

3b I wake up 1-2 hours early and can't get back to sleep.

(over)

## 17. Irritability

- 0 I am no more irritable than usual.
- 1 I am more irritable than usual.
- 2 I am much more irritable than usual.
- 3 I am irritable all the time.

## 18. Changes in Appetite

- 0 I have not experienced any change in my appetite.
- 

- 1a My appetite is somewhat less than usual.
  - 1b My appetite is somewhat greater than usual.
- 

- 2a My appetite is much less than before.
  - 2b My appetite is much greater than before.
- 

- 3a I have no appetite at all.
- 3b I crave food all the time.

## 19. Concentration Difficulty

- 0 I can concentrate as well as ever.
- 1 I can't concentrate as well as usual.
- 2 It's hard to keep my mind on anything for very long.
- 3 I find I can't concentrate on anything.

## 20. Tiredness or Fatigue

- 0 I am no more tired or fatigued than usual.
- 1 I get more tired or fatigued more easily than I used to.
- 2 I am too tired or fatigued to do a lot of the things I used to do.
- 3 I am too tired or fatigued to do most of the things I used to do.

## 21. Loss of Interest in Sex

- 0 I have not noticed any recent change in my interest in sex.
- 1 I am less interested in sex than I used to be.
- 2 I am much less interested in sex now.
- 3 I have lost interest in sex completely.

## Appendix B: The Inventory to Diagnose Depression, Lifetime version

## IDD-L

For the following questions, indicate the one statement that best describes how you felt across (or longer than) the whole two-week span **WHEN YOU WERE MOST DEPRESSED. IF YOUR ANSWER CHOICE DID NOT LAST AT LEAST TWO WEEKS, MARK THE TOP ANSWER CHOICE.**

1. What one statement best describes how you felt?

- 0 I did not feel sad or depressed. (or lasted less than 2 weeks)
- 1 I occasionally felt sad or down.
- 2 I felt sad most of the time, but I was able to snap out of it.
- 3 I felt sad all the time, and I couldn't snap out of it.
- 4 I was so sad or unhappy that I couldn't stand it.

2. What one statement best describes how you felt?

- 0 My energy level was normal. (or change lasted less than 2 weeks)
- 1 My energy level was a little lower than normal.
- 2 I got tired more easily and had less energy than is usual.
- 3 I got tired from doing almost anything.
- 4 I felt tired or exhausted almost all the time.

3. What one statement best describes how you felt?

- 0 I was not feeling more restless and fidgety than usual. (or change lasted < 2 weeks)
- 1 I felt a little more restless or fidgety than usual.
- 2 I was very fidgety, and I had some difficulty sitting still in a chair.
- 3 I was extremely fidgety, and I paced a little bit almost everyday.
- 4 I paced more than an hour per day, and I couldn't sit still.

4. What one statement best describes how you felt?

- 0 I did not talk or move more slowly than usual. (or change lasted < 2 weeks)
- 1 I talked a little slower than usual.
- 2 I spoke slower than usual, and it took me longer to respond to questions, but I could still carry on a normal conversation.
- 3 Normal conversations were difficult for me because it was hard to start talking.
- 4 I felt extremely slowed down physically, like I was stuck in mud.

5. What one statement best describes how you felt?

- 0 I did not lose interest in my usual activities. (OR change lasted less than 2 weeks)
- 1 I was a little less interested in 1 or 2 of my usual activities.
- 2 I was less interested in several of my usual activities.
- 3 I lost most of my interest in almost all of my usual activities.
- 4 I lost interest in all of my usual activities.

6. What one statement best describes how you felt?

- 0 I got as much pleasure out of my usual activities as usual. (OR change lasted <2 weeks)
- 1 I got a little less pleasure from 1 or 2 of my usual activities.
- 2 I got less pleasure from several of my usual activities.
- 3 I got almost no pleasure from several of my usual activities.
- 4 I got no pleasure from any of the activities which I usually enjoy.

7. What one statement best describes how you felt?

- 0 My interest in sex was normal. (OR change lasted < 2 weeks)
- 1 I was only slightly less interested in sex than usual.
- 2 There was noticeable decrease in my interest in sex.
- 3 I was much less interested in sex than usual.
- 4 I lost all interest in sex.

8. What one statement best describes how you felt?

- 0 I did not feel guilty. (OR I felt this way less than 2 weeks)
- 1 I occasionally felt a little guilty.
- 2 I often felt guilty.
- 3 I felt quite guilty most of the time.
- 4 I felt extremely guilty most of the time.

9. What one statement best describes how you felt?

- 0 I did not feel like a failure. (or feelings were for less than 2 weeks)
- 1 My opinion of myself was occasionally a little low.
- 2 I felt I was inferior to most people.

- 3 I felt like a failure.
- 4 I felt I was a totally worthless person.

10. What one statement best describes how you felt?

- 0 I could concentrate as well as usual. (or difficulties lasted < 2 weeks)
- 1 My ability to concentrate was slightly worse than usual.
- 2 My attention span was not as good as usual and I had difficulty collecting my thoughts; but this didn't cause any problems.
- 3 My ability to read or hold a conversation was not as good as usual.
- 4 I could not read, watch TV, or have a conversation without great difficulty.

11. What one statement best describes how you felt?

- 0 I made decisions as well as usual. (OR difficulties lasted < 2 weeks)
- 1 Decision making was slightly more difficult than usual.
- 2 It was harder and took longer to make decisions, but I did make them.
- 3 I was unable to make some decisions.
- 4 I couldn't make any decisions at all.

12. What one statement best describes how you felt?

- 0 My appetite was not less than normal. (OR change lasted < 2 weeks)
- 1 My appetite was slightly worse than usual.
- 2 My appetite was clearly not as good as usual, but I still ate.
- 3 My appetite was much worse.
- 4 I had no appetite at all, and I had to force myself to eat even a little.

13. What one statement best describes how you felt?

- 0 I didn't lose any weight.
- 1 I lost less than 5 pounds.
- 2 I lost between 5-10 pounds.
- 3 I lost between 11-25 pounds.
- 4 I lost more than 25 pounds.

14. What one statement best describes how you felt?

- 0 My appetite was not greater than normal. (OR change was < 2 wks)
- 1 My appetite was slightly greater than usual.
- 2 My appetite was clearly greater than usual.

- 3 My appetite was much greater than usual.
- 4 I felt hungry all the time.

15. What one statement best describes how you felt?

- 0 I didn't gain any weight.
- 1 I gained less than 5 pounds.
- 2 I gained between 5-10 pounds.
- 3 I gained between 11-25 pounds.
- 4 I gained more than 25 pounds.

16. What one statement best describes how you felt?

- 0 I was not sleeping less than usual. (OR change was for less than 2 weeks)
- 1 I occasionally had light difficulty sleeping.
- 2 I clearly didn't sleep as well as usual.
- 3 I slept about half my normal amount of time.
- 4 I slept less than 2 hours per night.

17. What one statement best describes how you felt?

- 0 I was not sleeping more than normal. (OR change was for < 2 weeks)
- 1 I occasionally slept more than usual.
- 2 I frequently slept at least 1 hour more than usual.
- 3 I frequently slept at least 2 hours more than usual.
- 4 I frequently slept at least 3 hours more than usual.

18. What one statement best describes how you felt?

- 0 I did not feel anxious, nervous or tense. (OR these feelings last < 2 weeks)
- 1 I occasionally felt a little anxious.
- 2 I often felt anxious.
- 3 I felt anxious most of the time.
- 4 I felt terrified and near panic.

19. What one statement best describes how you felt?

- 0 I did not feel discouraged about the future. (OR felt discouraged < 2 weeks)
- 1 I occasionally felt a little discouraged about the future.
- 2 I often felt discouraged about the future.

- 3 I felt very discouraged about the future most of the time.
- 4 I felt that the future was hopeless and that things would never improve.

20. What one statement best describes how you felt?

- 0 I did not feel irritated or annoyed (OR felt irritated/annoyed < 2 weeks)
- 1 I occasionally got a little more irritated than usual.
- 2 I got irritated or annoyed by things that usually didn't bother me.
- 3 I felt irritated or annoyed almost all the time.
- 4 I felt so depressed that I didn't get irritated at all by things that would normally bother me.

21. What one statement best describes how you felt?

- 0 I was not worried about my physical health. (OR concerns lasted < 2 weeks)
- 1 I was occasionally concerned about bodily aches and pains.
- 2 I was worried about my physical health.
- 3 I was very worried about my physical health.
- 4 I was so worried about my physical health that I could not think about anything else.

22. What one statement best describes you?

- 0 This bout of depression is the only one I have ever had.
- 1 I have had an additional period of depression similar to the one I already described.
- 2 I have had two more periods of depression similar to the one I already described.
- 3 I have had three more periods of depression similar to the one I already described.
- 4 I have had five or more periods of depression similar to the one I already described.

23. What one statement best describes the period?

- 0 I did not get any treatment for how I felt.
- 1 I got psychotherapy, but did not take anti-depressant medication.
- 2 I took anti-depressant medication, but did not get psychotherapy.
- 3 I got psychotherapy and took anti-depressant medication(s).
- 4 I was admitted to a psychiatric hospital for treatment.

**Additional Questions:**

24. How long ago was this depressive period? \_\_\_\_\_

25. When was your last depressive period? \_\_\_\_\_



## Appendix C: Beck Anxiety Inventory

Subject ID: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ Study: \_\_\_\_\_ Session: \_\_\_\_\_

## BAI

Below is a list of common symptoms of anxiety. Please read each item in the list carefully. Indicate how much you have been bothered in *the past week including today* by each symptom. Circle the number in the corresponding space next to each symptom.

	0	1	2	3	4
	Not at all	Mildly	Moderately:	Severely:	I
			It did not	It was very	could
			bother me	unpleasant,	barely
				but I could	stand
				stand it	it
1. Numbness or tingling	0	1	2	3	4
2. Feeling hot	0	1	2	3	4
3. Wobbliness in legs	0	1	2	3	4
4. Unable to relax	0	1	2	3	4
5. Fear of the worst happening	0	1	2	3	4
6. Dizzy or lightheaded	0	1	2	3	4
7. Heart pounding or racing	0	1	2	3	4
8. Unsteady	0	1	2	3	4
9. Terrified	0	1	2	3	4
10. Nervous	0	1	2	3	4
11. Feeling of choking	0	1	2	3	4
12. Hands trembling	0	1	2	3	4
13. Shaky	0	1	2	3	4
14. Fear of losing control	0	1	2	3	4
15. Difficulty breathing	0	1	2	3	4
16. Fear of dying	0	1	2	3	4
17. Scared	0	1	2	3	4
18. Indigestion or discomfort in abdomen	0	1	2	3	4
19. Faint	0	1	2	3	4
20. Face flushed	0	1	2	3	4
21. Sweating (not due to heat)	0	1	2	3	4

## Appendix D: Modified Structured Clinical Interview for DSM-IV-TR Axis I Disorders

**SCID – SR**

Read each statement below and check “YES” or “NO”.

	YES	NO
1. Have you ever had a period of time when you were feeling so good, high, excited, or hyper that <b>other people thought you were not your normal self or you were so hyper that you got into trouble?</b>		
2. Did it last most of the day, nearly every day for at least ONE WEEK?		
3. Has there ever been a period of time when you were so irritable that you found yourself shouting at people or starting fights or arguments?		
4. Did it last most of the day, nearly every day for at least ONE WEEK?		
5. <b>In the past 12 months</b> , did you have a time when you weighed much less than other people thought you ought to weigh? IF YES, complete questions 6-8. IF NO skip to question 9.		
6. At that time, were you very afraid that you could become fat?		
7. At your lowest weight during that time, did you still feel too fat or that part of your body was too fat?		
8. FOR FEMALES: During that time, did you miss three consecutive periods?		
9. <b>In the past 12 months</b> , did you often have times when your eating was out of control? If YES complete questions 10-13. IF NO skip to question 14.		
10. At that time, did you often eat in a two-hour period what other people would regard as an unusual amount of food?		
11. Did you do anything to counteract the effects of eating that much? (like making yourself vomit, taking laxatives, enemas or water pills, strict dieting or fasting, or exercising a lot?)		
12. Did these behaviors occur at least twice a week for at least three months?		
13. Were your body weight and shape among the most important things that affected how you felt about yourself?		

	YES	NO
14. Have you ever received special messages from the TV, radio, or newspaper, or from the way things were arranged around you?		
15. Have you ever felt that other people were going out of their way to give you a hard time, or trying to hurt you?		
16. Have you ever felt that you were especially important in some way, or that you had special powers to do things that other people could not do?		
17. Do you ever hear things that other people couldn't, such as noises, or the voices of people whispering or talking when you were alone?		
18. Do you have visions or see things that other people couldn't see?		
19. In the <b>past 12 months</b> has alcohol caused <b>significant</b> impairment or distress for you in one or more of the following ways? (check all that apply)		
a. Tolerance effects (a need for markedly increased amounts of alcohol to achieve intoxication or markedly diminished effect with continued use of the same amount of alcohol)		
b. Withdrawal symptoms (symptoms due to the cessation of, or reduction in, alcohol use and can include increased heart rate, hand tremor, nausea, insomnia, and anxiety)		
c. Alcohol is often taken in larger amounts or over a longer period than was intended		
d. There is a persistent desire or unsuccessful efforts to cut down or control alcohol use		
e. A great deal of time is spent in activities necessary to obtain alcohol (e.g., driving long distances), use the alcohol, or recover from its effects		
f. Important social, occupational, or recreational activities are given up or reduced because of alcohol use		
g. Alcohol use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance (e.g., continued drinking despite recognition that an ulcer was made worse by alcohol consumption)		
20. In the <b>past 12 months</b> has drinking caused <b>significant</b> impairment or distress for you in one or more of the following ways? (check all that apply)		
a. Recurrent poor work or school performance		
b. Recurrent alcohol use in situations in which it is physically hazardous		
c. Recurrent alcohol-related legal problems		

d. Continued alcohol use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of alcohol		
	YES	NO
21. In the <b>past 12 months</b> have drugs or medicines, including prescription drugs and “street” drugs like marijuana or methamphetamines, caused <b>significant</b> impairment or distress for you in one or more of the following ways? (check all that apply)		
a. Tolerance effects (a need for markedly increased amounts of the substance to achieve intoxication or markedly diminished effect with continued use of the same amount of the substance)		
b. Withdrawal symptoms (symptoms due to the cessation of, or reduction in, substance use)		
c. The substance is often taken in larger amounts or over a longer period than was intended		
d. There is a persistent desire or unsuccessful efforts to cut down or control substance use		
e. A great deal of time is spent in activities necessary to obtain the substance (e.g., visiting multiple doctors or driving long distances), use the substance, or recover from its effects		
f. Important social, occupational, or recreational activities are given up or reduced because of substance use		
g. The substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance (e.g., current cocaine use despite recognition of cocaine-induced depression)		
22. In the <b>past 12 months</b> have drugs or medicines, including prescription drugs and “street” drugs like marijuana or methamphetamines, caused <b>significant</b> impairment or distress for you in one or more of the following ways? (check all that apply)		
a. Recurrent poor work or school performance		
b. Recurrent alcohol use in situations in which it is physically hazardous		
c. Recurrent substance-related legal problems		
d. Continued substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance		

## Appendix E: Modified Family History Screen

## FHS

Below are various questions that ask about the psychiatric histories and behaviors of your parents. Check the box that most appropriately reflects your knowledge of your MOTHER. When answering, **exclude times when your mother was physically ill or mourning after a death.** Your responses will be kept strictly confidential.

MOTHER:

	Yes	No	Don't Know
1. Has there ever been a period of time during which your mother felt sad, blue, or depressed for <b>most of the day, nearly every day</b> and it lasted at least TWO WEEKS?			
2. Has there ever been a time when your mother lost interest or pleasure in her usual activities <b>most of the day, nearly every day</b> and it lasted at least TWO WEEKS?  If you answered NO to both questions, proceed to #13 If you answer YES to either question, focus on that period of time for the following questions.			
3. During this period of time did your mother experience a significant change in appetite, (either eating more or less)?			
4. During this period did your mother experience a significant weight gain or loss (not intentional)?			
5. During this period did your mother ever have sleep problems, like trouble falling asleep, or waking up too early, or sleeping too much, that lasted as much as an hour a night?			
6. During this period did your mother ever act so fidgety or restless that she was unable to sit still?			
7. <u>If you answered no</u> , what about your mother talking or moving more slowly than is normal for her?			
8. During this period did your mother seem fatigued and have less energy?			
9. During this time did your mother has feelings of worthlessness and/or excessive guilt about things done or not done?			
10. During this period did your mother have trouble thinking or concentrating?			
11. During this period did your mother have difficulty making decisions about everyday things?			
12. Because of these symptoms has your mother ever had difficulty carrying out her usual responsibilities such as working, going to school, or taking care of the family or household for a WEEK OR MORE?			

13. Has your mother ever suffered from depression?			
14. Has your mother ever seen a psychiatrist, psychologist, social worker, doctor, or other health professional for depression?			
15. Has your mother ever stayed overnight or longer in a hospital or treatment facility because of depression?			
16. Has a doctor ever given your mother any medicine for depression?			

## FHS

Below are various questions that ask about the psychiatric histories and behaviors of your parents. Check the box that most appropriately reflects your knowledge of your FATHER. When answering, **exclude times when your father was physically ill or mourning after a death.** Your responses will be kept strictly confidential.

FATHER:

	Yes	No	Don't Know
1. Has there ever been a period of time during which your father felt sad, blue, or depressed for <b>most of the day, nearly every day</b> and it lasted at least TWO WEEKS?			
2. Has there ever been a time when your father lost interest or pleasure in his usual activities <b>most of the day, nearly every day</b> and it lasted at least TWO WEEKS?  If you answered NO to both questions, proceed to #13 If you answer YES to either question, focus on that period of time for the following questions.			
3. During this period of time did your father experience a significant change in appetite, (either eating more or less)?			
4. During this period did your father experience a significant weight gain or loss (not intentional)?			
5. During this period did your father ever have sleep problems, like trouble falling asleep, or waking up too early, or sleeping too much, that lasted as much as an hour a night?			
6. During this period did your father ever act so fidgety or restless that he was unable to sit still?			
7. <u>If you answered no</u> , what about your father talking or moving more slowly than is normal for him?			
8. During this period did your father seem fatigued and have less energy?			
9. During this time did your father has feelings of worthlessness and/or excessive guilt about things done or not done?			
10. During this period did your father have trouble thinking or concentrating?			
11. During this period did your father have difficulty making decisions about everyday things?			
12. Because of these symptoms has your father ever had difficulty carrying out his usual responsibilities such as working, going to school, or taking care of the family or household for a WEEK OR MORE?			
13. Has your father ever suffered from depression?			

14. Has your father ever seen a psychiatrist, psychologist, social worker, doctor, or other health professional for depression?			
15. Has your father ever stayed overnight or longer in a hospital or treatment facility because of depression?			
16. Has a doctor ever given your father any medicine for depression?			



## Appendix F: Parental Bonding Instrument

This questionnaire lists various attitudes and behaviors of parents. Please mark the column that most appropriately reflects how you remember your mother during your first 16 years.

MOTHER:	Very Like	Some What Like	Some What Unlike	Very Unlike
1. Spoke to me with a warm and friendly voice	( )	( )	( )	( )
2. Did not help me as much as I needed	( )	( )	( )	( )
3. Let me do those things I liked doing	( )	( )	( )	( )
4. Seemed emotionally cold to me	( )	( )	( )	( )
5. Appeared to understand my problems and worries	( )	( )	( )	( )
6. Was affectionate to me	( )	( )	( )	( )
7. Liked me to make my own decisions	( )	( )	( )	( )
8. Did not want me to grow up	( )	( )	( )	( )
9. Tried to control everything I did	( )	( )	( )	( )
10. Invaded my privacy	( )	( )	( )	( )
11. Enjoyed talking things over with me	( )	( )	( )	( )
12. Frequently smiled at me	( )	( )	( )	( )
13. Tended to baby me	( )	( )	( )	( )
14. Did not seem to understand what I needed or wanted	( )	( )	( )	( )
15. Let me decide things for myself	( )	( )	( )	( )
16. Made me feel I wasn't wanted	( )	( )	( )	( )
17. Could make me feel better when I was upset	( )	( )	( )	( )
18. Did not talk with me very much	( )	( )	( )	( )
19. Tried to make me dependent on her	( )	( )	( )	( )
20. Felt I could not look after myself unless she was around	( )	( )	( )	( )
21. Gave me as much freedom as I wanted	( )	( )	( )	( )
22. Let me go out as often as I wanted	( )	( )	( )	( )
23. Was overprotective of me	( )	( )	( )	( )
24. Did not praise me	( )	( )	( )	( )
25. Let me dress in any way I pleased	( )	( )	( )	( )

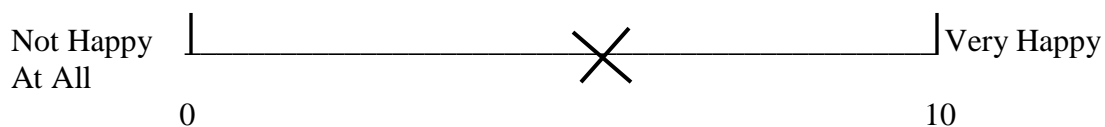
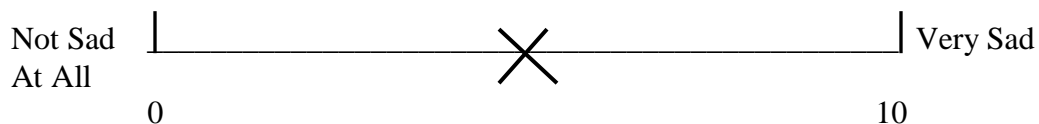
This questionnaire lists various attitudes and behaviors of parents. Please mark the column that most appropriately reflects how you remember your father during your first 16 years.

FATHER:	Very Like	Some What Like	Some What Unlike	Very Unlike
1. Spoke to me with a warm and friendly voice	( )	( )	( )	( )
2. Did not help me as much as I needed	( )	( )	( )	( )
3. Let me do those things I liked doing	( )	( )	( )	( )
4. Seemed emotionally cold to me	( )	( )	( )	( )
5. Appeared to understand my problems and worries	( )	( )	( )	( )
6. Was affectionate to me	( )	( )	( )	( )
7. Liked me to make my own decisions	( )	( )	( )	( )
8. Did not want me to grow up	( )	( )	( )	( )
9. Tried to control everything I did	( )	( )	( )	( )
10. Invaded my privacy	( )	( )	( )	( )
11. Enjoyed talking things over with me	( )	( )	( )	( )
12. Frequently smiled at me	( )	( )	( )	( )
13. Tended to baby me	( )	( )	( )	( )
14. Did not seem to understand what I needed or wanted	( )	( )	( )	( )
15. Let me decide things for myself	( )	( )	( )	( )
16. Made me feel I wasn't wanted	( )	( )	( )	( )
17. Could make me feel better when I was upset	( )	( )	( )	( )
18. Did not talk with me very much	( )	( )	( )	( )
19. Tried to make me dependent on him	( )	( )	( )	( )
20. Felt I could not look after myself unless he was around	( )	( )	( )	( )
21. Gave me as much freedom as I wanted	( )	( )	( )	( )
22. Let me go out as often as I wanted	( )	( )	( )	( )
23. Was overprotective of me	( )	( )	( )	( )
24. Did not praise me	( )	( )	( )	( )
25. Let me dress in any way I pleased	( )	( )	( )	( )

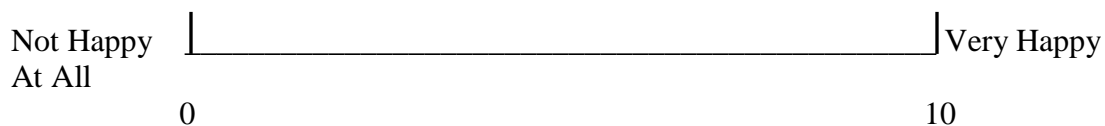
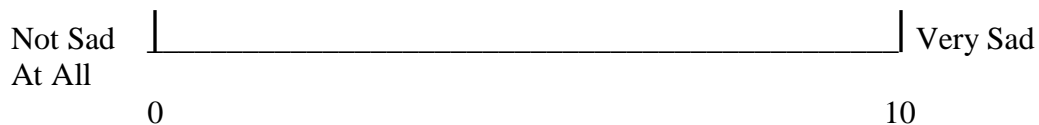
## Appendix G: Visual Analog Scale

## T1 VAS

Instructions: Mark an  $\times$  on the line which indicates a range of feelings. For instance, if you were feeling “moderate sadness” or “moderate happiness” you would indicate on the line below as such:



Make your mark here:



## Appendix H: Short Form of the Profile of Mood States

**POMS SF PROFILE OF MOOD STATES-SHORT FORM**

Below is a list of words that describe feelings people have. Please read each one carefully. Then circle ONE answer to the right, which best describes HOW YOU HAVE BEEN FEELING DURING THE PAST 24 HOURS.

The numbers refer to these phrases:

- 0=not at all
- 1=a little
- 2=moderately
- 3=quite a bit
- 4=extremely

- |  |   |
|--|---|
| 1. Tense.....0 1 2 3 4                     | 20. Discouraged.....0 1 2 3 4               |
| 2. Angry.....0 1 2 3 4                     | 21. Resentful.....0 1 2 3 4                 |
| 3. Worn out.....0 1 2 3 4                  | 22. Nervous.....0 1 2 3 4                   |
| 4. Unhappy.....0 1 2 3 4                   | 23. Miserable.....0 1 2 3 4                 |
| 5. Lively.....0 1 2 3 4                    | 24. Cheerful.....0 1 2 3 4                  |
| 6. Confused.....0 1 2 3 4                  | 25. Bitter.....0 1 2 3 4                    |
| 7. Peeved.....0 1 2 3 4                    | 26. Exhausted.....0 1 2 3 4                 |
| 8. Sad.....0 1 2 3 4                       | 27. Anxious.....0 1 2 3 4                   |
| 9. Active.....0 1 2 3 4                    | 28. Helpless.....0 1 2 3 4                  |
| 10. On Edge.....0 1 2 3 4                  | 29. Weary.....0 1 2 3 4                     |
| 11. Grouchy.....0 1 2 3 4                  | 30. Bewildered.....0 1 2 3 4                |
| 12. Blue.....0 1 2 3 4                     | 31. Furious.....0 1 2 3 4                   |
| 13. Energetic..... 0 1 2 3 4               | 32. Full of pep.....0 1 2 3 4               |
| 14. Hopeless.....0 1 2 3 4                 | 33. Worthless.....0 1 2 3 4                 |
| 15. Uneasy.....0 1 2 3 4                   | 34. Forgetful.....0 1 2 3 4                 |
| 16. Restless.....0 1 2 3 4                 | 35. Vigorous.....0 1 2 3 4                  |
| 17. Unable to<br>Concentrate.....0 1 2 3 4 | 36. Uncertain about<br>things.....0 1 2 3 4 |

## Appendix I: Stimuli Words

## Depressed words

1. Hurt
2. Sad
3. Blue
4. Downhearted
5. Miserable
6. Depressed
7. Unhappy
8. Hopeless
9. Distressed
10. Unlovable
11. Failure
12. Helpless
13. Useless
14. Dejected
15. Despondent

## Nondepressed words

1. Satisfied
2. Gratified
3. Pleased
4. Glad
5. Relaxed
6. Sociable
7. Jolly
8. Fine
9. Capable
10. Good
11. Pleasant
12. Friendly
13. Amusing
14. Steady
15. Agreeable

## Appendix J: Dysfunctional Attitudes Scale

**DAS**

This questionnaire lists different attitudes or beliefs which people sometimes hold. Read each statement carefully and decide how much you agree or disagree with the statement.

For each of the attitudes, indicate to the left of the item the number that best describes how you think. Be sure to choose only one answer for each attitude. Because people are different, there is no right answer or wrong answer to these statements.

To decide whether a given attitude is typical of your way of looking at things, simply keep in mind what you are like most of the time.

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>totally</b>	<b>disagree</b>	<b>disagree</b>	<b>neutral</b>	<b>agree</b>	<b>agree</b>	<b>totally</b>
<b>disagree</b>	<b>very much</b>	<b>slightly</b>		<b>slightly</b>	<b>very much</b>	<b>agree</b>

- |       |     |   |
|-------|-----|---|
| _____ | 1.  | It is difficult to be happy unless one is good looking, intelligent, rich, and creative.          |
| _____ | 2.  | Happiness is more a matter of my attitude towards myself than the way other people feel about me. |
| _____ | 3.  | People will probably think less of me if I make a mistake.  |
| _____ | 4.  | If I do not do well all the time, people will not respect me.                                     |
| _____ | 5.  | Taking even a small risk is foolish because the loss is likely to be a disaster.                  |
| _____ | 6.  | It is possible to gain another person's respect without being especially talented at anything.    |
| _____ | 7.  | I cannot be happy unless most people I know admire me.  |
| _____ | 8.  | If a person asks for help, it is a sign of weakness.  |
| _____ | 9.  | If I do not do as well as other people, it means I am a weak person.                              |
| _____ | 10. | If I fail at my work, then I am a failure as a person.  |
| _____ | 11. | If you cannot do something well, there is little point in doing it at all.                        |
| _____ | 12. | Making mistakes is fine because I can learn from them.  |
| _____ | 13. | If someone disagrees with me, it probably indicates he does not like me.                          |
| _____ | 14. | If I fail partly, it is as bad as being a complete failure.                                       |

- \_\_\_\_\_ 15. If other people know what you are really like, they will think less of you.
- \_\_\_\_\_ 16. I am nothing if a person I love doesn't love me.
- \_\_\_\_\_ 17. One can get pleasure from an activity regardless of the end result.
- \_\_\_\_\_ 18. People should have a chance to succeed before doing anything.
- \_\_\_\_\_ 19. My value as a person depends greatly on what others think of me.
- \_\_\_\_\_ 20. If I don't set the highest standards for myself, I am likely to end up a second-rate person.
- \_\_\_\_\_ 21. If I am to be a worthwhile person, I must be the best in at least one way.
- \_\_\_\_\_ 22. People who have good ideas are better than those who do not.
- \_\_\_\_\_ 23. I should be upset if I make a mistake.
- \_\_\_\_\_ 24. My own opinions of myself are more important than others' opinions of me.
- \_\_\_\_\_ 25. To be a good, moral, worthwhile person, I must help everyone who needs it.
- \_\_\_\_\_ 26. If I ask a question, it makes me look stupid.
- \_\_\_\_\_ 27. It is awful to be put down by people important to you.
- \_\_\_\_\_ 28. If you don't have other people to lean on, you are going to be sad.
- \_\_\_\_\_ 29. I can reach important goals without pushing myself.
- \_\_\_\_\_ 30. It is possible for a person to be scolded and not get upset.
- \_\_\_\_\_ 31. I cannot trust other people because they might be cruel to me.
- \_\_\_\_\_ 32. If others dislike you, you cannot be happy.
- \_\_\_\_\_ 33. It is best to give up your own interests in order to please other people.
- \_\_\_\_\_ 34. My happiness depends more on other people than it does on me.
- \_\_\_\_\_ 35. I do not need the approval of other people in order to be happy.
- \_\_\_\_\_ 36. If a person avoids problems, the problems tend to go away.
- \_\_\_\_\_ 37. I can be happy even if I miss out on many of the good things in life.
- \_\_\_\_\_ 38. What other people think about me is very important.
- \_\_\_\_\_ 39. Being alone leads to unhappiness.
- \_\_\_\_\_ 40. I can find happiness without being loved by another person.

## Appendix K: Attributional Style Questionnaire

Name \_\_\_\_\_ Date: \_\_\_\_\_

On the next several pages a variety of situations will be described that may happen to someone like yourself. Please try to vividly imagine yourself in the situations that follow. If such a situation happened to you, what would you feel would have caused it? While events have many causes, we want you to pick only one - - the major cause if this event happened to you. Please write this cause in the blank provided after each event. Next we want you to answer some questions about the cause and a final question about the situation. To summarize, we want you to:

1. Read each situation and vividly imagine it happening to you.
2. Decide what you feel would be the major cause of the situation if it happened to you.
3. Write one cause in the blank provided.
4. Answer five questions about the cause.
5. Answer one question about the situation.
6. Go on to the next situation.



ASQ

**YOU MEET A FRIEND WHO COMPLIMENTS YOU ON YOUR APPEARANCE.**

1. Write down the one major cause

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2. Is the cause of your friend's compliment due to something about you or something about the other person or circumstances? (Circle one number)

Totally due to the other person or circumstances    1    2    3    4    5    6    7    Totally due to me.

3. In the future when you are with your friends, will this cause again be present? (Circle one number)

Will never again be present    1    2    3    4    5    6    7    Will always be present

4. Is the cause something that just affects interacting with friends or does it also influence other areas of your life? (Circle one number).

Influences just this particular situation    1    2    3    4    5    6    7    Influences all situations in my life

5. How much did the cause result from your actions? (Circle one number)

Not due to my actions at all    1    2    3    4    5    6    7    Totally due to my actions

6. In the future how much could you do to influence the cause of the situation? (Circle one number)

I could do nothing to influence it    1    2    3    4    5    6    7    The situation would be totally under my influence

7. How important would this situation be if it happened to you? (Circle one number)

Not at all Important    1    2    3    4    5    6    7    Extremely Important

ASQ

**YOU HAVE BEEN LOOKING FOR A JOB UNSUCCESSFULLY FOR SOME TIME.**

1. Write down one major cause

---

2. Is the cause of your unsuccessful job search due to something about you or something about other people or circumstances? (Circle one number)

Totally due to the other person or circumstance    1    2    3    4    5    6    7    Totally due to me.

3. In the future when looking for a job, will this cause again be present? (circle one number)

Will never again be present    1    2    3    4    5    6    7    Will always be present

4. Is the cause something that just influences looking for a job or does it also influence other areas of your life? (Circle one number).

Influences just this particular situation    1    2    3    4    5    6    7    Influences all situations in my life

5. How much did the cause result from your actions? (Circle one number)

Not due to my actions at all    1    2    3    4    5    6    7    Totally due to my actions

6. In the future how much could you do to influence the cause of the situation? (Circle one number)

I could do nothing to influence it    1    2    3    4    5    6    7    The situation would be totally under my influence

7. How important would this situation be if it happened to you? (Circle one number)

Not at all Important    1    2    3    4    5    6    7    Extremely Important

ASQ

## YOU BECOME VERY RICH.

1. Write down the one major cause

---

2. Is the cause of your becoming rich due to something about you or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me.
--	---	---	---	---	---	---	---	--------------------

3. In your financial future will this cause again be present? (Circle one number)

Will never again be present	1	2	3	4	5	6	7	Will always be present
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4. Is the cause something that just affects obtaining money or does it also influence other areas of your life? (Circle one number).

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
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5. How much did the cause result from your actions? (Circle one number)

Not due to my actions at all	1	2	3	4	5	6	7	Totally due to my actions
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6. In the future how much could you do to influence the cause of the situation? (Circle one number)

I could do nothing to influence it	1	2	3	4	5	6	7	The situation would be totally under my influence
------------------------------------	---	---	---	---	---	---	---	---

7. How important would this situation be if it happened to you? (Circle one number)

Not at all important	1	2	3	4	5	6	7	Extremely important
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ASQ

**A FRIEND COMES TO YOU WITH A PROBLEM AND YOU DON'T TRY TO HELP THEM.**

1. Write down the one major cause

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2. Is the cause of your not helping your friend due to something about you or something about the other person or circumstances? (Circle one number)

Totally due to the other person or circumstance    1    2    3    4    5    6    7    Totally due to me.

3. In the future when a friend comes to you with a problem, will this cause again be present? (Circle one number)

Will never again be present    1    2    3    4    5    6    7    Will always be present

4. Is the cause something that just affects what happens when a friend comes to you with a problem or does it also influence other areas of your life? (Circle one number).

Influences just this particular situation    1    2    3    4    5    6    7    Influences all situations in my life

5. How much did the cause result from your actions? (Circle one number)

Not due to my actions at all    1    2    3    4    5    6    7    Totally due to my actions

6. In the future how much could you do to influence the cause of the situation? (Circle one number)

I could do nothing to influence it    1    2    3    4    5    6    7    The situation would be totally under my influence

7. How important would this situation be if it happened to you? (Circle one number)

Not at all Important    1    2    3    4    5    6    7    Extremely Important

ASQ

**YOU GIVE AN IMPORTANT TALK IN FRONT OF A GROUP AND THE AUDIENCE REACTS NEGATIVELY**

1. Write down the one major cause

---

2. Is the cause of the audience reacting negatively due to something about you or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstance    1    2    3    4    5    6    7    Totally due to me.

3. In the future when giving talks, will this cause again be present? (Circle one number)

Will never again be present    1    2    3    4    5    6    7    Will always be present

4. Is the cause something that just affects giving talks or does it also influence other areas of your life? (Circle one number).

Influences just this particular situation    1    2    3    4    5    6    7    Influences all situations in my life

5. How much did the cause result from your actions? (Circle one number)

Not due to my actions at all    1    2    3    4    5    6    7    Totally due to my actions

6. In the future how much could you do to influence the cause of the situation? (Circle one number)

I could do nothing to influence it    1    2    3    4    5    6    7    The situation would be totally under my influence

7. How important would this situation be if it happened to you? (Circle one number)

Not at all Important    1    2    3    4    5    6    7    Extremely Important

ASQ

YOU DO A PROJECT WHICH IS HIGHLY PRAISED.

1. Write down the one major cause

---

2. Is the cause of being praised due to something about you or something about the other people or circumstances? (Circle one number)

Totally due to the other people or circumstances	1	2	3	4	5	6	7	Totally due to me.
--	---	---	---	---	---	---	---	--------------------

3. In the future when doing projects, will this cause again be present? (Circle one number)

Will never again be present	1	2	3	4	5	6	7	Will always be present
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4. Is the cause something that just affects doing projects, or does it also influence other areas of your life? (Circle one number).

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
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5. How much did the cause result from your actions? (Circle one number)

Not due to my actions at all	1	2	3	4	5	6	7	Totally due to my actions
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6. In the future how much could you do to influence the cause of the situation? (Circle one number)

I could do nothing to influence it	1	2	3	4	5	6	7	The situation would be totally under my influence
------------------------------------	---	---	---	---	---	---	---	---

7. How important would this situation be if it happened to you? (Circle one number)

Not at all Important	1	2	3	4	5	6	7	Extremely Important
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ASQ

YOU MEET A FRIEND WHO ACTS HOSTILELY TOWARDS YOU.

1. Write down the one major cause

---

2. Is the cause of your friend acting hostile due to something about you or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances    1    2    3    4    5    6    7    Totally due to me.

3. In the future when interacting with friends, will this cause again be present? (Circle one number)

Will never again be present    1    2    3    4    5    6    7    Will always be present

4. Is the cause something that just affects interacting with friends or does it also influence other areas of your life? (Circle one number).

Influences just this particular situation    1    2    3    4    5    6    7    Influences all situations in my life

5. How much did the cause result from your actions? (Circle one number)

Not due to my actions at all    1    2    3    4    5    6    7    Totally due to my actions

6. In the future how much could you do to influence the cause of the situation? (Circle one number)

I could do nothing to influence it    1    2    3    4    5    6    7    The situation would be totally under my influence

7. How important would this situation be if it happened to you? (Circle one number)

Not at all important    1    2    3    4    5    6    7    Extremely important

ASQ

YOU CAN'T GET ALL THE WORK DONE THAT OTHERS EXPECT OF YOU.

1. Write down the one major cause

---

2. Is the cause of your not getting the work done due to something about you or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances    1    2    3    4    5    6    7    Totally due to me.

3. In the future when doing work that others expect, will this cause again be present? (Circle one number)

Will never again be present    1    2    3    4    5    6    7    Will always be present

4. Is the cause something that just affects doing work that others expect of you or does it also influence other areas of your life? (Circle one number).

Influences just this particular situation    1    2    3    4    5    6    7    Influences all situations in my life

5. How much did the cause result from your actions? (Circle one number)

Not due to my actions at all    1    2    3    4    5    6    7    Totally due to my actions

6. In the future how much could you do to influence the cause of the situation? (Circle one number)

I could do nothing to influence it    1    2    3    4    5    6    7    The situation would be totally under my influence

7. How important would this situation be if it happened to you? (Circle one number)

Not at all Important    1    2    3    4    5    6    7    Extremely Important



ASQ

**YOUR SPOUSE (BOYFRIEND/GIRLFRIEND) HAS BEEN TREATING YOU MORE LOVINGLY.**

1. Write down the one major cause

---

2. Is the cause of your spouse (boyfriend/girlfriend) treating you more lovingly due to something about you or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me.
--	---	---	---	---	---	---	---	--------------------

3. In future interactions with your spouse (boyfriend/girlfriend), will this cause again be present? (Circle one number)

Will never again be present	1	2	3	4	5	6	7	Will always be present
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4. Is the cause something that just affects how your spouse (boyfriend/girlfriend) treats you or does it also influence other areas of your life? (Circle one number).

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
---	---	---	---	---	---	---	---	--------------------------------------

5. How much did the cause result from your actions? (Circle one number)

Not due to my actions at all	1	2	3	4	5	6	7	Totally due to my actions
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6. In the future how much could you do to influence the cause of the situation? (Circle one number)

I could do nothing to influence it	1	2	3	4	5	6	7	The situation would be totally under my influence
------------------------------------	---	---	---	---	---	---	---	---

7. How important would this situation be if it happened to you? (Circle one number)

Not at all Important	1	2	3	4	5	6	7	Extremely Important
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ASQ

**YOU APPLY FOR A POSITION THAT YOU WANT VERY BADLY (e.g. IMPORTANT JOB, GRADUATE SCHOOL ADMISSION, etc.) AND YOU GET IT.**

1. Write down the one major cause
- 

2. Is the cause of your getting the position due to something about you or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances    1    2    3    4    5    6    7    Totally due to me.

3. In the future when applying for a position, will this cause again be present? (Circle one number)

Will never again be present    1    2    3    4    5    6    7    Will always be present

4. Is the cause something that just affects applying for a position or does it also influence other areas of your life? (Circle one number).

Influences just this particular situation    1    2    3    4    5    6    7    Influences all situations in my life

5. How much did the cause result from your actions? (Circle one number)

Not due to my actions at all    1    2    3    4    5    6    7    Totally due to my actions

6. In the future how much could you do to influence the cause of the situation? (Circle one number)

I could do nothing to influence it    1    2    3    4    5    6    7    The situation would be totally under my influence

7. How important would this situation be if it happened to you? (Circle one number)

Not at all Important    1    2    3    4    5    6    7    Extremely Important

ASQ

**YOU GO OUT ON A DATE AND IT GOES BADLY.**

1. Write down the one major cause

---

2. Is the cause of the date going badly due to something about you or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances    1    2    3    4    5    6    7    Totally due to me.

3. In the future when dating, will this cause again be present? (Circle one number)

Will never again be present    1    2    3    4    5    6    7    Will always be present

4. Is the cause something that just influences dating or does it also influence other areas of your life? (Circle one number).

Influences just this particular situation    1    2    3    4    5    6    7    Influences all situations in my life

5. How much did the cause result from your actions? (Circle one number)

Not due to my actions at all    1    2    3    4    5    6    7    Totally due to my actions

6. In the future how much could you do to influence the cause of the situation? (Circle one number)

I could do nothing to influence it    1    2    3    4    5    6    7    The situation would be totally under my influence

7. How important would this situation be if it happened to you? (Circle one number)

Not at all Important    1    2    3    4    5    6    7    Extremely Important

ASQ

**YOU GET A RAISE.**

1. Write down the one major cause

---

2. Is the cause of your getting a raise due to something about you or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me.
--	---	---	---	---	---	---	---	--------------------

3. In the future on your job, will this cause again be present? (Circle one number)

Will never again be present	1	2	3	4	5	6	7	Will always be present
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4. Is the cause something that just affects getting a raise or does it also influence other areas of your life? (Circle one number).

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
---	---	---	---	---	---	---	---	--------------------------------------

5. How much did the cause result from your actions? (Circle one number)

Not due to my actions at all	1	2	3	4	5	6	7	Totally due to my actions
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6. In the future how much could you do to influence the cause of the situation? (Circle one number)

I could do nothing to influence it	1	2	3	4	5	6	7	The situation would be totally under my influence
------------------------------------	---	---	---	---	---	---	---	---

7. How important would this situation be if it happened to you? (Circle one number)

Not at all important	1	2	3	4	5	6	7	Extremely Important
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