SELF-ESTEEM LEVEL, LABILITY, AND DEPRESSIVE SYMPTOMS IN LATE ADOLESCENCE AND YOUNG ADULTHOOD

by

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CHAPTER I

INTRODUCTION

In a recent special issue focusing on the role of self-esteem in development, the editor noted that the most important advance in self-esteem research has been to establish the complexity and multi-faceted nature of its underlying structure (Dubois & Hirsch, 2000). The history of self-esteem theory and research, particularly with regard to its relation to depression, indicates the need to consider multiple dimensions of self-esteem. In addition to average level of self-esteem, daily fluctuations in self-cognitions (i.e., lability) may be relevant to the onset and maintenance of depression (Roberts & Monroe, 1994). The present study was an empirical investigation of self-esteem level and lability, in relation to daily events, and their relation to subsequent depression.

Self-esteem has long been a central construct in models of depression. Loss of self-esteem was seen as pivotal in the onset of melancholic depression by psychodynamic theorists (Bibring, 1953). Cognitive theories of depression also have afforded it a key role. According to Beck (1967), depressed patients typically have a negative view of themselves, and, when confronted with new information, make cognitive errors or distortions based on pre-existing cognitive schemas rather than facts related to the current situation. Abramson, Metalsky, and Alloy (1989) proposed that cognitive vulnerabilities affect specific inferences about a stressor typically including negative inferences about the self. This process leads to hopelessness and the hopelessness subtype of depression. Thus, cognitions about the self are expected to be both concurrently associated with depression and to contribute to the onset and exacerbation of depressive symptoms.

Empirical support for the role of self-esteem in depression has been mixed. Cross-sectional studies with children have established a relation between level of self-esteem and depression. The average correlation between self-esteem and depression in youth has been reported to be about .52 (for a review see Garber & Hilsman, 1992). Harter (Harter & Marold, 1994) has reported correlations between self-worth and affect ranging from .72 to .80. However, longitudinal investigations of the role of self-perceptions in the prediction of childhood depression have yielded more mixed results. Several studies have shown that level of self-esteem (Allgood-Merton et al., 1990; Hammen, 1988; Vitaro, Pelletier, Gagnon, & Baron, 1995) and perceived self-competence in specific domains (Vitaro et al., 1995) predicted child and adolescent depressive symptoms (Allgood-Merton et al., 1990; Hammen, 1988; Vitaro et al., 1995) as well as diagnoses (Hammen, 1988), controlling for prior levels of depression. While other studies have not found that level of self-esteem predicts depressive symptoms (Dubois, Felner, Brand, & George, 1999; Robertson & Simons, 1989) or onset of new episodes (Goodyer et al., 2000).

A similar picture has emerged from research with adults. A review of the literature investigating the tenets of Beck's (1967) cognitive theory of depression (Haaga, Dyck, & Ernst, 1991) concluded that negative self views are reliably demonstrated in depressed adults but prospective tests have been less consistent. For example, Hokanson and colleagues (Hokanson, Rubert, Welker, Hollander, & Hedeen, 1989) found a lower level of self-esteem in college students who became depressed versus normal controls. On the other hand, Lewinsohn, Steinmetz, Larson, and Franklin (1981) did not replicate this finding in an adult community sample. Finally, some studies have found that self-esteem is lower among individuals whose depressive episode has remitted (e.g., Altman & Wittenborn, 1980; Cofer & Wittenborn, 1980),

whereas other studies, particularly those using within-person designs, have shown that self-esteem returns to normal (e.g., Hamilton & Abramson, 1983).

Thus, although a concurrent relation between level of self-esteem and depression consistently has been demonstrated, the role of self-worth as a risk factor in the onset of depression is less clear. Given its long history and intuitive appeal, why then doesn't level of self-esteem perform better as a pre-existing risk factor? This may be due, in part, to methodological gaps in extant studies (Haaga et al., 1991). Low self-esteem may be a diathesis activated by the presence of a salient stressor. Beck (Beck, 1976*)* proposed that negative cognitive beliefs are latent until activated by a stressor. Thus, a complete test of cognitive theories of depression would have to assess self-cognitions under stressful situations, and predict later increases in depressive symptoms or onset of major depressive disorder. Robinson, Garber, and Hilsman (1995) detected moderating effects of both depressive attributional style and self-esteem; students who reported both lower self-esteem and higher levels of major and minor life events during the transition to junior high school reported the highest levels of depressive symptoms. Similarly, Abela (2002) found that the interaction between depressive attributional style and self-esteem predicted an enduring depressive response following a priming event in a sample of older adolescents. Also, Abela and Sullivan (2003) found that depressive symptoms were related to dysfunctional attitudes in young adolescents with high but not low levels of self-esteem, following negative events. In adults, low self-esteem also has been found to predict depression in the presence of major life events (Brown, Bifulco, & Andrews, 1990; Miller, Kreitman, Ingham, & Sashidharan, 1989). However, there are an insufficient number of studies to allow strong conclusions about the validity of cognitive diathesis-stress theories of depression that include self-esteem.

Another reason for discrepant findings in tests of cognitive models of depression may be that low self-esteem is a state activated by environmental cues rather than a stable diathesis in individuals vulnerable to depression (Barnett & Gotlib, 1988). A salient stressor could disrupt sources of positive self-esteem and, if no alternative sources are available, could lead to depression (Oatley & Bolton, 1985). In this case, low levels of self-esteem would be concurrent with, but would not precede, a depressive episode or elevation in depressive symptoms. Instead, individuals might be expected to vary pre-morbidly in the degree to which their average level of self-esteem is resilient to stress-related fluctuations.

Self-Esteem as a Multi-Dimensional Construct

Several theorists have proposed that self-esteem actually is a multi-dimensional construct. Although they did not discuss lability per se, early self-esteem researchers conceptualized both multiple dimensions of self-esteem (James, 1890) and its complex interaction with environmental factors (Cooley, (1956 [1902]). The clinical literature also has acknowledged that fluctuations in level are another aspect of self-esteem. For example, psychodynamic theorists (e.g., Arieti & Bemporad, 1980; Rado, 1928) have proposed that individuals vulnerable to depression lack a stable, internal sense of self worth. Rado (1928) proposed that individuals predisposed to depression rely excessively on the love and approval of others for their self-esteem. When such approval is present, vulnerable individuals will appear asymptomatic; whereas, in the absence of positive external sources of self-worth, these individuals are at risk. Moreover, whereas small variations in self-esteem level are normatively expected in response to life's vicissitudes, this process is thought to be exaggerated in vulnerable individuals (Jacobson, 1975). Thus, individuals at risk for depression are thought to base their

self-esteem on less predictable external sources and to be more reactive to stress. Temporal instability of self-esteem would be a behavioral marker of this phenomenon.

In their review of the literature, Barnett and Gotlib (1988) concluded that there was little evidence to support extant cognitive models of depression largely because research had focused almost exclusively on stable negative cognitive tendencies. On the other hand, the authors did find evidence that reactivity in self-esteem combined with the occurrence of a relevant stressor, particularly the loss of an important external source of self-esteem, could be a pre-morbid vulnerability factor for depression.

Roberts and Monroe (1994) proposed a multi-dimensional model of self-esteem. Rather than a trait low level of self-esteem, the authors suggested that vulnerability to depression results from three alternate dimensions: a) structural deficits, b) lack of resilience, and c) temporal instability. Structural deficits refer to having fewer positive sources of self-esteem relative to negative evaluations of self that are activated by congruent life experiences. Future depressives also are thought to have self-esteem that may be normal in terms of average level when they are not in a depressive episode, but less resilient to stressors that either activate dormant negative self-cognitions or deflate tenuous positive beliefs about the self. Finally, lability in self-esteem also would be characteristic of individuals vulnerable to depression because of their lack of resilience to life events. Such lack of resilience may be one instance (i.e., reaction to a single stressful prime) of a more general overall lability. Thus, according to Roberts and Monroe (1994), lack of resilience and lability may be similar if not equivalent constructs, both representing underlying structural deficits. These behavioral manifestations then will lead to poor coping and affect regulation, problems in interpersonal relationships, and the generation of

stressors, which in turn will maintain and possibly enhance the structural deficits characteristic of future depressed individuals.

In summary, individuals at risk for depression have limited sources of self-esteem and are particularly vulnerable to challenges to their self-image. Self-esteem in these individuals is expected to be fragile, contingent on external influences, and labile over time. Individuals with labile self-esteem are thought to react more adversely to life stress than individuals with more stable self-cognitions. In addition, individuals at risk for future depression would be better identified by increased variance in self-esteem over time than by any single measurement of self-esteem level. Single assessments may or may not capture drops in self-esteem in depression-prone individuals thereby leading to mixed and inconclusive results in the literature.

Interestingly, despite the wide recognition of multiple dimensions of self-esteem, average level has been almost exclusively investigated with daily fluctuations in self-esteem consigned to measurement error. A few researchers, however, have examined lability; preliminary studies indicate that self-esteem lability has performed better as a predictor than average level of self-esteem.

Empirical Studies of Lability

Studies of short-term fluctuations in self-esteem come from both social and clinical psychology. Temporal variability in self-esteem has been referred to as both instability and lability. In most of these studies, the difference is semantic only. Statistically the construct of lability is indistinguishable from stability with a single exception in a study (Butler, Hokanson, & Flynn, 1994) where the operationalization of lability included the relation of fluctuations in self-esteem to stress.

Rosenberg (1985) was one of the first to investigate the relation of fluctuations in daily self-esteem to emotional adjustment. He reported significant concurrent correlations between his self-report measure, the Stability of Self Scale, and measures of anxiety, depression, and aggression in three samples of children ages 11 through 17. The Stability of Self Scale is administered once and is a self-report measure which asks subjects to reflect on the stability of their self-esteem. Greater instability was associated with poorer adjustment in each case, even when trait levels of self-esteem were controlled.

Other studies have chosen to measure instability by assessing self-esteem variation on a daily or semi-daily basis and comparing scores over time. Kernis (1993) defined self-esteem instability as the magnitude of short-term fluctuations in global self-esteem around an average or baseline level. These short-term variations are distinct from long-term trends toward higher or lower levels of self-esteem. In keeping with this theoretical conceptualization, numerous studies (Greenier et al., 1999; Kernis et al., 1998; Kernis, Brown, & Brody, 2000a; Kernis, Cornell, Sun, Berry, & Harlow, 1993; Kernis, Grannemann, & Barclay, 1989; Kernis, Grannemann, & Barclay, 1992; Kernis, Grannemann, & Mathis, 1991, Kernis, Greenier, Herlocker, Whisenhunt, & Abend, 1997; Kernis, Paradise, Whitaker, Wheatman, & Goldman, 2000b; Kernis & Waschull, 1995; Waschull & Kernis, 1996) have operationalized instability as the standard deviation of current self-esteem scores assessed at least daily across multiple time points; the greater the standard deviation, the greater instability in self-esteem. In these studies, self-esteem level assessed at baseline typically has been orthogonal to, or minimally correlated with, instability (although correlations in a few studies were as high as -.42). When correlated, the direction is consistently negative indicating that lower baseline self-esteem is associated with higher levels of variability in daily self-esteem.

Regardless of their statistical relation, both level and instability have contributed to variance in many outcomes. Often the main effects of level and instability of self-esteem have been qualified by significant interactions. Overall, individuals with higher and more stable self-esteem have more positive outcomes. Individuals with higher and less stable self-esteem have been shown to report more anger (Kernis et al., 1989) and hostility in response to unfavorable evaluations (Kernis et al., 1993), to engage in more excuse-making (Kernis et al., 1992), and to report less enjoyment of success but engage in more boastful behavior (Kernis et al., 1997). Instability in individuals with lower baseline self-esteem has been associated with poorer self-concept clarity (Kernis et al., 2000b), greater reactivity to negative events (Greenier et al., 1999), and a greater tendency to accept unfavorable feedback (Kernis et al., 1993).

Although stability doesn't consistently characterize individuals with low baseline self-esteem, these individuals generally appear to make less effort to protect their self-concept than do individuals with higher and more variable self-esteem. With regard to vulnerability to depression, Kernis and colleagues (Kernis et al., 1991; 1998) reported that greater instability was related to higher levels of depressive symptoms but this finding tended to be moderated by baseline level of self-esteem. Instability was more strongly associated with depressive symptoms in individuals who reported high self-esteem at baseline than in individuals reporting lower levels of self-esteem. In the only study to control for a prior assessment of the outcome measure, Kernis and colleagues (1998) found that instability interacted with daily hassles to predict change in depressive symptoms. Overall, level of self-esteem was a much stronger predictor of depression in individuals with greater self-esteem instability.

These studies demonstrate meaningful individual differences in self-esteem stability related to several psychological and behavioral constructs. Most importantly, stability is an

alternate dimension of self-esteem potentially relevant to depression. For individuals with unstable self-esteem, assessing self-esteem at any single time point may estimate either an average level or some peak or valley in their overall pattern of self-esteem which may or may not be associated with later increases in depressive symptoms. In either case, single assessments of self-esteem level fail to capture the nature of the phenomena in individuals with unstable self-esteem. If level of self-esteem has performed poorly as a predictor of depression, perhaps it is the snapshot quality of this common assessment technique rather than the lack of a true temporal relation between loss of self-esteem and onset of depression.

Kernis and colleagues' (e.g., Kernis et al., 1989; 1992; 1993; 1997) line of inquiry has focused on self-esteem stability and numerous correlates, but they have not examined the role of stability in a larger model of the etiology of depression. Roberts and Monroe (1992) tested three competing hypotheses regarding the role of self-esteem in depressive symptoms: a) individuals predisposed to depression will show chronically low self-esteem, b) low self-esteem is a latent cognition that becomes activated when primed by depressed mood (see Teasdale, 1983; 1988), and c) individuals vulnerable to depression would not demonstrate low self-esteem at any particular point in time but rather are susceptible to fluctuations in self-esteem contingent on relevant events. The authors labeled the third 'lability', although their statistical operationalization of the construct is identical to that of stability researchers and does not capture the quality of self-esteem fluctuations as reactions to stress. Nonetheless, lability emerged as a stronger predictor of change in depressive symptoms over time than either trait self-worth or self-esteem activated by depressed mood. Specifically, lability prospectively predicted depressive symptoms following a self-rated academic stressor particularly for individuals who

were initially non-depressed suggesting that lability may be a cognitive diathesis that increases individuals' likelihood of experiencing depressive symptoms following a relevant stressor.

In three additional studies, Roberts and colleagues (Roberts, Kassel, & Gotlib, 1995) found conflicting results for the relation of stability to depression. In study 1, the relation between stability and depression was significant as was the interaction between level and stability. However, unlike Kernis et al.'s (1991; 1998) finding, the interaction was no longer significant once the influence of extreme level scores was controlled. In both studies 2 and 3, stability was not uniquely related to depressive symptoms when level was included in the analysis. Prior levels of depressive symptoms were not controlled in any of these studies.

Further investigations by Roberts and colleagues have found that instability in self-esteem (Roberts & Kassel, 1997) and specific self-evaluations (Roberts & Gotlib, 1997) predicted increases in depressive symptoms in combination with stress, particularly when stress was weighted by the individual's perception of the importance or impact of the stressor (Roberts & Kassel, 1997). This effect was stronger for individuals with a more severe history of depression and lower initial levels of depressive symptoms (Roberts & Gotlib, 1997; Roberts & Kassle, 1997). Moreover, instability in positive and negative affect did not predict depressive symptoms (Roberts & Gotlib, 1997) suggesting that it is not just variability in mood but variability in self-cognitions per se that is related to increases in depressive symptoms.

Dubois and colleagues (Tevendale, Dubois, Lopez, & Prindiville, 1997) reported results from a study of stability in domain-specific self-evaluations in children in grades 8 and 9. The authors calculated stability similarly to Kernis' group (Kernis et al., 1993) by summing difference scores from consecutive assessments. Stability of self-evaluations associated with peer relationships and physical appearance was concurrently related to child depressive symptoms

when controlling the effects of daily hassles and trait self-esteem. Trait self-esteem was a more consistent overall predictor of depression in this study. However, there were several interactive effects detected, generally indicating that instability was more strongly associated with depressive symptoms when stressors were present and trait self-esteem was low.

Taken together these studies demonstrate a relation between lability in self-esteem and depression for both global self-esteem and specific self-evaluations, beyond the effects of average self-esteem level and daily fluctuations in mood (although few studies have controlled for prior levels of depression). Moreover, in studies that have tested lability as a diathesis in interaction with intervening life events, lability has predicted later depressive symptoms in the context of stress.

The finding of a significant interaction between lability and average level of self-esteem raises an interesting issue. In Kernis and colleagues' work (Kernis et al., 1991; 1998), instability in self-esteem generally appears to be more of a liability for individuals with higher as compared to lower levels of self-esteem. Similarly, Roberts and colleagues (Roberts & Gotlib, 1997; Roberts & Kassel, 1997) found that instability had a greater relation to depression in initially non-depressed individuals than in those who reported higher levels of depression at baseline. Kernis et al. (1991) speculated that lability might act as a buffer for lower trait self-esteem individuals by encouraging them to invest greater effort in seeking self-esteem boosts. However, an alternative explanation is that the interaction between self-esteem level and lability occurs only as a statistical artifact resulting from the influence of extreme level scores; that is, individuals with either high or low level scores could not demonstrate as much instability due to measurement floor and ceiling effects. Both sets of authors investigated this possibility by including the square of self-esteem and initial depression level in their statistical models. In such

studies by Kernis and colleagues (1991; 1998), the interaction between level and stability continued to be related to depressive symptoms, whereas Roberts et al. (1995) found that the interaction was no longer significant, thus leaving this issue unresolved. However, Kernis et al. (1991; 1998) tested the interaction with initial level of self-esteem rather than with initial depressive symptoms. Also, in studies by Roberts et al. (Roberts & Gotlib, 1997; Roberts & Kassel, 1997), the finding was reversed when considering lifetime history of depression such that instability was more strongly related to future depression in individuals with a more severe depressive history.

In sum, Kernis et al.'s studies (1991; 1998) suggest that lability is more of a risk factor for individuals with high average self-esteem and a buffer for individuals with lower average levels. In contrast, studies by Roberts and colleagues (Roberts & Gotlib, 1997; Roberts & Kassel, 1997), suggest that lability is more of a risk factor for individuals who were asymptomatic at baseline. This appeared to be a mathematical artifact, however, and they also found that lability was more of a risk factor for individuals with more severe depression histories. Thus, it is difficult to draw conclusions about the role of lability at different levels of average or baseline self-esteem and at different levels of baseline depression. Given these inconsistencies in the findings, future research should clarify the interaction between level and lability. Moreover, testing the interaction of a proposed predictor with initial depression levels provides additional information about the nature of the prospective relation, that is whether the predictor contributes to increases, decreases, and or maintenance of depressive symptoms over time (Barnett & Gotlib, 1988). The current study also tested the interaction between self-esteem level, initial depression, and lability, while controlling for potential statistical confounds.

Finally, although theories of lability consider fluctuations in daily self-esteem a response to external influences, the studies reviewed thus far have not examined the relation between daily hassles and self-esteem variations. Although Dubois et al. (1997) did assess daily hassles; they did not include them in their measure of stability. Only one study (Butler, Hokanson, & Flynn, 1994) has specifically defined lability differently from stability such that daily fluctuations in self-esteem are expected to be related to the occurrence of positive and negative events. Lability, thus defined, is an improvement over stability as it more adequately captures the relation between reactive self-esteem and stress proposed by major theories.

Butler and colleagues (1994) compared both trait and state (lability) self-esteem in pre-episodic, episodic, and post-episodic depressed individuals, and never-depressed controls. They collected daily self-esteem and stress data over a 30-day period. Individual self-esteem lability scores were computed in relation to positive, negative, and overall event scores. Currently depressed participants reported lower trait self-esteem than both the previously depressed and never depressed groups (previously depressed individuals also reported lower trait SE than never-depressed controls). Currently depressed and previously-depressed participants did not differ from each other, but both groups were more labile than never depressed controls. Also, lability scores, although higher in the depressed groups, were greater than zero on average in never-depressed participants demonstrating that fluctuations in self-esteem as a response to daily events may be a common process and only a vulnerability to depression when that response becomes more extreme. At a five-month follow-up, individuals who became depressed during the follow-up (including four from the never-depressed group) and those who were previously depressed (this group also included subjects who had remitted since Time 1) differed significantly from never depressed controls on lability (greater lability in depressed persons) but

not on trait self-esteem. Moreover, the interaction between self-esteem lability, but not trait self-esteem, and major life event ratings during the follow-up interval significantly incremented the prediction of depression at Time 2, beyond the significant effects of Time 1 depression and stress alone. These findings support self-esteem lability as a vulnerability factor for depression that distinguishes not only in-episode and remitted depressives, but also future depressives from controls. Consistent with its unreliable status in the literature, trait self-esteem did not predict later depression and was less able to discriminate remitted depressives from controls, suggesting that trait self-esteem may be a concurrent symptom of depression rather than a risk factor. Perhaps, low self-esteem assessed during a depressive episode is simply a low point in a fluctuating and vulnerable system. Thus, the single study that measured lability consistently with theoretical definitions found that the interaction of lability and stress predicted depression. However, the measure of lability in this study included several mood items which may have inflated its relation to depression.

Origins of Self-Esteem Lability

Given that research focused on stability/lability of self-cognition is still relatively new, studies of precursors, or potential causes, are very limited. Moreover, a theoretical framework for guiding such research is unavailable, although other areas of study may inform the development of such a framework. Beck and colleagues (Beck, 1983; Beck, Epstein, & Harrison, 1983) have proposed that events congruent with hypothesized personality dimensions, sociotropy and autonomy, activate dysfunctional beliefs in these domains. Similarly, Crocker and Wolfe (2001) emphasized "contingencies of self-worth" or domain-specific self-evaluations on which an individual's global self-worth is based. These domains are thought to be different for every

person. Self-esteem rises or falls in response to an individual's interpretation of external events as self-relevant. In other words, if an event occurs that is perceived to have relevance to adequacy in an important domain, global self-worth will rise or fall accordingly. Although the theory does not specifically address individual differences in the magnitude of these fluctuations, it does propose that individuals vary in the organization of their contingencies and in the extent to which their environment tends to support or undermine positive self-evaluations in important domains. According to Crocker and Wolfe (2001), certain self-worth contingency organizations are likely to be more vulnerable to instability, particularly if the environment is an unsupportive match. For example, individuals whose self-esteem is contingent on the approval of others as opposed to the virtuousness of their own behavior are expected to have greater difficulty maintaining self-esteem as the former is less controllable. Externally-based sources of self-esteem are more volatile and considered to be more vulnerable to fluctuations in self-esteem than internally-based sources. Finally, Crocker and Wolfe (2001) proposed that the interaction between self-esteem contingencies and domain-congruent events increase vulnerability to depression because it creates fluctuations in self-esteem over time. Thus, salient events are expected to impact self-esteem stability, particularly for individuals whose self-worth is contingent on a matching domain. Studies of self-esteem lability have not yet examined the potential role of personality type and sources of self-worth in larger models of the relations between lability and depression.

In addition, negative affect and/or neuroticism have been associated, although non-specifically, with depressive outcomes (Clark, Watson, & Mineka, 1994), stress reactivity (Bolger & Zuckerman, 1995), and daily mood fluctuations (Bolger & Schilling, 1991). Although mood fluctuations have been shown not to be equivalent to daily variations in self-esteem

(Kernis et al., 1993), theoretical formulations hold that self-esteem lability is a reaction to external events. Thus, lability may be a cognitive manifestation of stress reactivity. Taken together, these empirical and hypothetical links have encouraged a few researchers to include measures of negative affect and/or neuroticism in their studies of stability/lability. Roberts et al. (1995) reported that instability in self-esteem was correlated with both neuroticism and instability in negative affect measured concurrently. However, in a later study with only female subjects, Roberts and Gotlib (1997) found that instability in self-esteem and specific self-evaluations were moderately correlated with instability in negative affect but not significantly correlated with neuroticism. In addition, Kernis and colleagues (Berry, Cornell, & Kernis; cited in Kernis & Waschull, 1995) reported that, among individuals with low self-esteem, instability was associated with greater neuroticism.

Finally, one of the features of Borderline Personality Disorder (BPD) is known to be affective instability (Trull, Stepp, & Durrett, 2003). Moreover, BPD is frequently co-morbid with Axis 1 disorders including depression (Trull et al., 2003). Thus, borderline symptoms also may be expected to be associated with labile self-cognitions and mood.

Summary

Although self-esteem is a central construct in theories of depression, empirically it has performed best as a concomitant of depressive symptoms. As a precursor, self-esteem has yielded inconsistent results across studies. Despite the view of numerous theorists that self-esteem actually is a multi-dimensional construct, research investigating self-esteem has used a stable trait conceptualization almost exclusively. Lability or instability refers to short-term fluctuations in self-esteem. Multiple assessments over brief time intervals are required to get an

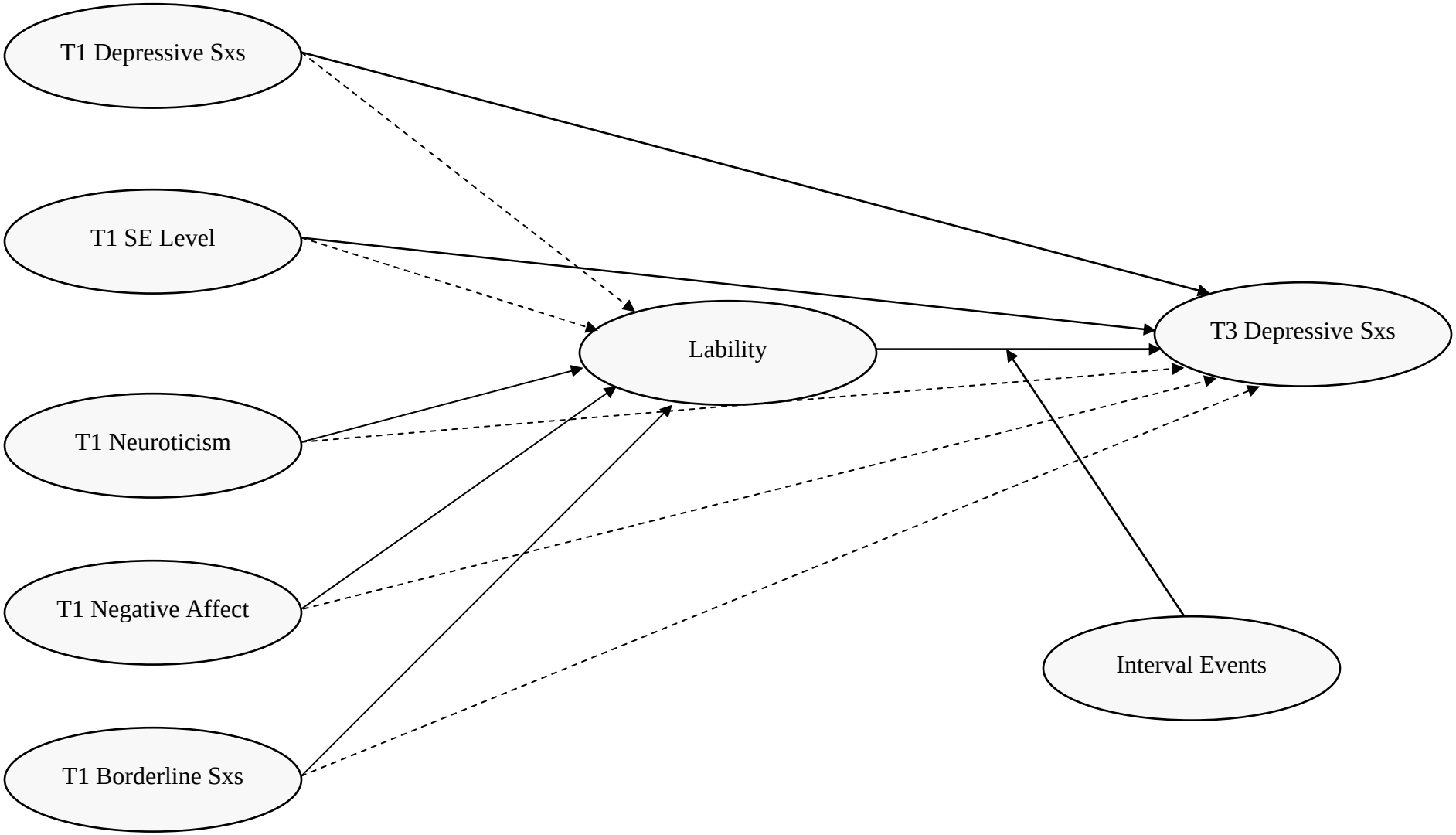
accurate picture of the individual's fluctuations in sense of self. A few studies have found meaningful variation in within-person lability, related to various outcomes including depressive symptoms; however these studies are not conclusive. Although all theories of lability/instability propose, and every researcher in the area assumes, that fluctuations in self-cognitions result from cognitive reactivity to external influences and events, only one study actually has created a relational (the relation of daily hassles to fluctuations in self-esteem) lability score. In addition, potentially related factors (e.g., negative affectivity, personality characteristics, contingency domains), have not been assessed simultaneously making it difficult to develop a model of how these factors may interact to cause depression. Finally, it is unclear whether self-esteem lability/instability interacts with trait levels of self-esteem in predicting depression.

The present study addressed these issues by testing a prospective model of the relation of self-esteem lability to later depressive symptoms. This study operationalized lability as the fluctuations in self-esteem related to positively- and negatively-valenced daily events. Mood and personality variables that may be associated with lability, such as neuroticism, negative affectivity, and sociotropy/autonomy were assessed. Moreover, suggested improvements in the methodological issues described above were addressed.

Research Questions and Hypotheses

The purpose of the current study was to test a comprehensive model proposed by the lability theory of Roberts and Monroe (Roberts & Monroe, 1994) and suggested by the empirical studies reviewed here. A model of study constructs is depicted in Figure 1. The primary hypothesis was that between-person variance in lability, operationalized as fluctuations in daily self-esteem level related to daily minor events, would predict changes in depressive symptoms

Figure 1: Hypothesized Predictive Relations between T1 Depression, Mood and Personality Measures, and Self-Esteem Level, Self-Esteem/Mood Lability, Follow-Up Interval Stress, and T3 Depression



at follow-up in interaction with life events occurring during the follow-up interval. Specific hypotheses and research questions were:

1. Fluctuations in daily self-esteem and mood were expected to be related to daily minor events and significant between-subjects variance was expected in the lability estimates.
2. The relation between self-esteem level, assessed at baseline and across daily assessments, and self-esteem lability estimates was examined.
3. Depressive symptoms at baseline were expected to be negatively correlated with self-esteem level and positively correlated with self-esteem lability. Its relation to mood lability also was tested.
4. Neuroticism and negative affect were expected to be positively correlated with self-esteem lability. The relation between neuroticism, negative affect, and level of self-esteem, assessed at baseline, also was tested.
5. The ability of self-esteem level and lability to predict depressive symptoms at follow-up, alone and as moderated by life events assessed during the follow-up interval was tested. Similar models were fit with estimates of mood lability to examine the relation of daily fluctuations in mood to depressive symptoms.
6. Measures of sociotropy, autonomy, and other domains potentially relevant to self-esteem lability were administered to examine the relations between individual orientation to varying sources of self-esteem and depressive symptoms.
7. The potential moderating influence of initial level of depression and baseline self-esteem level on the relation between self-esteem lability and subsequent depressive symptoms was tested.

8. Although, gender has not influenced the relations between lability and depression in prior studies, the well-known gender difference in rates of depression (Hankin et al., 1998) justified a test of constancy across gender for final study models.

CHAPTER II

METHOD

Participants

Participants were 160 undergraduate students recruited from two universities located in neighboring mid-size southeastern cities. The sample was 73% female (43 males and 117 females). 75% of participants identified themselves as Caucasian, 11.3% African-American, 4.4% Asian, 2.5% Hispanic, 1.9% Latino/a, .6% Pacific Islander, and 4.4.% as Other (including African, West Indian, Pakistani, and Bi-racial). Participants ranged in age from 18 to 29. The mean age was 19.5 years (SD=1.73). 90% of the sample was between 18 and 21 years of age.

Procedure

Participants were recruited through the psychology department research subject pools at each university. The Hassles and Self-Esteem (H&SE) Project was advertised through the subject pool listings and participants were required to be enrolled in an undergraduate psychology course. There were no other exclusion criteria. Data were collected in two waves (Cohorts 1 and 2). 224 total participants were consented: 103 from Vanderbilt University (VU) and 121 from Middle Tennessee State University (MTSU). The study was a short-term longitudinal study with three data collection time points. The first (baseline) consisted of a half-hour packet of questionnaires administered in-person immediately following informed consent. Packets included demographic and contact information about the participants, as well as baseline personality, self-esteem, and depression measures. Demographic information was presented first;

all other questionnaires were given in random order varying across individuals to control presentation effects. The second time point (daily) was administered on-line. Participants were asked to complete a series of daily surveys assessing self-cognitions, minor hassles and positive events, and mood each day, for approximately 14 days. Participants received reminder emails if they missed a day and additional time was allowed if they were unable to complete the surveys within two weeks. These assessments took 10-15 minutes to complete. The mean number of daily entries was 9.97 (SD=3.65); 83% (N=185) of the consented sample completed at least 7 daily surveys and proceeded to the follow-up portion of the study. The number of days to complete the daily portion ranged from 11-44 (1 participant took 89 days to complete the daily portion but was subsequently dropped from all analyses). The mean number of days to complete the daily portion was 18.40 (SD=6.85), the modal number was 14 days, and 55% of the sample completed the study within 16 days. The third time point (follow-up) was available on-line and took approximately 20 minutes to complete. The follow-up was completed by 163 participants approximately six-months following the end of the daily portion of the study. The mean follow-up interval was 5.96 months (SD=1.80); individual intervals ranged from 3 to 13 months. Due to study time constraints, Cohort 1 had a significantly longer follow-up interval on average (mean=7.70 months) than Cohort 2 (mean=4.67 months; t=19.23, df=160, $p<.01$).

Participants were provided with the option of completing paper versions of both daily and follow-up questionnaires if they did not have regular, private internet access; 9 participants selected this option during the daily portion and 15 participants opted to complete a paper version of the follow-up assessment. Participants received two psychology credits for completion of the baseline assessments; they received an additional two credits for a minimum completion of two daily surveys (this arrangement was reached with the directors of each university's subject

pool); they received a $10.00 payment for completion of the follow-up questionnaire. Participants were consented for all three time points at baseline but were able to withdraw from the study at any time. The table below provides details of attrition by site and cohort.

Table 1: Data Collection Patterns by Cohort and Site

Cohort	Site	Consented	Completed Baseline	Completed Daily	Completed Follow-Up	Total Withdrawn	Total Completers
I	VU	57	57	53	48	9	48
	MTSU	30	30	24	21	9	21
	Total	87	87	77	69	18	69
II	VU	46	46	41	38	8	38
	MTSU	91	91	67	56	35	56
	Total	137	137	108	94	43	94
Study Totals		224	224	185	163	61	163

Withdraws from the study predominantly occurred during the daily phase. Most participants withdrawing during this phase did not complete the minimum number of days and declined to continue. Several participants, particularly at MTSU, reported that they did not require the additional two psychology credits received from the daily interviews and therefore declined to complete the study. Of the 163 participants who completed all three time points, three were not included in the current analyses; two were over 30 years old and one participant took nearly three months to complete the daily portion of the study. The final sample (N=160) did not differ from the consented 224 on racial composition (chi square=1.04, df=6, n.s), or age (t=1.43, df=222, n.s.). The sex ratio for the final sample (43 males to 117 females) differed significantly from the consented sample (73 males to 151 females; t=-2.93, df=222, $p<.01$). There were no statistically significant differences between the consented and final sample, or within the final sample by site or cohort, on central study constructs (global self-esteem and

depressive symptoms) assessed at baseline. Based on a score of greater than 18 on the Beck Depression Inventory, 25% of the consented sample experienced at least moderate levels of self-reported depressive symptoms at some point during the study and were provided mental health resources in their community.

Measures

1. Baseline Assessment (T1; see Appendix A for copies of measures)

Demographic and Contact Information

Participants were asked to provide consent, basic demographic information, including age, gender, ethnicity, and both current and anticipated (at follow-up) contact information.

Personality

The introversion-extraversion and neuroticism subscales of the Eysenck Personality Inventory (EPI; Eysenck & Eysenck, 1964) are each 23-item self-report measures of introversion-extraversion and neuroticism. Participants answered yes or no to a series of questions related to these constructs (e.g., “Do you really enjoy meeting new people?” “Do you tend to keep in the background in social situations?” “Would you call yourself a nervous person?” “Do you worry a long time after an embarrassing experience?”). Scores represent the number of items positively endorsed, with some items reverse-scored so that higher scores indicated greater extraversion and neuroticism, respectively. Scores could range from 0 to 23. The EPI is a widely used measure of personality with adequate indices of reliability (Eysenck & Eysenck, 1964). Internal consistency for the current sample was .85 for the introversion-

extraversion scale, and .86 for the neuroticism scale. The two subscales were negatively correlated, r = -.20, $p<.05$.

The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) is a self-report measure of positive (PA) and negative (NA) affect experienced over a selected time period. In the current study, participants were asked to answer items for how much they "usually felt this way". Two scales (PA and NA) consisting of ten items each (e.g., interested, alert, guilty, afraid) were rated on a 5-point scale (from "not at all" to "extremely"). Items were summed for each scale; scores could range from 10 to 50 with higher scores reflecting greater amounts of typically experienced affect. The PANAS has been shown to have good internal consistency and long-term stability and to be correlated as expected with measures of theoretically-related constructs (Watson & Walker, 1996; Watson, Clark, & Tellegen, 1988). Internal consistency for the current sample was .88 for each scale. The two subscales were negatively correlated, r = -.27, $p<.01$.

The Sociotropy-Autonomy Scale (SAS; Beck, Epstein, Harrison, & Emery, 1983) is a 65-item self-report measure with two subscales representing an individual's orientation toward interpersonal and/or achievement domains. Sample items include, "I feel I have to be nice to other people" "I am afraid of hurting other people's feelings" "It is important to me to be free and independent" "I value work accomplishments more than I value making friends". Items were rated on a 5-point scale ranging from "not at all [true]" to "very much [true]". Items were summed within scales; scores could range from 30 to 150 with higher scores indicating greater sociotropy or autonomy, respectively. The two subscales have been shown to have good internal consistency (Beck et al., 1983). Internal consistency for the current sample was .89 for the

sociotropy subscale, and .83 for the autonomy subscale. The two subscales were negatively correlated, r = -.23, p<.01.

The borderline subscale of the Personality Assessment Inventory (PAI; Morey, 1991) is a 23-item self-administered inventory of borderline personality features. Respondents are asked to rate each item (e.g., "My mood can shift quite suddenly" My relationships have been stormy" "Sometimes I feel terribly empty inside") on a 4-point scale ranging from "Not at all true" to "Very true". In the current sample, item responses were summed; scores could range from 23-92 with higher scores indicating greater borderline features. The PAI was developed and standardized on a sample of 18-year-old and older adults. The subscales of the PAI have demonstrated good internal consistency, test-retest reliability, and discriminant validity (Morey, 1991). In the current sample, internal consistency was .84.

Self-Worth

The Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1979) is a widely used 10-item questionnaire assessing global self-esteem on a 4-point scale ranging from "strongly agree" to "strongly disagree" with items such as, "On the whole, I am satisfied with myself" I certainly feel useless at times" "I wish I could have more respect for myself". Items were summed, with some items reverse-scored so that higher scores reflected greater self-esteem. Scores could range from 10 to 40. Internal consistency for the current sample was .90.

Sources of Self-Esteem

The Contingencies of Self-Worth Scale (CSWS; Crocker, Luhtanen, Cooper, & Bouvrette, 2001) was developed by Crocker and colleagues to evaluate sources of self-esteem from seven domains (family support, competition, appearance, god's love, academic competence, virtue, others' approval). Respondents were asked to rate items on a 7-point scale

ranging from “strongly disagree” to “strongly agree”. Examples of items from each domain are “”Knowing that my family members love me makes me feel good about myself” “I feel worthwhile when I perform better than others on a task or skill” “When I think I look attractive, I feel good about myself” “I feel worthwhile when I have God’s love” “Doing well in school gives me a sense of self-respect” “Doing something I know is wrong makes me lose my self-respect” “I can’t respect myself if others don’t respect me”. The measure is scored by taking the mean of responses for each domain. Scores could range from 1 to 7 with higher scores indicating greater reliance on the specified source for global self-esteem. The measure was developed on a large sample of college undergraduates and demonstrated excellent internal consistency ranging from .82 to .96 for the seven subscales. Test-retest reliability ranged from .68 to .96 over a three-month period, and factor analyses confirmed the presence of seven domains. In the current sample, internal consistencies were as follows: Family Support α=.67, Competition α=.84, Appearance α=.75, God’s Love α=.97, Academic Competence α=.77, Virtue α=.81, Others’ Approval α=.81.

Depressive Symptoms

The Beck Depression Inventory - II (BDI-II) is a widely used self-report measure of depressive symptoms first developed in 1961 (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) and later revised (Beck, Rush, Shaw, & Emery, 1979). The BDI-II assesses 21 symptoms and attitudes associated with depression on a 4-point scale (0-3). In the current study, only 20 items were used; suicidality was not queried. Ratings were summed across items with higher scores reflecting greater symptom levels. Scores could range from 0-60. Approximate cut-off scores have been suggested by the Center for Cognitive Therapy with scores < 10 indicating no or minimal depression, 10-18 indicating mild to moderate depression, 19-29 indicating moderate to

severe depression, and 30-63 indicating severe depression. The BDI has demonstrated good reliability and validity in numerous studies with varying populations (Beck, Steer, & Garbin, 1988). Internal consistency for the current sample was .92.

The Center for Epidemiological Studies – Depression Scale (CES-D; Radloff, 1977) is 20-item self-report measure of depression intended for use in the general population. Respondents were asked to rate each item on a 4-point scale identifying frequency of depressive experiences during the past week. Ratings could range from "Rarely or none of the time (less than 1 day)" to "Most or all of the time (5-7 days)". Items were summed; scores could range from 0 to 60 with higher scores indicating more and more frequent depressive experiences. The CES-D has demonstrated adequate internal reliability in youth and young adult samples (Radloff, 1977; 1991). Internal consistency for the current sample was .90.

2. Daily Assessment (T2; see Appendix B for copies of measures)

The daily survey was a 20-30 minute survey consisting of three sections (101 items) covering daily self-cognitions, hassles, and mood. The daily interview was available online for participants with regular, private internet access. The H&SE Project website was designed by the principle investigator (PI) and maintained by CrystalTech, a secure commercial server allowing for divided password-protected access. At baseline, participants were provided with randomly assigned usernames and passwords, not linked to protected health information, to allow access to the online interview. Date and time of daily participant submissions were automatically recorded allowing for monitoring of number and timing of daily entries. Access to online databases was restricted to the PI only. Several existing measures were incorporated into the daily survey.

Self-Esteem

The Quick Self-Description Form (QSDF; Butler et al., 1994) is a 31-item self-report measure designed to capture daily variations in self-esteem. Each item is a 21-point scale between two bipolar adjectives reflecting favorable versus unfavorable self-descriptions. Items were included for their relation to extant measures of trait self-esteem. Participants were asked to endorse each item on the basis of how they see themselves at the moment, from neutral to "the most you have ever felt this way" for each pole. Daily self-esteem scores were represented by the average responses to the 31 items. In the current study, 30 items were assessed (one item "Sober-Drunk" was dropped) but only 15 items ("Important-Unimportant" "Effective-Ineffective" "Likable-Unlikable" "Success-Failure" "Self-Confident-Insecure" "Capable-Helpless" "Useful-Useless" "Winner-Loser" "Lovable-Unlovable" "Valuable-Worthless" "Belonging-Not Belonging" "Adequate-Inadequate" "Self-Trusting-Self-Doubting" "Reliable-Unreliable" "Worthy-Unworthy) were included in the final daily self-esteem scores. The remaining items (e.g., "Happy-Sad" "Joyful-Depressed" "Cheerful-Gloomy") were not used in daily self-esteem scores due to their overlap with mood and depression measures. Scores were created by taking the daily mean of the 15 items and could range from 1-21. Internal consistency has been found to be excellent (Butler et al., 1994) for the full scale. For the current sample, alpha was calculated for the 15 items, across the sample, for each daily entry; internal consistencies were quite high, ranging from .95 to .98.

Daily Hassles

The second part of the daily survey consisted of a 47-item checklist of minor positive and negative events. Respondents were asked to check either yes or no if they had experienced the

event since completing the last daily survey or in the last 24 hours if they had missed a day or more. The list of minor events was created for the current study and designed to efficiently sample daily life events in a sample of older adolescents/young adults. A pool of items was collected from extant measures of daily hassles (Daily Hassles Scale for College Students; O'Neill, Cohen, Tolpin, & Gunthert, 2004, Daily Hassles & Uplifts; Kanner, Coyne, Schaefer, & Lazarus, 1981) and submitted to a panel of 10 undergraduate and graduate students to be rated on likelihood of occurrence. The panel also was asked to generate novel items on the basis of their own daily experiences. The panel then met with the PI and two doctoral-level researchers with experience in stress assessment with adolescent populations. Items were discussed and voted on for their likelihood of daily occurrence and saliency to the target population. The final checklist included 7 positive and 39 negative daily events, e.g., "You were unprepared for a class or important meeting" "Someone complimented you" "You felt pressured to do something you didn't want to do". The checklist also included an unlimited category for listing other events occurring during the past 24 hours. Summary scores included counts of positive, negative, and total events.

Mood

The daily mood assessment was taken from several studies focusing on mood variability (Diener & Larsen, 1984; Larsen, 1987; Larsen & Diener, 1985). Participants were asked to rate 24 mood descriptors (e.g., "happy" "sad" "fearful") on a six-point scale, ranging from "not at all" to "extremely much", for their average mood on the day of completion. Larsen (1987) reported that factor analyses of the scale yielded positive and negative mood factors with a consistently strong inverse relation. The measure typically has been scored by creating a difference score from the subtraction of average negative affect ratings from average positive

affect ratings per day. In the current study, three summary scores for each day were created by summing the positive items, negative items, and subtracting negative from positive sums. Two of the original mood descriptors, “astonished” and “”still”, were not included in summary scores because of low correlations with other items. Internal consistencies for the positive mood summary scores ranged from .84-.91 and from .80-.88 for negative mood scores. On average, daily positive and negative mood were moderately and negatively correlated (mean r = -.38, $p<.01$). Correlations between positive and negative mood scores ranged from -.24 to -.47 across days. The difference score was used in all analyses; lower scores represented more negative mood ratings. The maximum possible positive score was 72; the maximum possible negative score was 60. Thus, the difference score could theoretically range from -60 to +72, with scores less than 12 indicating more negative than positive mood ratings.

3. Follow-Up Assessment (T3; see Appendix C for copies of measures)

The follow-up assessment was approximately 30-minutes and consisted of three sections (116 items) assessing major life events occurring over the follow-up interval and current depressive symptoms. The assessment was available online for participants with internet access. Date and time of submission were automatically recorded. Several existing measures were incorporated into the follow-up interview.

Stress/Major Life Events

The life events checklist was created for the current study and designed to sample major life events in a sample of older adolescents/young adults. A pool of items was collected from extant measures (Life Events Survey; Hammen, Marks, Mayol, & de Mayo, 1985, Life Events Schedule; Dohrenwend, Krasnoff, Askenasy, & Dohrenwend, 1978, Life Events Checklist;

Johnson & McCutcheon, 1980) and submitted to the panel of 10 undergraduate and graduate students. The panel also was asked to generate novel items on the basis of their own experiences. Items were discussed and voted on in a meeting with the PI and two doctoral-level researchers for their likelihood of occurrence and saliency to the target population. The final checklist included 75 major life events, e.g., “You dropped out of school” “You started a new job” “You became engaged” “A close personal friendship ended” “You were the victim of a crime”. The checklist also included an unlimited category for listing other events occurring during the follow-up interval. Respondents were asked to indicate whether each event had occurred and if so to rate the impact of the event on a 5-point scale ranging from “No Impact” to “Huge Impact”. Summary scores included a count of total events, and an impact rating score (the sum of the impact ratings for each occurring event).

Depressive Symptoms

The Beck Depression Inventory (BDI-II) and Center for Epidemiological Studies Depression Scale (CES-D) were re-administered at follow-up (T3). Internal consistency at T3 was .93 for each measure.

CHAPTER III

RESULTS

Overview of Data Analyses

Self-esteem and mood lability coefficients were calculated by fitting hierarchical linear equations (HLM 6; Raudenbush, Bryk, Cheong, & Congden) and extracting individual estimates of the relation between self-esteem/mood and the daily events counts for use as predictor and criterion variables in path analyses. Descriptive statistics and bivariate correlations for all observed variables, including the lability estimates, were computed. The across-time correlations were examined to assess the hypothesized relations between study constructs and to establish a basis for appropriate specification of the data in path models of all three time points. Path analyses were conducted with AMOS (AMOS 5.0*,* Arbuckle & Wothke, 1995). All analyses were performed on data from the sample of participants completing a minimum of seven daily entries and the follow-up interview (N = 160). For the final path models, constancy of coefficients across gender was tested with a multi-group analysis. There was no missing data in between-subjects analyses. Model comparison provided differences in the chi square statistic ($\Delta\chi^2$) that were used to determine significant changes in model fit when testing central hypotheses (Bollen, 1989).

Creation of Lability Estimates

To test whether fluctuations in daily self-esteem and mood ratings were related to concurrent minor events and whether these relations would vary significantly between

participants (Hypothesis 1), lability estimates were calculated for each participant by fitting hierarchical linear equations with the first 11 daily entries. One hundred percent of the sample had complete data to 7 time points; 88% of the sample completed at least 10 time points, and 69% of the sample had complete data to 11 time points. Less than half the sample completed greater than 11 daily entries, thus only the first 11 entries were used for all participants to preserve the precision of the estimates. Self-esteem lability was calculated by regressing daily self-cognitions on the total daily events count, and to assess the degree to which daily self-cognitions were reactive to negative only and positive only events, these two additional lability coefficients also were estimated. The same three coefficients were calculated using the daily mood difference score regressed on total, negative, and positive events counts. Thus, there were six lability estimates for each participant: three self-esteem (SE-NH, SE-PH, SE-TH) and three mood (DM-NH, DM-PH, DM-TH). In these equations,

$$\textit{Level 1:} \quad Y_{ij} = B0_j + B1_j Entry_{ij} + B2_j Events_{ij} + r_{ij}$$

$$\textit{Level 2:} \quad B0_j = \gamma 00 + u0_j$$

$$B1_j = \gamma 10 + u1_j$$

$$B2_j = \gamma 20 + u2_j,$$

Y_{ij} = daily self-esteem/mood ratings (N = 11), $B1_j$ = trend over daily entries, and $B2_j$ = the de-trended correlation between self-esteem/mood and daily events. The $B1$ and $B2$ fixed effects represented the mean linear trend across the daily interval. The significance of the mean relation of fluctuations in daily self-esteem to daily events was estimated as the difference from zero of the $B2$ fixed effect. The $B2_j$ random effects, i.e., the between-subjects variance in the relation between self-esteem/mood and events represented lability, or the degree to which participants differed on the day to day concordance between self-cognitions, mood, and events. The

significance of between-person variability in the relation between self-esteem and events, i.e., in self-esteem lability, was measured by the difference from zero of the variation in the $B2_j$ random effect (τ_{b2}).

1. The relation of self-cognitions to total daily hassles (SE-TH): The linear trend across daily entries was statistically significant (b1 = .06, t = 2.28, p <.05) indicating a small increase in self-esteem over the course of the daily assessments. The count of total daily hassles significantly predicted daily fluctuations in self-esteem ratings (b2 = -.14, t = -6.23, p <.01) indicating that on average, for each additional daily event, mean self-esteem ratings decreased by .14 on the 21-point scale. There was significant between-subjects variance in the b2 relation (τ_{b2} = .13, χ^2 = 201.71, p <.05) indicating significant variance in the lability estimates. The estimated individual lability coefficients ranged from -.45 to .09.

2. The relation of self-cognitions to negative daily hassles (SE-NH): The linear trend across daily entries was not statistically significant (b1 = .03, t = 1.10, n.s.). The count of negative daily hassles significantly predicted daily fluctuations in self-esteem ratings (b2 = -.31, t = -12.13, p <.01) indicating that on average, for each additional daily negative event, mean self-esteem ratings decreased by .31. There was significant between-subjects variance in the b2 relation (τ_{b2} = .16, χ^2 = 267.00, p <.01) indicating significant variance in the lability estimates. The estimated individual lability coefficients ranged from -.72 to -.07.

3. The relation of self-cognitions to positive daily hassles (SE-PH): The linear trend across daily entries was statistically significant (b1 = .12, t = 4.94, p <.01). The count of positive daily events

significantly predicted daily fluctuations in self-esteem ratings (b2 = .55, t = 9.86, p <.01) indicating that on average, for each additional daily positive event, mean self-esteem ratings increased by .55. There was significant between-subjects variance in the b2 relation (τ_{b2} = .46, χ^2 = 274.17, p <.01) indicating significant variance in the lability estimates. The estimated individual lability coefficients ranged from -.05 to 1.61 indicating that, for the most labile individuals, a minor positive event could be associated with a 1.5 point boost in self-esteem on that same day.

4. The relation of mood to total daily hassles (DM-TH): The linear trend across daily entries was statistically significant (b1 = -.37, t = -2.63, p <.01) indicating a trend for mood ratings to become more negative on average over the course of the daily assessments. The count of total daily hassles significantly predicted fluctuations in mood ratings (b2 = -1.14, t = -8.04, p <.01) indicating that on average, for each additional event, mood ratings decreased, i.e., became more negative, by 1.14 points. There was significant between-subjects variance in the b2 relation (τ_{b2} = .93, χ^2 = 226.23, p <.01) indicating significant variance in the lability estimates. The estimated individual lability coefficients ranged from -2.61 to .37.

5. The relation of mood to negative daily hassles (DM-NH): The linear trend across daily entries was statistically significant (b1 = -.58, t = -4.59, p <.01). The count of negative daily hassles significantly predicted daily fluctuations in mood ratings (b2 = -2.37, t = -14.83, p <.01) indicating that on average, for each additional negative event, mood ratings decreased by 2.37 points. There was significant between-subjects variance in the b2 relation (τ_{b2} = 1.23,

χ^2 = 292.21, p <.01) indicating significant variance in the lability estimates. The estimated individual lability coefficients ranged from -5.46 to -.35.

6. The relation of mood to positive daily hassles (DM-PH): The linear trend was not statistically significant (b1 = .11, t = .80, n.s.). The count of positive daily hassles significantly predicted daily fluctuations in mood ratings (b2 = 3.97, t = 12.52, p <.01) indicating that on average, for each additional positive event, mood ratings increased, i.e., became more positive, by 3.97 points. There was significant between-subjects variance in the b2 relation (τ_{b2} = 2.23, χ^2 = 219.27, p <.01) indicating significant variance in the lability estimates. The estimated individual lability coefficients ranged from .36 to 7.64.

Overall, in these models there was a small but significant positive linear effect for daily self-esteem indicating that on average self-esteem became more positive across the daily interval. There generally was a small negative linear effect for mood indicating a slight decline in mood ratings across daily entries. The mean relation between self-esteem, mood and daily events was statistically significant, indicating daily fluctuations in self-esteem and mood in relation to minor events on average for the sample. More importantly, the B2 random effect consistently was significant indicating that individuals varied in the degree to which their self-cognitions and mood were related to daily minor events.

Descriptive Statistics

Distribution properties and bivariate correlations for study measures are presented in Tables 2 and 3. T1 and T3 depression indices of depression (BDI-II and CES-D) and negative affect (PANAS) were positively skewed. These variables were transformed with the square root

Table 2: Descriptive Statistics for Study Measures

Measure	N	Mean	SD	Min	Max	Skew
T1 BDI	160	11.77	9.23	0	59.00	1.76
T1 CES-D	160	16.38	10.14	2.00	51.00	1.07
T1 RSE	160	31.28	5.15	16.00	40.00	-.33
T1 PANAS Negative Affect	160	21.04	6.75	10.00	48.00	1.23
T1 PANAS Positive Affect	160	34.33	6.43	11.00	50.00	-.64
T1 EPI Neuroticism	160	11.91	5.36	1.00	23.00	.01
T1 EPI Introversion-Extraversion	160	14.85	5.05	3.00	23.00	-.56
T1 PAI-Borderline	160	49.57	10.01	31.00	78.00	.56
T1 SAS Sociotropy	160	92.70	17.21	46.00	134.00	-.05
T1 SAS Autonomy	160	96.94	13.11	66.00	133.00	.25
T1 CSWS Family Support	160	5.70	.72	3.60	7.00	-.67
T1 CSWS Competition	160	5.16	.93	1.40	7.00	-.74
T1 CSWS Appearance	160	5.24	.89	2.00	7.00	-.50
T1 CSWS God's Love	159	4.45	1.90	1.00	7.00	-.45
T1 CSWS Academic Competence	160	5.62	.80	3.80	7.00	-.17
T1 CSWS Virtue	160	5.33	.97	1.00	7.00	-1.07
T1 CSWS Others' Approval	160	4.23	1.20	1.60	7.00	-.25
Lability Estimates for SE-TH	160	-.14	.06	-.45	.09	-.22
Lability Estimates for SE-NH	160	-.31	.11	-.72	-.07	-.90
Lability Estimates for SE-PH	160	.55	.32	-.05	1.61	.88
Lability Estimates for DM-TH	160	-1.14	.52	-2.61	.37	-.09
Lability Estimates for DM-NH	160	-2.37	.83	-5.46	-.35	-.35
Lability Estimates for DM-PH	160	3.97	1.31	.36	7.64	.21
T3 Life Events	160	6.36	4.13	0	20.00	1.07
T3 BDI	160	10.58	10.05	0	57.00	1.55
T3 CES-D	160	15.75	11.28	1.00	54.00	.99

Note: T1=Time 1, T3=Time 3; BDI=Beck Depression Inventory-II, CES-D=Center for Epidemiological Studies-Depression Scale, RSE=Rosenberg Self-Esteem Scale, PANAS=Positive and Negative Affect Scales, EPI=Eysenck Personality Inventory, PAI=Personality Assessment Inventory, SAS=Sociotropy Autonomy Scale, CSWS=Contingencies of Self-Worth Scales; SE-TH=lability estimates from daily self-esteem ratings regressed on total daily hassles count, SE-NH=lability estimates from daily self-esteem ratings regressed on negative daily hassles count, SE-PH=lability estimates from daily self-esteem ratings regressed on positive daily hassles count, DM-TH=lability estimates from daily mood ratings regressed on total daily hassles count, DM-NH=lability estimates from daily mood ratings regressed on negative daily hassles count, DM-PH=lability estimates from daily mood ratings regressed on positive daily hassles count.

Table 3: Bivariate Correlations

	1	2	3	4	5	6	7	8	9	10	11	12	13
1) T1 BDI													
2) T1 CES-D	.79**												
3) T1 RSE	-.68**	-.69**											
4) T1 PANAS Neg	.69**	.67**	-.60**										
5) T1 PANAS Pos	-.50**	-.50**	.60**	-.28**									
6) T1 EPI Neuroticism	.68**	.63**	-.59**	.66**	-.42**								
7) T1 EPI Int-Ext	-.21**	-.23**	.35**	-.15	.38**	-.20*							
8) T1 PAI-Borderline	.67**	.64**	-.51**	.64**	-.38**	.62**	-.11						
9) T1 SAS Sociotropy	.42**	.44**	-.33**	.37**	-.19*	.55**	-.05	.26**					
10) T1 SAS Autonomy	.16*	.05	.09	.11	.15	-.01	-.10	.29**	-.23**				
11) T1 CSWS FS	.01	-.06	.14	-.10	.10	.01	.26**	-.13	.21**	-.15			
12) T1 CSWS Comp	.23**	.22**	-.22**	.21**	-.14	.28**	.09	.13	.35**	-.01	.18*		
13) T1 CSWS App	.28**	.22**	-.23**	.19*	-.16*	.30**	.14	.24**	.40**	-.14	.28**	.43**	
14) T1 CSWS God Love	-.07	-.08	.10	.01	.16*	.04	.02	-.06	.03	.02	.08	-.11	-.09
15) T1 CSWS Ac Comp	.19*	.15	-.08	.16*	-.01	.34**	-.05	.10	.33**	.03	.27**	.45**	.30**
16) T1 CSWS Virtue	-.16*	-.19*	.15	-.11	.22**	-.03	.08	-.26**	.24**	-.10	.35**	.09	.10
17) T1 CSWS Approval	.21**	.25**	-.28**	.14	-.17*	.35**	.09	.01	.54**	-.46**	.23**	.35**	.50**
18) SE-TH	-.23**	-.12	.15	-.26**	.07	-.24**	.12	-.21**	-.30**	-.14	-.07	-.02	-.12
19) SE-NH	-.24**	-.09	.28**	-.22**	.23**	-.24**	.13	-.20*	-.22**	-.05	-.02	.01	-.19*
20) SE-PH	.46**	.36**	-.52**	.35**	-.39**	.36**	-.06	.35**	.29**	-.06	-.01	.17*	.27**
21) DM-TH	-.05	-.03	.01	-.19*	-.04	-.08	.01	-.08	-.30**	.02	-.11	-.08	-.11
22) DM-NH	.01	.06	.02	-.07	.03	-.01	.04	-.01	-.19*	.08	-.09	-.02	-.14
23) DM-PH	.22**	.13	-.24**	.16*	-.18*	.22**	-.10	.19*	.23**	-.01	.07	.11	.19*
24) T3 Life Events	.33**	.36**	-.17*	.20*	-.17*	.24**	-.02	.29**	.22**	.15	.10	.12	.11
25) T3 BDI	.69**	.63**	-.57**	.50**	-.44**	.60**	-.23**	.57**	.33**	.18*	-.10	.22**	.22**
26) T3 CES-D	.61**	.67**	-.52**	.49**	-.40**	.59**	-.20*	.57**	.30**	.17*	-.10	.21**	.21**

Table 3: cont.

	14	15	16	17	18	19	20	21	22	23	24	25	26
1) T1 BDI													
2) T1 CES-D													
3) T1 RSE													
4) T1 PANAS Neg													
5) T1 PANAS Pos													
6) T1 EPI Neuroticism													
7) T1 EPI Int-Ext													
8) T1 PAI-Borderline													
9) T1 SAS Sociotropy													
10) T1 SAS Autonomy													
11) T1 CSWS FS													
12) T1 CSWS Comp													
13) T1 CSWS App													
14) T1 CSWS God Love													
15) T1 CSWS Ac Comp	.04												
16) T1 CSWS Virtue	.34**	.21**											
17) T1 CSWS Approval	-.16*	.25**	.17*										
18) SE-TH	-.14	-.18*	-.20*	-.22**									
19) SE-NH	-.09	-.17*	-.16*	-.24**	.78**								
20) SE-PH	-.06	.15	-.02	.17*	-.05	-.44**							
21) DM-TH	-.10	-.24**	-.24**	-.21**	.68**	.55**	-.11						
22) DM-NH	-.09	-.19*	-.20*	-.21**	.48**	.66**	-.26**	.83**					
23) DM-PH	.05	.10	.04	.11	-.03	-.28**	.64**	-.05	-.35**				
24) T3 Life Events	.10	.15	.07	.05	-.19*	-.03	.19*	-.20*	-.02	.14			
25) T3 BDI	-.01	.17*	-.14	.17*	-.14	-.11	.36**	.04	.12	.18*	.35**		
26) T3 CES-D	.01	.15	-.18*	.14	-.11	-.07	.31**	.04	.15	.09	.30**	.85**	

*Note: N=160; *p<.05, **p<.01; T1=Time 1, T3=Time 3; BDI=square root transformation of Beck Depression Inventory-II, CES-D= square root transformation of Center for Epidemiological Studies-Depression Scale, RSE=Rosenberg Self-Esteem Scale, PANAS=Positive and Negative Affect Scales (Neg=square root transformation of negative affect scale, Pos=positive affect scale), EPI=Eysenck Personality Inventory (Int-Ext=Introversion-Extraversion), PAI=Personality Assessment Inventory, SAS=Sociotropy-Autonomy Scale, CSWS=Contingencies of Self-Worth Scales (FS=Family Support, Comp=Competition, App=Appearance, God Love=God's Love, Ac Comp=Academic Competence, Approval=Others' Approval)); SE-TH=lability estimates from daily self-esteem ratings regressed on total daily hassles count, SE-NH=lability estimates from daily self-esteem ratings regressed on negative daily hassles count, SE-PH=lability estimates from daily self-esteem ratings regressed on positive daily hassles count, DM-TH=lability estimates from daily mood ratings regressed on total daily hassles count, DM-NH=lability estimates from daily mood ratings regressed on negative daily hassles count, DM-PH=lability estimates from daily mood ratings regressed on positive daily hassles count.*

for use in all analyses. The daily event counts also tended to be positively skewed across the sample; however, these variables were used as within-person covariates in the creation of lability scores and generally were not skewed at that level. Overall, the bivariate relations between baseline personality, affect, and depression measures tended to be statistically significant and in expected directions. The contemporaneous relation between the two indices of depression was high (r = .79, p <.01 at T1; r = .85, p <.01 at T3). Both T1 depression measures (BDI-II and CES-D) were highly negatively correlated with baseline self-esteem (r = -.68 and -.69, p <.01, respectively) confirming the hypothesized concurrent relation between self-esteem level and depressive symptoms (Hypothesis 3). Negative affect, neuroticism, and borderline symptoms assessed at baseline were significantly and positively associated with both T1 depression (BDI: r = .69, .68, and .67, p <.01, respectively; CES-D: r = .67, .63, and .64, p <.01, respectively) and negatively associated with self-esteem level (r = -.60, -.59, and -.51, p <.01, respectively) (Hypothesis 4).

The Relation of Self-Esteem Level and Lability

To test the relation between self-esteem level and lability (Hypothesis 2), self-esteem lability scores were regressed on self-esteem level scores assessed at baseline. To test whether this relation was an artifact of floor and ceiling effects, i.e., extreme initial level scores having limited range to vary over time, the correlation between the squared level term and lability also was tested. Self-esteem level was significantly and positively related to the relation between self-esteem and negative hassles (SE-NH; b = .28, t = 3.70, p <.01), and negatively related to the relation between self-esteem and positive hassles (SE-PH; b = -.52, t = -7.60, p <.01). Self-esteem level was not related to the lability estimates for total hassles (SE-TH; b = .15, t = 1.87,

n.s.). The pattern of correlations was the same for the relation of individual mean self-esteem ratings across the daily time period and lability. Mean level across days was positively related to SE-NH (r = .25, p <.01), negatively related to SE-PH (r = -.55, p <.01), and not significantly related to SE-TH. Thus, individuals with lower self-esteem at baseline, and on average across daily assessments, were more likely to have greater covariance between their self-cognitions and both negative and positive events, i.e. these individuals were more labile. The squared self-esteem level term did not contribute to the prediction of the lability estimates, indicating that these relations tended not to be curvilinear and less likely due to floor and ceiling effects. The unsquared term was used in all subsequent analyses.

Relations between Major Study Constructs across Time

Self-esteem lability calculated from the regression of daily self-esteem ratings on the total hassles count (SE-TH) was significantly related to the T1 BDI (r = -.23, p <.01) but not the T1 CES-D. SE-TH was associated with T1 negative affect (r = -.26, p<.01), neuroticism (r = -.24, p<.01), and borderline symptoms (r = -.21, p<.01). SE-TH was not related to T1 positive affect or introversion/extraversion. Self-esteem lability calculated from the regression on the negative hassles count (SE-NH) also was significantly related to the T1 BDI (r = -.24, p <.01) but not the CES-D. SE-NH was associated with T1 negative affect (r = -.22, p <.01), neuroticism (r = -.24, p <.01), and borderline symptoms (r = -.20, p <.05). SE-NH was related to T1 positive affect (r = .23, p <.01), but not to introversion/extraversion. Self-esteem lability calculated from the regression on the positive hassles count (SE-PH) was related to both T1 indices of depression (BDI: r = .46, p <.01; CES-D: r = .36, p <.01). SE-PH was associated with T1 negative affect

(r = .35, p <.01), neuroticism (r = .36, p <.01), and borderline symptoms (r = .35, p <.01). SE-PH was related to T1 positive affect (r = -.39, p <.01), but not to introversion/extraversion.

Thus, personality and affect variables, such as neuroticism and negative affect, were associated with greater lability in self-cognitions. Both indices of depression at T1 predicted self-esteem lability, although lability was generally more strongly associated with the BDI and the largest correlations were with the lability scores derived from the regression of daily self-esteem ratings on the positive events count. The direction of this relation indicated that individuals who demonstrated greater self-esteem boosts from the occurrence of minor positive events (e.g., a compliment) were more likely to report greater levels of depressive symptoms at the baseline assessment.

With regards to mood lability, the estimates calculated from the regression of daily mood ratings on the total hassles count (DM-TH) and the negative hassles count (DM-NH) generally were not related to depressive symptoms, mood, or personality measures at Time 1. The mood lability estimates calculated from the regression of daily mood ratings on the positive hassles count (DM-PH) was significantly related to the T1 BDI (r = .22, p <.01) but not the CES-D. DM-PH also was associated with T1 negative affect (r = .16, p <.06), neuroticism (r = .22, p <.01) and borderline symptoms (r = .19, p <.05). DM-PH was related to T1 positive affect (r = -.18, p <.05), but not to introversion/extraversion. The pattern of findings for daily mood lability was similar to that for the self-esteem lability estimates; however, only in the case of daily mood ratings regressed on positive events, indicating that individuals who demonstrated greater mood responsiveness to positive events reported more neuroticism, more borderline tendencies, and greater levels of depressive symptoms at Time 1. There was considerable item

overlap between the daily mood assessment and the negative and positive affect assessments at Time 1; therefore, these relations were not considered theoretically meaningful.

The autocorrelations of each depression measure across time were quite large (BDI: r = .69, p <.01; CES-D: r = .67, p <.01) indicating minimal change in rank order for depressive symptoms from the baseline to follow-up assessments. There was a slight downward shift in mean depressive symptoms from baseline to follow-up for the BDI (Mean difference = 1.18, t = 2.06, p<.05). Comparison of the CES-D means across time points did not yield significant differences. Taken together, these results suggested a high degree of stability in levels of depression across time.

Self-esteem lability (SE-PH) was significantly related to both indices of depression at Time 3 (BDI: r = .36, p <.01; CES-D: r = .31, p <.01). Self-esteem level also was associated with Time 3 depression (BDI: r = -.57, p <.01; CES-D: r = -.52, p <.01). Mood lability (DM-PH) was significantly associated with the T3 BDI (r = .18, p <.05). Both indices of Time 3 depressive symptoms also generally were related to Time 1 negative and positive affect measures, neuroticism, borderline symptoms, and introversion/extraversion (see Table 2). Major life events occurring during the follow-up interval also were significantly associated with both indices of depression (BDI: r = .35, p <.01; CES-D: r = .30, p <.01).

In sum, depressive symptoms at baseline were significantly related to self-esteem lability, particularly when operationalized as the relation of daily self-esteem fluctuations to concurrent positive events (Hypothesis 3). The findings were similar for mood lability, only when operationalized as the relation of daily fluctuations in mood to concurrent positive events. Individuals reporting higher levels of depressive symptoms at baseline demonstrated more lability in their self-cognitions and mood associated with the occurrence of positive events.

Moreover, both self-esteem and mood lability were associated with mood, neuroticism, and borderline symptoms reported at Time 1, but again most consistently for the lability estimates calculated from the regression on the positive events count. Thus, individuals reporting greater levels of negative affect, more neuroticism, and higher levels of borderline symptoms were more likely to demonstrate daily cognitive and mood fluctuations associated with positive events (Hypothesis 4). With regards to predicting depressive symptoms at follow-up, self-esteem level and lability were related to both indices of Time 3 depression, such that lower baseline self-esteem and greater lability were associated with higher levels of depression at follow-up. Mood lability was related to the Time 3 BDI. There also were significant relations between baseline mood and personality variables and Time 3 depressive symptoms. Notably, the relation between Time 1 and Time 3 indices of depression was quite high. Finally, stress occurring during the follow-up interval was associated with higher levels of depressive symptoms at Time 3.

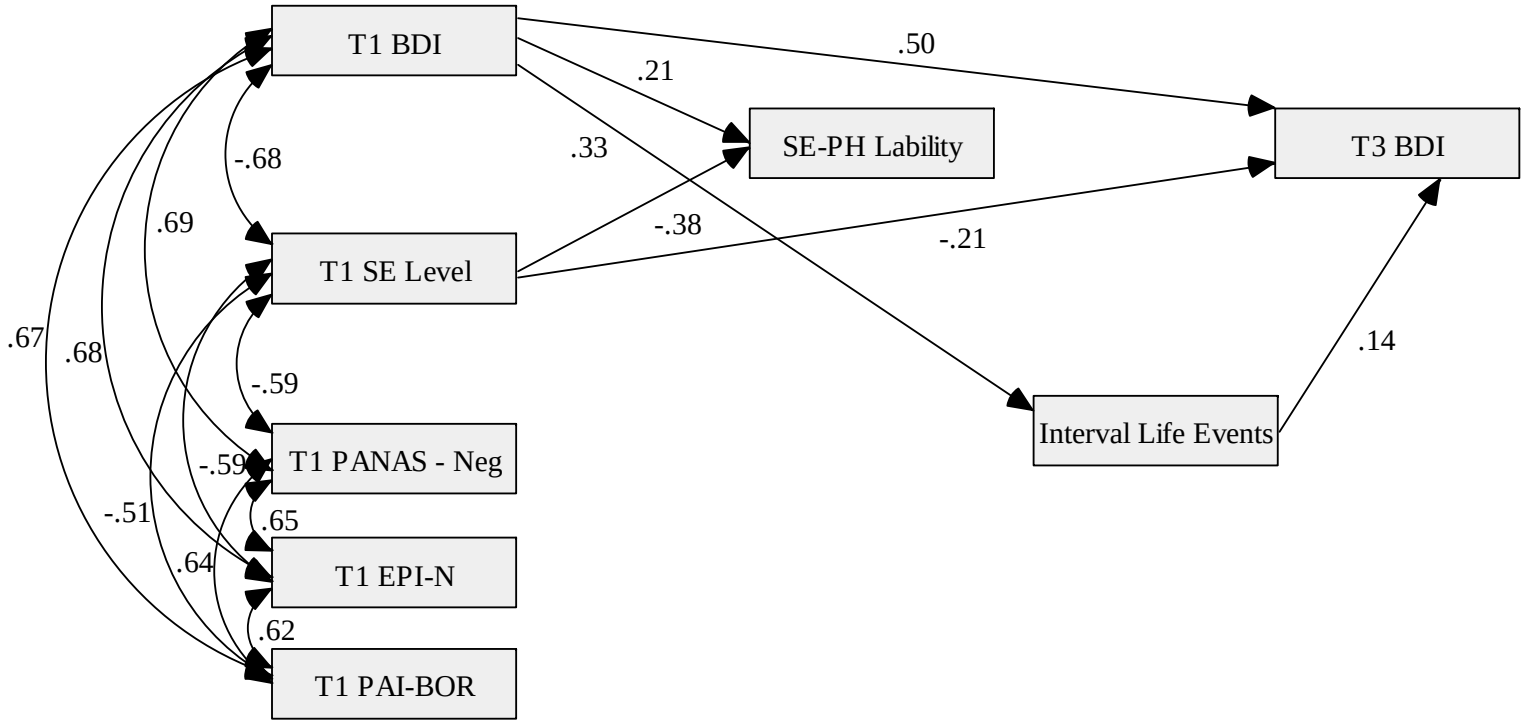
Path Analyses

To test the ability of self-esteem level and lability to predict depressive symptoms at follow-up, while controlling the effect of prior depression, both alone and as moderated by intervening life events (Hypothesis 5), path analyses were conducted to assess the multivariate relations for all three time points. Separate models were fit for each index of depression and for self-esteem and mood lability resulting in four models summarizing the across time relations between major study constructs (only lability coefficients estimated from the regression of daily self-esteem and mood ratings regressed on positive hassles were included as these scores had the most consistent relation to depression). In each of these models, an unspecified main effects model, where all paths were free to vary, was fit to establish a basis of comparison for models

including constraints reflecting hypothesized relations. A non-significant decrement in fit ($\Delta\chi^2$ statistic) relative to increased parsimony indicated good specification of the data (Bollen, 1989). Other overall fit indices also were considered: the Tucker-Lewis Index (TLI) and the root mean square of approximation (RMSEA; Bollen, 1989). The significance of path estimates also was used to confirm hypothesized relations.

1. SE-PH - BDI: The unspecified model fit the data perfectly ($\chi^2 = 0$, df = 0) since with all paths freely estimated the model is just-identified. As expected, all correlations between T1 variables (BDI, self-esteem level, negative affect, neuroticism, and borderline symptoms) were significant (see Figure 2). T1 depression predicted T3 depression (b = .38, t = 4.07, p <.01) and stress during the follow-up interval (b = .33, t = 2.56, p <.01). There was a trend for T1 depression to predict self-esteem lability (b = .21, t = 1.86, p <.07), self-esteem level predicted lability (b = -.38, t = -4.07, p <.01) and T3 depression (b = -.18, t = -2.23, p <.05). Interval stress was related to T3 depression (b = .13, t = 2.18, p <.05). T1 neuroticism made a small but significant contribution to the prediction of variance in T3 depression (b = .19, t = 2.33, p <.05). Notably, the large bivariate correlation between negative affect and T3 depression became non-significant with T1 depression in the model. Self-esteem lability also failed to predict T3 depression, controlling T1 depression. A series of models with constraints according to study hypotheses were fit and compared to the unspecified model. In these models, constraining to zero the relations of negative affect, neuroticism, and borderline symptoms to interval stress and T3 depression, and the relations between self-esteem level/lability and interval stress resulted in a non-significant decrement in model fit ($\Delta\chi^2 = 15.16$, df = 8, n.s.). The test of the hypothesized relation between T1 mood and personality variables and self-esteem lability resulted in a non-significant

Figure 2: T3 BDI predicted by T1 BDI, Self-Esteem Level, and Follow-Up Interval Stress
Model Chi Square = 15.679, df = 12, p value = .206; RMSEA = .044; TLI= .986; Standardized estimates

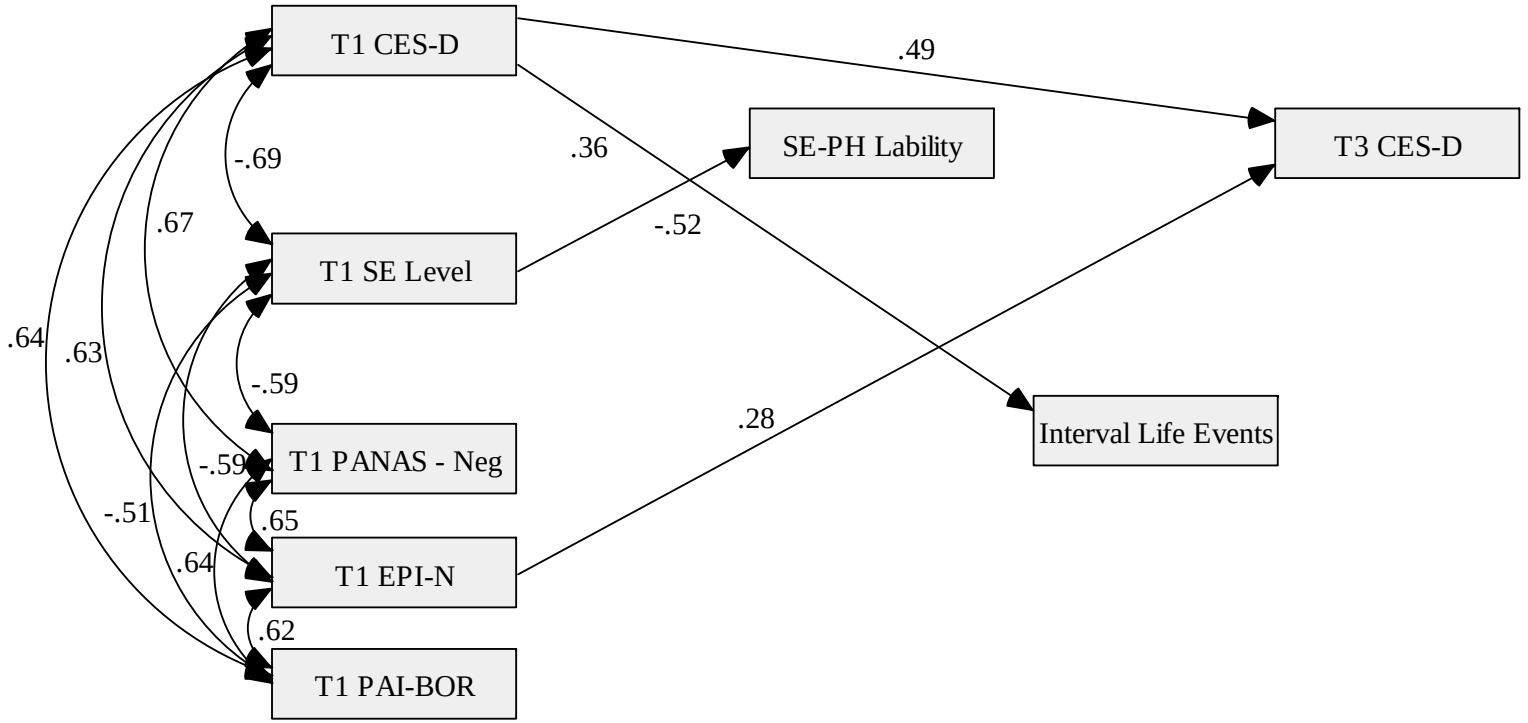


Note: T1 = Time 1, T3 = Time 3. BDI = Beck Depression Inventory - II, SE Level = Rosenberg Self-Esteem Scale, PANAS-Neg = Positive and Negative Affect Scales - Negative Affect Scale, EPI-N = Eysenck Personality Inventory - Neuroticism, PAI-BOR = Personality Assessment Inventory - Borderline Scale, SE-PH Lability = Individual lability coefficients estimated from the regression of daily self-esteem ratings on the positive hassles scale, Life Events = Life Events Checklist completed at follow-up (T3) about interval life events. Only significant paths are shown; residual terms were estimated for endogenous variables but are not pictured.

decrement in fit ($\Delta\chi^2$ = .51, df = 3, n.s.). The test of the hypothesized relation between lability and T3 depression also resulted in a non-significant decrement in fit ($\Delta\chi^2$ = .01, df = 1, n.s.). Tests of the predictive relations between T1 depression and T3 depression ($\Delta\chi^2$ = 36.19, df = 1, p <.01), T1 depression and SE lability ($\Delta\chi^2$ = 5.20, df = 1, p <.05), T1 depression and interval stress ($\Delta\chi^2$ = 18.75, df = 1, p <.01), self-esteem level and lability ($\Delta\chi^2$ = 16.33, df = 1, p <.01), self-esteem level and T3 depression ($\Delta\chi^2$ = 7.61, df = 1, p <.01), and interval stress and T3 depression ($\Delta\chi^2$ = 5.93, df = 1, p <.05) all resulted in significant decrements to model fit indicating that adequate specification of the data required these paths. Thus, the most parsimonious model, represented in Figure 2, indicated that T1 depression accounted for the largest amount of variance in T3 depression (b = .50, t = 6.46, p <.01) and self-esteem level (b = -.21, t = -2.80, p <.01), but not lability, contributed to the prediction of T3 depressive symptoms beyond the effect of depression at Time 1. This model fit the data well (χ^2 = 15.68, df = 12, n.s., TLI = .99, RMSEA = .04).

2. SE-PH - CES-D: The just-identified model fit the data perfectly (χ^2 = 0, df = 0). All correlations between T1 variables (CES-D, self-esteem level, negative affect, neuroticism, and borderline symptoms) were significant (see Figure 3). T1 depression predicted T3 depression (b = .41, t = 4.37, p <.01) and stress during the follow-up interval (b = .42, t = 3.57, p <.01). The T1 CES-D did not predict self-esteem lability (b = -.07, t = -.63, n.s.). Self-esteem level predicted lability (b = -.47, t = -4.87, p <.01) but not the T3 CES-D (b = -.06, t = -.72, n.s.). Interval stress was not related to the T3 CES-D (b = .05, t = .83, n.s.). T1 neuroticism made a significant contribution to the prediction of variance in T3 depression (b = .24, t = 2.87, p <.01) and

Figure 3: T3 CES-D predicted by T1 CES-D and Neuroticism
Model Chi Square = 16.105, df = 14, p value = .307; RMSEA = .031; TLI= .993; Standardized estimates



Note: T1 = Time 1, T3 = Time 3. CES-D = Center for Epidemiological Studies-Depression Scale, SE Level = Rosenberg Self-Esteem Scale, PANAS-Neg = Positive and Negative Affect Scales - Negative Affect Scale, EPI-N = Eysenck Personality Inventory - Neuroticism, PAI-BOR = Personality Assessment Inventory - Borderline Scale, SE-PH Lability = Individual lability coefficients estimated from the regression of daily self-esteem ratings on the positive hassles scale, Life Events = Life Events Checklist completed at follow-up (T3) about interval life events. Only significant paths are shown; residual terms were estimated for endogenous variables but are not pictured.

borderline symptoms reported at T1 also contributed to the prediction of depressive symptoms at T3 (b = .17, t = 2.15, p <.05). Self-esteem lability failed to predict T3 CES-D scores, controlling T1. A series of models with constraints according to study hypotheses were fit and compared to the unspecified model. In these models, constraining to zero the relations of negative affect, neuroticism, and borderline symptoms to interval stress and T3 depression, and the relations between self-esteem level/lability and interval stress resulted in a significant decrement in model fit ($\Delta\chi^2$ = 22.77, df = 8, p <.01). Retaining the significant path from T1 neuroticism and T3 depression resulted in a non-significant decrement to fit from the unspecified model ($\Delta\chi^2$ = 11.64, df = 7, n.s.). The test of the hypothesized relation between T1 mood and personality variables and self-esteem lability resulted in a non-significant decrement in fit ($\Delta\chi^2$ = 2.65, df = 3, n.s.). The test of the hypothesized relation between lability and T3 depression also resulted in a non-significant decrement in fit ($\Delta\chi^2$ = .11, df = 1, n.s.). Tests of the predictive relations between T1 depression and T3 depression ($\Delta\chi^2$ = 22.62, df = 1, p <.01), T1 depression and interval stress ($\Delta\chi^2$ = 22.15, df = 1, p <.01), and self-esteem level and lability ($\Delta\chi^2$ = 26.97, df = 1, p <.01) resulted in significant decrements to model fit indicating that adequate specification of the data required these paths; however, tests of the relations between T1 depression and lability ($\Delta\chi^2$ = .03, df = 1, n.s.), self-esteem level and T3 depression ($\Delta\chi^2$ = .58, df = 1, n.s.), and interval stress and T3 depression ($\Delta\chi^2$ = 1.28, df = 1, n.s.) were non-significant. Thus, the most parsimonious model, represented in Figure 3, indicated that T1 depression accounted for the largest amount of variance in T3 depression (b = .49, t = 6.71, p <.01). Neither self-esteem level nor lability contributed to the prediction of T3 depressive symptoms beyond the effect of depression at T1. T1 neuroticism also significantly predicted the

T3 CES-D (b = .28, t = 3.78, p <.01). This model fit the data well (χ^2 = 16.11, df = 14, n.s., TLI = .99, RMSEA = .03).

In the two models examining the relation of mood lability to follow-up depression, the pattern of results generally were identical to the models above; however, mood lability was not significantly associated with any other variables in the model, and did not predict Time 3 depressive symptoms.

Finally, the tests of invariance across different levels of life events (assessed during the follow-up interval) were non-significant indicating that self-esteem and mood lability did not predict changes in depressive symptoms from Time 1 to Time 3 either alone or in interaction with stress. There were no significant interactions between initial depression level or self-esteem level and lability in the prediction of later depressive symptoms (Hypothesis 7). In addition, a multi-group model was fit to test if the final models supported above were invariant across gender. There was no significant decrement in fit when model estimates were constrained to be equal for males and females, indicating that the relations between self-esteem level, mood, personality, lability, and depressive symptoms were equivalent for the two gender groups (Hypothesis 8).

Sources of Self-Esteem

Measures of sociotropy, autonomy, and other domains potentially relevant to self-esteem maintenance were administered to examine the relations between individual orientation to varying sources of self-esteem and depression (Hypothesis 6). There were nine scores created from two measures that assessed the self-relevance of domains covering interpersonal relationships and support, achievement, independence, morality, appearance, and behavior. The

bivariate relations between these measures and with other study constructs are presented in Table 2. Review of the correlations between subscales of these measures suggest a high degree of overlap between sources of self-esteem particularly for individuals characterizing themselves as more sociotropic. Sociotropy was significantly and positively related to the Family Support (r = .21, p <.01), Competition (r = .35, p <.01), Appearance (r = .40, p <.01), Academic Competence (r = .33, p <.01), Virtue (r = .24, p <.01), and Others' Approval (r = .54, p <.01) subscales of the measure of contingencies of self-worth (CSWS). Autonomy was not related to any of these subscales with the exception of a large negative correlation with the Others' Approval subscale (r = -.46, p <.01). Sociotropy and autonomy were negatively related (r = -.23, p <.01). Notably, sociotropy was significantly related to each of the lability estimates such that greater sociotropy was associated with greater lability (see Table 2). Autonomy was not significantly related to any of the lability indices. Although, sociotropy was related to depression at both time points, it did not predict depressive symptoms at follow-up, after controlling Time 1 depression, and did not interact with lability to predict depression.

CHAPTER IV

DISCUSSION

The current study was designed to address several substantive and methodological gaps in the extant literature by investigating the role of self-esteem level and lability as potential risk factors for depression in a sample of older adolescents and young adults. Daily assessments conducted during this study provided information about fluctuations in self-cognitions and mood and their relations to minor daily hassles and positive events. The current study investigated these constructs in a larger model of depression including assessments of theoretically related mood and personality factors.

The first goal of the current study was to determine whether there was significant variability between participants in the relation between daily ratings of self-esteem and both negative and positive events. On average, self-esteem was significantly related to daily events; moreover, participants in the current study varied in the degree to which positive and negative events were associated with fluctuations in their self-cognitions. The direction of these relations suggested that self-cognitions tended to be more negative in concert with the occurrence of daily hassles or negative events (e.g., an interpersonal conflict, struggling with a class), and more positive in concert with positive events (e.g., receiving a compliment, completing goals for the day). This finding was consistent with prior research finding individual differences in self-esteem stability (e.g., Butler, et al., 1994; Kernis et al., 1991; 1998; Roberts, et al., 1995; Roberts & Gotlib, 1997; Roberts & Kassle, 1997) and adds to the literature by demonstrating individual differences in the relation between self-esteem fluctuations and concurrent events.

Daily fluctuations in mood also were examined in the current study. As with self-cognitions, mood covaried with negative and positive events on average, and individual participants varied in the degree to which mood was associated with concurrent events. Overall, the direction of these relations indicated that individuals experienced varying degrees of drops in mood related to greater occurrence of negative events and increases in positive mood related to the occurrence of positive events.

Self-esteem level and lability were strongly related in the current study such that individuals with lower levels of self-esteem assessed at baseline, and across the daily portion of the study, generally demonstrated greater lability in self-cognitions. Individuals with lower baseline self-esteem exhibited greater drops in daily ratings of self-esteem concurrent with negative events and were more likely to report boosts in self-esteem concurrent with the occurrence of positive events during the day. This study also tested whether the relation between level and lability might in part be due to floor and ceiling effects of measurement such that individuals with higher and lower initial levels of self-esteem could not vary as much across daily assessments. The finding that the relation between self-esteem level and lability was not curvilinear suggested that this was not the case in the current study. It is possible that floor and ceiling effects were minimized by including an assessment of daily self-esteem that differed from the baseline measure and included an increased range for potential responses.

Both self-esteem and mood lability were associated with participants' reports of depressive symptoms at baseline and follow-up. The largest and most consistent relations were between the lability estimates calculated from the covariance between daily cognitive and mood fluctuations and positive events. Individuals reporting higher levels of depressive symptoms at both time points were more likely to experience boosts in mood and self-cognitions associated

with the occurrence of a concurrent positive event. This also was true for the experience of drops in self-esteem associated with the occurrence of negative events. Of primary interest to the current study was whether self-esteem level and/or lability would precede and contribute to changes in future depression. Level of self-esteem, which dominates the literature, consistently has been associated with depression concurrently but has not performed as well when predicting later episodes of depression or increases in depressive symptoms. In the current study, self-esteem level, but not lability, did predict change in depressive symptoms, after controlling the effects of prior depression. Lower baseline self-esteem level was associated with more positive residual variance in follow-up depression, suggesting a predictive association with increases in depressive symptoms. Neither self-esteem nor mood lability predicted changes in depressive symptoms, despite their moderate to large bivariate relations. This would suggest that lability is a concurrent feature of depression but not a pre-existing vulnerability factor. However, it is important to note that levels of depressive symptoms were highly stable in the current study providing minimal residual variance. Also, given that lability was represented by the estimated coefficients of the relation between two variables, it would have less shared method variance with depression assessments than self-esteem level or other variables in the larger models of depression. Nonetheless, in the current study, both self-esteem level and lability were correlated with depression contemporaneously and across time, and level of self-esteem predicted changes in depressive symptoms from Time 1 to Time 3. These results suggest that both level and lability may be meaningful dimensions of self-esteem and potential targets for intervention. The current study did not detect large changes in individual depressive symptoms over time, and so although lability was not established as a precursor to depression, its relevance for prevention efforts may

require further investigation. Future research may wish to include both constructs in longitudinal studies of onset and remission of depressive symptoms.

The current study also examined the relations of baseline assessments of mood and personality with self-cognitions and depression. Higher levels of self-reported negative affect, neuroticism, and borderline symptoms were associated with lower levels of self-esteem and greater lability in self-cognitions (mood lability generally was not associated with these measures), and higher levels of depression. Notably, although the contemporaneous relations continued to be significant in larger models of depression, the large significant across-time relations between baseline mood and personality variables and both lability and later depression became non-significant, when controlling prior depression. Again, the stability of the depression indices may have impacted the predictive relations with other model variables.

Stress, operationalized as major life events occurring during the follow-up interval, was hypothesized as a potential moderator of the predictive relation between lability and depressive symptoms. Although stress was related to follow-up depression as a main effect, it did not moderate the relation between lability and depression. There also were no interactions between self-esteem level and lability, or between initial level of depression and lability. Tests of invariance across level of gender yielded null results suggesting that the significant pathways discussed here were statistically identical for males and females. It is important to note, however, that these tests may lack accuracy due to the unequal representation of males and females in the current study.

Finally, measures of potential sources of self-esteem were examined for their potential to yield information about the self-relevancy of daily events. Interestingly, there was a considerable degree of overlap in domains associated with a greater sociotropic orientation, suggesting that

both interpersonal- and achievement-related events may impact individuals rating themselves higher in sociotropy. Moreover, these individuals also exhibited greater cognitive and mood lability, whereas there was no association between lability and autonomy. Current literature on the self-relevancy of events (Hammen & Goodman-Brown, 1990) would suggest that daily hassles or positive events that impact an individual's primary sources of self-worth might result in greater lability in self-cognitions, and potentially the relation of lability to depression. The findings from the current study further suggest that multiple domains may be important, particularly in relation to cognitive lability. It may be fruitful for future research examining the association between self-cognitions and daily events to attempt to identify individuals' perceptions of the event types that most greatly impact their daily sense of well-being. This methodology would combine theoretical thinking from multiple domains (e.g., Hammen & Goodman-Brown, 1990; Kernis, 1993; Robert & Monroe, 1994) and provide an example of independent theories working conjointly to enable better prediction of future depression in at-risk individuals.

The current study contributed several improvements to the extant literature. Although, self-esteem lability has been proposed as cognitive reactivity to external events, most studies to date have not operationalized the construct in a manner consistent with theory. In the current study, lability was calculated as the relation between daily events and fluctuations in self-esteem. In addition, the simultaneous covariance between mood fluctuations and daily events, and its relation to depressive symptoms also was examined. This provided a more conservative test of the construct of lability than in prior studies and was a measure more consistent with theories regarding the multi-dimensionality of self-esteem. One important finding resulting from this operationalization was that individuals experiencing higher levels of depressive symptoms

reported greater boosts in self-esteem concurrent with the occurrence of positive minor events. Existing measures of daily hassles and major life events tend to have fewer positive than negative items. Future studies of stress and depression may wish to increase the assessment of positive events.

The current study also was able to compare the relative contributions to depression of self-esteem level and lability using different measures for baseline, or average, level and daily fluctuations of self-cognitions. This study was able to examine both the contemporaneous and predictive relations between self-esteem level and lability and multiple indices of depression, controlling for prior levels of depressive symptoms. Another contribution of the current study was the inclusion of mood and personality traits hypothesized to be related to self-esteem lability. Negative affectivity, neuroticism, and borderline traits were proposed to be part of a personality style which is generally hyper-reactive to external events (Bolger & Zuckerman, 1995), prone to distress (Clark et al., 1994), and related to a less stable sense of self. This study is unique in providing a preliminary examination of an inclusive model of these constructs with lability and depression.

It is important to highlight several weaknesses of the current study to inform future investigations. The results are most readily generalizable to undergraduate students and may not be representative of the broader community. The current sample contained a disproportionate ratio of females to males and although gender effects were not found may be more readily generalizable to female populations. Another possible weakness is the use of self-report to assess all constructs in the current study. In particular, perceptions of daily events may have been influenced by other constructs in the model (e.g., level of depression), thus inflating the relation between lability and depressive symptoms. On the other hand, some researchers have argued that

it is an individual's subjective experience of stress that is most critical (Brown & Harris, 1978; Lazarus & Folkman, 1984; see also Roberts & Kassel, 1997 for empirical comparison). Future studies could reduce the influence of shared method variance by combining different methodologies where possible.

Finally, the estimates of lability can only be as good as the measure of stress used. An additional strength of the current study was its development of both a hassles and major events checklist specifically designed to tap salient events for an undergraduate population. However, some participants may have had lability scores near zero because these events did not occur during their daily interval. Similarly, there may have been events that were relevant to some participants that were not listed. Participants were provided the option of listing additional events; however, if some relevant events were not captured by study measures, fluctuations in self-cognitions and mood related to these events would have been consigned to the error term when estimating lability. These issues would be expected to attenuate the relations between lability and depression, and highlight the importance of efficient methods of stress assessment in studies of lability.

Also, in the current investigation, the high degree of stability of depressive symptoms over the interval from first to last assessment may have impacted the detection of significant predictive relations between study constructs. Research designs that allow self-cognitions and mood to be studied in relation to depressive onset, maintenance, and remission may yield more conclusive results.

Nonetheless, the findings of the current study may have preliminary implications for clinical interventions designed to enhance self-esteem and treat depression. In recent decades, the association of self-esteem with positive emotional and behavioral outcomes led to a popular

movement to enhance self-esteem in school children (California Task Force to Promote Self-Esteem & Personal & Social Responsibility, 1990). However, as with depression, empirical studies in multiple domains failed to demonstrate conclusively that self-esteem was a cause, rather than just a correlate, of important social outcomes. Moreover, research on narcissism (Baumeister & Boden, 1998) led some critics to propose that high self-esteem might have been overrated or even undesirable and to question the usefulness of programs to raise self-esteem in children (Salzinger, 2002; Seligman, 1998). These views may have failed to consider the multi-dimensional nature of self-esteem, however. Rather than dismissing efforts to improve self-esteem, the current study suggests that it may be premature to abandon self-esteem as an important construct related to emotional well-being and prosocial behavioral outcomes. Consistent with cognitive theories of depression, the current study demonstrated that level of self-esteem is a relevant target for treatment. The current findings also suggest that increasing the resistance of an individual's self-concept to the vicissitudes of external influences may be helpful in ameliorating some of the cognitive effects of concurrent depression.

According to Roberts and Monroe (1994) to increase stability in self-esteem, interventions should address core deficits by increasing sources of positive self-esteem and reducing lack of resiliency to external influences. In other words, interventions that foster an internally-based self-concept that is resistant to dramatic shifts in level related to negative evaluative events are expected to have a positive impact on depression. Given the nascent status of research on cognitive lability, specific methods for increasing stability have not yet been formulated. A single study (Kernis et al., 2000a) found that family environments providing non-contingent and/or controlling feedback may promote the development of unstable self-esteem suggesting the possibility of family-level intervention. Cognitive-behavioral techniques also may

be applicable. Common practice in cognitive-behavioral therapy (CBT) is to identify automatic thoughts, trace them to underlying beliefs or schema, and collect evidence to verify or discredit those beliefs (Beck, Rush, Shaw, & Emery, 1979). This practice might be applied to reduce fluctuations in self-esteem by increasing reliance on internal sources of self-esteem and creating new self-cognitions based on empirical evidence. The latter are likely to be more stable given the process by which they were achieved.

In sum, the current study investigated self-esteem level and lability in a larger model of etiological factors related to depression. The model included hypothesized mood and personality correlates of lability, assessment of both self-esteem level and indices of lability which reflected the theoretical link between daily events and fluctuations in self-esteem, and assessment of daily mood fluctuations. Level and lability were associated with depression concurrently and across time. Level predicted depressive symptoms at follow-up, while controlling initial depression. There was no interaction with major life events in the prediction of depression; however, there generally was an effect of stress on follow-up symptoms. The current study provided a conservative test of these constructs in a larger model of depression than previously tested, and that was prescribed from both theory and the empirical literature to date. Results indicated that self-esteem lability varies between individuals and warrants further investigation in studies of depressive onset, maintenance, and remission. Given the scarcity of research in this domain with children, testing the model in younger populations may provide information related to self-cognitions and the development of depression. This line of inquiry stands to contribute to knowledge of the cognitive processes associated with onset and maintenance of depression and, thus, methods of prevention and intervention able to alter those self-cognitions that contribute to depressive disorder.

APPENDIX A

BASELINE MEASURES

BACKGROUND INFORMATION FORM

This form asks for some basic information about you for our records and so that we may contact you during the study and make payments to you for your participation. All information provided here will be kept strictly confidential and at no time will be connected to the information you provide on other questionnaires. Please answer all the questions below in the spaces provided.

Name: _____

Current Address: _____
_____
_____

Current Telephone #: _____

Current Email Address: _____

Permanent Address:
(*if different from above*) _____
_____
_____

Permanent/Alternative
Telephone #
(*if different from above*) _____

Do you have an alternative
email address? _____

Date of Birth:
(*mm/dd/yyyy*) ____/____/_____ How old are you today? _____

Gender (check one): ☐ Male ☐ Female

Ethnicity (check one):

☐ African-American ☐ Hispanic
☐ Caucasian ☐ Latina/o
☐ Asian ☐ Pacific Islander
☐ Other _____

EPI

Please circle YES or NO in response to how well each question describes you.

YES	NO	1.	Do you have many different hobbies?
YES	NO	2.	Does your mood go up and down?
YES	NO	3.	Are you a talkative person?
YES	NO	4.	Do you often feel “just miserable” for no reason?
YES	NO	5.	If you say you will do something, do you always keep your promise no matter how inconvenient it might be?
YES	NO	6.	Do you often worry about things you should not have done or said?
YES	NO	7.	Can you usually let yourself go and enjoy yourself at a lively party?
YES	NO	8.	Are you an irritable person?
YES	NO	9.	Do you really enjoy meeting new people?
YES	NO	10.	Have you ever broken or lost something belonging to someone else?
YES	NO	11.	Are your feelings easily hurt?
YES	NO	12.	Do you tend to keep in the background in social situations?
YES	NO	13.	Do you often feel “fed-up”?
YES	NO	14.	Do you like going out and partying a lot?
YES	NO	15.	Are you often troubled by feelings of guilt?
YES	NO	16.	Do you ever talk about things you know nothing about?
YES	NO	17.	Do you prefer being by yourself?
YES	NO	18.	Would you call yourself a nervous person?
YES	NO	19.	Do you really enjoy talking to other people?
YES	NO	20.	Are you a worrier?

YES NO 21. Have you ever said anything bad or nasty about anyone?

YES NO 22. Do you often feel that life is very dull?

YES NO 23. Can you easily put some excitement into a dull party?

YES NO 24. Do you worry about terrible things that might happen?

YES NO 25. Are you mostly quiet when you are with other people?

YES NO 26. Do you worry about your health?

YES NO 27. Do you like telling jokes and funny stories to your friends?

YES NO 28. Do you sometimes talk back to your parents?

YES NO 29. Do thoughts run through your head so that you cannot sleep?

YES NO 30. Do you often take on more activities than you have time for?

YES NO 31. Are you usually in a hurry to do things?

YES NO 32. Can you get a party going?

YES NO 33. Do you often feel lonely?

YES NO 34. Have you ever insisted on having your own way?

YES NO 35. Do you worry a long time after an embarrassing experience?

YES NO 36. Are you a lively and outgoing person?

YES NO 37. Do you like lots of activities and excitement around you?

YES NO 38. Are you sometimes bubbling over with energy and sometimes very sluggish?

YES NO 39. Do other people think of you as very lively?

YES NO 40. Do you sometimes gossip?

YES NO 41. Are you easily hurt when people find fault with you or the work you do?

YES NO 42. Do you generally do and say things quickly without stopping to think?

YES NO 43. After you have done something important, do you often feel you could have done better?

YES NO 44. Do you often do things on the spur of the moment?

YES NO 45. Do you always admit it when you make a mistake?

YES NO 46. Do you often have aches and pains?

YES NO 47. Would you say you are fairly self-confident?

YES NO 48. Do you sometimes lose your temper and get angry?

YES NO 49. Do you often need understanding friends to cheer you up?

YES NO 50. Do you worry a lot about your looks?

YES NO 51. Do you like being with a crowd that plays jokes on one another?

YES NO 52. Would you call yourself tense and “high-strung”?

YES NO 53. Do you often feel that you are not as good as other people?

YES NO 54. Do you like to have a lot of people around you?

YES NO 55. Have you ever been late for an appointment?

YES NO 56. Do you tend to blame yourself when things go wrong?

YES NO 57. Are you a very active person?

PANAS

This questionnaire consists of a number of words that describe feelings and emotions. Read each item and then mark the answer for how much you usually feel this way.

		1	2	3	4	5
1.	INTERESTED	Not at all	A Little	Moderately	Quite a lot	Extremely
2.	DISTRESSED	Not at all	A Little	Moderately	Quite a lot	Extremely
3.	EXCITED	Not at all	A Little	Moderately	Quite a lot	Extremely
4.	UPSET	Not at all	A Little	Moderately	Quite a lot	Extremely
5.	STRONG	Not at all	A Little	Moderately	Quite a lot	Extremely
6.	GUILTY	Not at all	A Little	Moderately	Quite a lot	Extremely
7.	SCARED	Not at all	A Little	Moderately	Quite a lot	Extremely
8.	HOSTILE	Not at all	A Little	Moderately	Quite a lot	Extremely
9.	ENTHUSIASTIC	Not at all	A Little	Moderately	Quite a lot	Extremely
10.	PROUD	Not at all	A Little	Moderately	Quite a lot	Extremely
11.	IRRITABLE	Not at all	A Little	Moderately	Quite a lot	Extremely
12.	ALERT	Not at all	A Little	Moderately	Quite a lot	Extremely
13.	ASHAMED	Not at all	A Little	Moderately	Quite a lot	Extremely

		1	2	3	4	5
14.	INSPIRED	Not at all	A Little	Moderately	Quite a lot	Extremely
15.	NERVOUS	Not at all	A Little	Moderately	Quite a lot	Extremely
16.	DETERMINED	Not at all	A Little	Moderately	Quite a lot	Extremely
17.	ATTENTIVE	Not at all	A Little	Moderately	Quite a lot	Extremely
18.	JITTERY	Not at all	A Little	Moderately	Quite a lot	Extremely
19.	ACTIVE	Not at all	A Little	Moderately	Quite a lot	Extremely
20.	AFRAID	Not at all	A Little	Moderately	Quite a lot	Extremely

SAS

Please read the following statements and circle the number which best describes how true or how much you agree with each one.

	How TRUE is this statement for you or how much do you AGREE with this statement?	Not at All	A Little	Some	Much	Very Much
1.	I feel I have to be nice to other people.	1	2	3	4	5
2.	It is important to me to be free and independent.	1	2	3	4	5
3.	It is more important that I know I've done a good job than having others know it.	1	2	3	4	5
4.	I enjoy doing things more when I am with other people.	1	2	3	4	5
5.	I am afraid of hurting other people's feelings.	1	2	3	4	5
6.	It bothers me when people try to direct my behavior or activities.	1	2	3	4	5
7.	I find it difficult to say "no" to people.	1	2	3	4	5
8.	I feel bad if I do not have some social plans for the weekend.	1	2	3	4	5
9.	I like being a unique individual more than being a member of a group.	1	2	3	4	5
10.	When I feel sick, I like to be left alone.	1	2	3	4	5
11.	I am concerned that if people knew my faults or weaknesses they would not like me.	1	2	3	4	5
12.	If I think I am right about something, I feel comfortable expressing myself even if others don't like it.	1	2	3	4	5
13.	When visiting people, I get fidgety just sitting around talking and would rather get up and do something.	1	2	3	4	5
14.	It is more important to meet your own goals on a task than to meet another person's goals.	1	2	3	4	5

	How TRUE is this statement for you or how much do you AGREE with this statement?	Not at All	A Little	Some	Much	Very Much
15.	I do things that are not in my best interest in order to please others.	1	2	3	4	5
16.	I like to take long walks by myself.	1	2	3	4	5
17.	I tend to be direct with people and tell them what I think.	1	2	3	4	5
18.	I am more concerned that people like me than I am about making important achievements.	1	2	3	4	5
19.	I would be uncomfortable dining out in a restaurant by myself.	1	2	3	4	5
20.	I don’t enjoy myself when I feel that someone in my life doesn’t really care about me.	1	2	3	4	5
21.	I am not influenced by others in what I decide to do.	1	2	3	4	5
22.	It is very important that I feel free to get up and go wherever I want.	1	2	3	4	5
23.	I value work accomplishments more than I value making friends.	1	2	3	4	5
24.	I find it important to be in control of my emotions.	1	2	3	4	5
25.	I get uncomfortable when I am not sure how I am expected to behave in front of others.	1	2	3	4	5
26.	I feel more comfortable helping others than receiving help.	1	2	3	4	5
27.	It would not be much fun for me to travel to a new place all alone.	1	2	3	4	5
28.	If a friend has not called for a while, I get worried that he or she has forgotten me.	1	2	3	4	5
29.	It is more important to be active and doing things than being close with other people.	1	2	3	4	5

	How TRUE is this statement for you or how much do you AGREE with this statement?	Not at All	A Little	Some	Much	Very Much
30.	I get uncomfortable around a person who clearly does not like me.	1	2	3	4	5
31.	If a goal is important to me, I try for it even if it makes other people uncomfortable.	1	2	3	4	5
32.	I find it difficult to be separated from people I love.	1	2	3	4	5
33.	Once I make a decision, I rarely change my mind.	1	2	3	4	5
34.	When I achieve a goal, I get more satisfaction from achieving the goal than from praise I might get from others.	1	2	3	4	5
35.	I am careful about what I say because I am concerned that others may disapprove or disagree.	1	2	3	4	5
36.	I get lonely when I am home by myself at night.	1	2	3	4	5
37.	I often find myself thinking about friends or family.	1	2	3	4	5
38.	I prefer to make my own plans, so I am not controlled by others.	1	2	3	4	5
39.	I can comfortably be by myself all day without feeling a need to have someone around.	1	2	3	4	5
40.	If somebody criticizes how I look, I feel I am not attractive to other people.	1	2	3	4	5
41.	It is more important to get a job done than to worry about other people's reactions.	1	2	3	4	5
42.	I like to spend my free time with others.	1	2	3	4	5
43.	I don't like to answer personal questions because it feels like an invasion of my privacy.	1	2	3	4	5

	How TRUE is this statement for you or how much do you AGREE with this statement?	Not at All	A Little	Some	Much	Very Much
44.	When I have a problem, I like to go off on my own and think it through rather than being influenced by others.	1	2	3	4	5
45.	In relationships, people often are too demanding of each other.	1	2	3	4	5
46.	I am uneasy when I cannot tell whether or not someone I've met likes me.	1	2	3	4	5
47.	I set my own standards and goals for myself rather than accepting those of other people.	1	2	3	4	5
48.	I apologize to others more than I need to.	1	2	3	4	5
49.	I prefer to "work out" my personal problems by myself.	1	2	3	4	5
50.	It is important for me to be liked and approved by others.	1	2	3	4	5
51.	I enjoy accomplishing things whether or not I get credit for them.	1	2	3	4	5
52.	Having close ties with other people makes me feel secure.	1	2	3	4	5
53.	When I am with other people, I look for signs of whether or not they like being with me.	1	2	3	4	5
54.	I like to go off on my own, exploring new places – without other people.	1	2	3	4	5
55.	If I think somebody may be upset at me, I want to apologize.	1	2	3	4	5
56.	I like to be certain that there is somebody close I can contact in case something unpleasant happens to me.	1	2	3	4	5
57.	I feel trapped when I have to sit through a long meeting.	1	2	3	4	5

	How TRUE is this statement for you or how much do you AGREE with this statement?	Not at All	A Little	Some	Much	Very Much
58.	I don't like people to invade my privacy.	1	2	3	4	5
59.	I feel uncomfortable when I feel I am not like everyone else.	1	2	3	4	5
60.	When I am working on a difficult problem, I prefer to work it out myself than have someone show me how to do it.	1	2	3	4	5
61.	The worst part about being in jail would be not being able to move around freely.	1	2	3	4	5
62.	The worst part about growing old is being left alone.	1	2	3	4	5
63.	I worry that somebody I love will die.	1	2	3	4	5
64.	Even if I think others will reject me, I still stand up for my rights.	1	2	3	4	5
65.	I get very annoyed when a task is not completed.	1	2	3	4	5

PAI-BOR

Read each statement below and decide if it is an accurate statement about you. Circle one of the answers to the right of each statement. Give your own opinion of yourself. Be sure to answer every statement.

F = FALSE, NOT AT ALL TRUE
ST = SLIGHTLY TRUE
MT = MAINLY TRUE
VT = VERY TRUE

1.	My mood can shift quite suddenly.	F	ST	MT	VT
2.	My attitude about myself changes a lot.	F	ST	MT	VT
3.	My relationships have been stormy.	F	ST	MT	VT
4.	I sometimes do things so impulsively that I get into trouble.	F	ST	MT	VT
5.	My moods get quite intense.	F	ST	MT	VT
6.	Sometimes I feel terribly empty inside.	F	ST	MT	VT
7.	I want to let certain people know how much they've hurt me.	F	ST	MT	VT
8.	My mood is very steady.	F	ST	MT	VT
9.	I worry a lot about other people leaving me.	F	ST	MT	VT
10.	People once close to me have let me down.	F	ST	MT	VT
11.	I'm too impulsive for my own good.	F	ST	MT	VT
12.	I have little control over my anger.	F	ST	MT	VT
13.	I often wonder what I should do with my life.	F	ST	MT	VT
14.	I rarely feel very lonely.	F	ST	MT	VT
15.	I spend money too easily.	F	ST	MT	VT
16.	I've always been a pretty happy person.	F	ST	MT	VT

F = FALSE, NOT AT ALL TRUE
ST = SLIGHTLY TRUE
MT = MAINLY TRUE
VT = VERY TRUE

17.	I can't handle separation from those close to me very well.	F	ST	MT	VT
18.	I've made some real mistakes in the people I've picked as friends.	F	ST	MT	VT
19.	I'm a reckless person.	F	ST	MT	VT
20.	I've had times when I was so mad I couldn't do enough to express all my anger.	F	ST	MT	VT
21.	I don't get bored very easily.	F	ST	MT	VT
22.	Once someone is my friend, we stay friends.	F	ST	MT	VT
23.	I'm careful about how I spend my money.	F	ST	MT	VT

RSE

Below is a list of statements dealing with your general feelings about yourself. If you strongly agree, circle SA. If you agree with the statement, circle A. If you disagree, circle D. If you strongly disagree, circle SD.

		strongly agree	agree	disagree	strongly disagree
1.	On the whole, I am satisfied with myself.	SA	A	D	SD
2.	At times I think I am no good at all.	SA	A	D	SD
3.	I feel that I have a number of good qualities	SA	A	D	SD
4.	I am able to do things as well as most other people.	SA	A	D	SD
5.	I feel I do not have much to be proud of.	SA	A	D	SD
6.	I certainly feel useless at times.	SA	A	D	SD
7.	I feel that I'm a person of worth, at least on an equal plane with others.	SA	A	D	SD
8.	I wish I could have more respect for myself.	SA	A	D	SD
9.	All in all, I am inclined to feel that I am a failure.	SA	A	D	SD
10.	I take a positive attitude toward myself.	SA	A	D	SD

CSWS

Please respond to each of the following statements by rating your answer using the scale from "1 = Strongly disagree" to "7 = Strongly agree". If you haven't experienced the situation described in a particular statement, please answer how you think you would feel if that situation occurred.

1	2	3	4	5	6	7
Strongly disagree	**Disagree**	**Disagree somewhat**	**Neutral**	**Agree somewhat**	**Agree**	**Strongly agree**

_____ 1. When I think I look attractive, I feel good about myself.

_____ 2. My self-worth is based on God's love.

_____ 3. I feel worthwhile when I perform better than others on a task or skill.

_____ 4. My self-esteem is unrelated to how I feel about the way my body looks.

_____ 5. Doing something I know is wrong makes me lose my self-respect.

_____ 6. I don't care if other people have a negative opinion about me.

_____ 7. Knowing that my family members love me makes me feel good about myself.

_____ 8. I feel worthwhile when I have God's love.

_____ 9. I can't respect myself if others don't respect me.

_____ 10. My self-worth is not influenced by the quality of my relationships with my family members.

_____ 11. Whenever I follow my moral principles, my sense of self-respect gets a boost.

_____ 12. Knowing that I am better than others on a task raises my self-esteem.

_____ 13. My opinion of myself isn't tied to how well I do in school.

_____ 14. I couldn't respect myself if I didn't live up to a moral code.

_____ 15. I don't care what other people think of me.

_____ 16. When my family members are proud of me, my sense of self-worth increases.

_____ 17. My self-esteem is influenced by how attractive I think my face or facial features are.

_____ 18. My self-esteem would suffer if I didn't have God's love.

_____ 19. Doing well in school gives me a sense of self-respect.

_____ 20. Doing better than others gives me a sense of self-respect.

_____ 21. My sense of self-worth suffers whenever I think I don't look good.

_____ 22. I feel better about myself when I know I'm doing well academically.

_____ 23. What others think of me has no effect on what I think about myself.

_____ 24. When I don't feel loved by my family, my self-esteem goes down.

_____ 25. My self-worth is affected by how well I do when I am competing with others.

_____ 26. My self-esteem goes up when I feel that God loves me.

_____ 27. My self-esteem is influenced by my academic performance.

_____ 28. My self-esteem would suffer if I did something unethical.

_____ 29. It is important to my self-respect that I have a family that cares about me.

_____ 30. My self-esteem does not depend on whether or not I feel attractive.

_____ 31. When I think that I'm disobeying God, I feel bad about myself.

_____ 32. My self-worth is influenced by how well I do on competitive tasks.

_____ 33. I feel bad about myself whenever my academic performance is lacking.

_____ 34. My self-esteem depends on whether or not I follow my moral/ethical principles.

_____ 35. My self-esteem depends on the opinions others hold of me.

BDI-II

Please read each group of statements carefully, then pick out the one statement in each group which best describes the way you have been feeling the past week, including today. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, simply circle the statement which has the largest number.

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 failures.
- 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 the things I enjoy.
- 1 I don't 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 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 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 Crying
- 0 I don't cry any more 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.

10 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 I have to keep moving or doing something.

11 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.

12 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.

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

14 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.

15 Change 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.

16 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.

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

18 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.

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

20 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.

CES-D

Circle the number for each statement which best describes how often you felt or behaved this way – DURING THE PAST WEEK.

DURING THE PAST WEEK:	Rarely or none of the time (Less than 1 day)	Some or a little of the time (1-2 days)	Occasionally or a moderate amount of time (3-4 days)	Most or all of the time (5-7 days)
1. I was bothered by things that usually don't bother me	0	1	2	3
2. I did not feel like eating; my appetite was poor	0	1	2	3
3. I felt that I could not shake off the blues even with help from my family or friends	0	1	2	3
4. I felt that I was just as good as other people	0	1	2	3
5. I had trouble keeping my mind on what I was doing	0	1	2	3
6. I felt depressed	0	1	2	3
7. I felt that everything I did was an effort	0	1	2	3
8. I felt hopeful about the future	0	1	2	3
9. I thought my life had been a failure	0	1	2	3
10. I felt fearful	0	1	2	3
11. My sleep was restless	0	1	2	3
12. I was happy	0	1	2	3
13. I talked less than usual	0	1	2	3
14. I felt lonely	0	1	2	3
15. People were unfriendly	0	1	2	3

DURING THE PAST WEEK:	Rarely or none of the time (Less than 1 day)	Some or a little of the time (1-2 days)	Occasionally or a moderate amount of time (3-4 days)	Most or all of the time (5-7 days)
16. I enjoyed life	0	1	2	3
17. I had crying spells	0	1	2	3
18. I felt sad	0	1	2	3
19. I felt that people disliked me	0	1	2	3
20. I could not get “going”	0	1	2	3

APPENDIX B

DAILY SURVEY

DAILY SURVEY

Today is (circle one) Sunday Monday Tuesday Wednesday Thursday Friday Saturday

Today's Date (*mm/dd/yyyy*) _____

What time is it right now? (*hh/mm*) _____ (circle one) am pm

SECTION I:

For items 1-30 fill in the bubble at a point between the two descriptors which indicates how you see yourself today – at this moment. The end bubbles represent the most you have ever felt this way about yourself. Consider each item briefly and use your first impression.

		More Neutral More	
1.	Relaxed	○○○○○○○○○○○○○○○○○○○○○	Tense
2.	Happy	○○○○○○○○○○○○○○○○○○○○○	Sad
3.	Worried	○○○○○○○○○○○○○○○○○○○○○	At Ease
4.	Important	○○○○○○○○○○○○○○○○○○○○○	Unimportant
5.	Ineffective	○○○○○○○○○○○○○○○○○○○○○	Effective
6.	Likable	○○○○○○○○○○○○○○○○○○○○○	Unlikable
7.	Open	○○○○○○○○○○○○○○○○○○○○○	Closed
8.	Failure	○○○○○○○○○○○○○○○○○○○○○	Success
9.	Self-Confident	○○○○○○○○○○○○○○○○○○○○○	Insecure
10.	Level-Headed	○○○○○○○○○○○○○○○○○○○○○	Rash
11.	Helpless	○○○○○○○○○○○○○○○○○○○○○	Capable
12.	Useless	○○○○○○○○○○○○○○○○○○○○○	Useful
13.	Joyful	○○○○○○○○○○○○○○○○○○○○○	Depressed
14.	Winner	○○○○○○○○○○○○○○○○○○○○○	Loser
15.	Shy	○○○○○○○○○○○○○○○○○○○○○	Sociable
16.	Unlovable	○○○○○○○○○○○○○○○○○○○○○	Lovable
17.	Valuable	○○○○○○○○○○○○○○○○○○○○○	Worthless
18.	Encouraged	○○○○○○○○○○○○○○○○○○○○○	Discouraged
19.	Belonging	○○○○○○○○○○○○○○○○○○○○○	Not Belonging
20.	Independent	○○○○○○○○○○○○○○○○○○○○○	Dependent
21.	Adequate	○○○○○○○○○○○○○○○○○○○○○	Inadequate
22.	Guilty	○○○○○○○○○○○○○○○○○○○○○	Guilt-Free
23.	Gloomy	○○○○○○○○○○○○○○○○○○○○○	Cheerful

		More	Neutral	More	
24.	Decisive	○○○○○○○○○○○○○○○○○○○○○			Indecisive
25.	Easily Upset	○○○○○○○○○○○○○○○○○○○○○			Steady
26.	Bold	○○○○○○○○○○○○○○○○○○○○○			Inhibited
27.	Self-Doubting	○○○○○○○○○○○○○○○○○○○○○			Self-Trusting
28.	Hopeful	○○○○○○○○○○○○○○○○○○○○○			Hopeless
29.	Reliable	○○○○○○○○○○○○○○○○○○○○○			Unreliable
30.	Unworthy	○○○○○○○○○○○○○○○○○○○○○			Worthy

SECTION II:

For items 31-77, answer yes or no if the event happened to you in the last 24 hours, or since you completed the last interview. If you skipped a day, only think back over the last 24 hours.

31.	Something you expected or counted on happening, didn't happen	YES	NO
32.	Something you expected or counted on happening, DID happen	YES	NO
33.	Something went wrong with your appearance (e.g., didn't have the right clothes, had a clothes 'crisis', had a bad hair day, nicked yourself shaving)	YES	NO
34.	You had mechanical and/or technical problems (e.g., computer glitches, car broke down or was towed, bus was late)	YES	NO
35.	You were unprepared for a class or important meeting (e.g., forgot to complete an assignment, got to class with the wrong book, notebook, or homework assignment, not ready for a pop quiz)	YES	NO
36.	Important items were misplaced or lost (e.g., a paper for class, car keys)	YES	NO
37.	You didn't have enough time to get things done that you needed to	YES	NO
38.	You were late or missed an important class or meeting	YES	NO
39.	You completed most of your goals for the day	YES	NO
40.	You received a poor grade on an exam, paper, presentation, or other assignment	YES	NO

41.	You received a GOOD grade on an exam, paper, presentation, or other assignment	YES	NO
42.	You're struggling with a difficult course	YES	NO
43.	You think you might be failing a course	YES	NO
44.	A big assignment or test was due and/or you had a major presentation	YES	NO
45.	You had problems with a professor, teaching assistant, or resident advisor	YES	NO
46.	You had a problem with an extracurricular activity or hobby (e.g., couldn't compete or performed unsatisfactorily in a sport; art, music, theatre project)	YES	NO
47.	You had an increase in hours or responsibilities at school and/or work	YES	NO
48.	There were problems with your boss and/or co-worker(s)	YES	NO
49.	You lost your job	YES	NO
50.	You had money problems	YES	NO
51.	Someone complimented you	YES	NO
52.	You had a positive interaction with a friend, acquaintance, peer, colleague, and/or family member	YES	NO
53.	There was conflict between your family members	YES	NO
54.	A family member ignored or snubbed you (not an argument)	YES	NO
55.	There was tension or you had a disagreement/conflict with a family member	YES	NO
56.	Your significant other ignored or snubbed you (not an argument)	YES	NO
57.	There was tension or you had a disagreement/conflict with your significant other	YES	NO
58.	You broke up with your significant other	YES	NO
59.	A friend or roommate ignored or snubbed you (not an argument)	YES	NO
60.	There was tension or you had a disagreement/conflict with a friend or roommate	YES	NO

61.	You felt pressured to do something you didn't want to do	YES	NO
62.	Other students, co-workers, and/or acquaintances harassed you, picked on you, teased you, made fun of you, or spread rumors about you	YES	NO
63.	Your were the victim of discrimination	YES	NO
64.	You were the victim of a crime (e.g. car broken into, wallet stolen)	YES	NO
65.	You experienced a minor physical ailment (e.g., headache, cold/flu symptoms, major acne breakout, PMS) or major dental work	YES	NO
66.	You had problems related to drugs and/or alcohol (woke up feeling embarrassed, hung-over)	YES	NO
67.	You had a serious illness, were injured, or were in an accident	YES	NO
68.	A friend or family member was sick, injured, or in an accident	YES	NO
69.	If female: You thought you might be pregnant If male: Your significant other thought she might be pregnant	YES	NO
70.	You had problems with your child care arrangements	YES	NO
71.	If you are a parent, you had problems with your child (e.g., your child had problems at school, discipline problems)	YES	NO
72.	You had minor legal problems (e.g., parking and or minor traffic ticket, detained by police, cited for legal infraction)	YES	NO
73.	A friend or family member had minor legal problems	YES	NO
74.	You purchased something you have been wanting	YES	NO
75.	You received a card, letter, or gift from a friend or family member	YES	NO
76.	You received bad news	YES	NO
77.	Other: Please explain _____	YES	NO

SECTION III:

For the following section, use the scale to indicate how much of each mood, on average, you experienced TODAY. If you skipped a day, only think back over the last 24 hours.

0 = Not at all

1 = Very Slightly

2 = Somewhat

3 = Moderate Amount

4 = Much

5 = Very Much

6 = Extremely Much

_____ drowsy	_____ surprised	_____ aroused	_____ relaxed
_____ elated	_____ sad	_____ warmhearted	_____ astonished
_____ excited	_____ distressed	_____ fearful	_____ enthusiastic
_____ unhappy	_____ dull	_____ calm	_____ at rest
_____ pleased	_____ happy	_____ grouchy	_____ sluggish
_____ nervous	_____ quiet	_____ still	_____ tranquil

APPENDIX C

FOLLOW-UP MEASURES

LIFE EVENTS CHECKLIST

Please indicate which of the following has happened to you since completing the daily questionnaire portion of this project (approx. 6-8 mths. ago). If YES, circle the number that best describes the impact of the event on you.

YES NO 1. YOU DECLARED OR CHANGED YOUR MAJOR

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 2. YOU FAILED A COURSE

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 3. YOU WERE PLACED ON ACADEMIC PROBATION

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 4. YOU HAD TROUBLE WITH ACADEMIC CREDITS (e.g., transfer credits, graduation, **NOT** grades)

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 5. YOU DROPPED OUT OF SCHOOL

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 6. YOU CHANGED SCHOOLS

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 7. YOU DIDN'T GET A JOB AND/OR ACADEMIC POSITION YOU APPLIED FOR

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 8. YOU EXPERIENCED SEXUAL HARASSMENT FROM A PROFESSOR, TEACHING ASSISTANT, AND/OR BOSS

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 9. YOU HAD TROUBLE FINDING A JOB

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 10. YOU STARTED A NEW JOB

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 11. YOU WERE LAID OFF

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 12. YOU WERE FIRED FROM WORK

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 13. YOU ENTERED THE ARMED SERVICES (not including ROTC)

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 14. YOU LEFT THE ARMED SERVICES (including ROTC)

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 15. YOUR SIGNIFICANT OTHER OR A FAMILY MEMBER WAS DEPLOYED TO A WAR ZONE OR OTHER AREA OF CONFLICT

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 16. YOU HAD A MAJOR UNEXPECTED EXPENSE (e.g., hospital bill, car repairs, etc.)

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 17. YOU PURCHASED A CAR, FURNITURE, OR OTHER LARGE PURCHASE ON AN INSTALLMENT PLAN AND/OR YOU TOOK OUT A MORTGAGE

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 18. YOU EXPERIENCED REPOSSESSION OF A CAR, FURNITURE, OR OTHER ITEMS BOUGHT ON AN INSTALLMENT PLAN AND/OR FORECLOSURE OF A MORTGAGE OR LOAN

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 19. YOUR INCOME DECREASED SUBSTANTIALLY

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 20. YOU HAD FINANCIAL PROBLEMS (e.g., change in employment, maxed out your credit cards, didn't receive child support)

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 21. YOUR FAMILY HAD FINANCIAL PROBLEMS (e.g., change in employment, didn't receive child support, bankruptcy)

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 22. THERE WERE PROBLEMS BETWEEN YOUR PARENT(S) AND YOUR SIBLING(S)

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 23. THERE WERE SERIOUS PROBLEMS BETWEEN YOU AND YOUR FAMILY

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 24. YOUR PARENTS SEPARATED OR DIVORCED

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 25. ONE OF YOUR PARENTS STARTED DATING

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 26. ONE OF YOUR PARENTS GOT ENGAGED OR REMARRIED, SO YOU GOT A NEW STEPFATHER, STEPMOTHER, STEPSISTER(S), OR STEPBROTHER(S)

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 27. YOU BEGAN A NEW ROMANTIC RELATIONSHIP

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 28. YOU BECAME ENGAGED

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 29. YOUR ENGAGEMENT WAS BROKEN

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 30. YOU GOT MARRIED

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 31. YOU FOUND OUT THAT YOUR SIGNIFICANT OTHER HAS BEEN UNFAITHFUL

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 32. YOU HAD AN AFFAIR

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 33. YOU BROKE UP WITH YOUR SIGNIFICANT OTHER

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 34. YOU WERE SEPARATED OR DIVORCED

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 35. YOU WERE THE VICTIM OF DOMESTIC VIOLENCE (i.e., verbal or physical abuse)

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 36. OTHER STUDENTS, CO-WORKERS, AND/OR ACQUAINTANCES HAVE BEEN PICKING ON YOU, TEASING YOU, MAKING FUN OF YOU, OR SPREADING RUMORS ABOUT YOU THAT CAUSED MAJOR PROBLEMS

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 37. YOU HAVE HAD DIFFICULTY MAKING NEW FRIENDS AND/OR HAVEN'T BEEN ACCEPTED OR LIKED BY OTHER STUDENTS AND/OR CO-WORKERS

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 38. A CLOSE PERSONAL FRIENDSHIP ENDED

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 39. If you are female: YOU FOUND OUT YOU WERE PREGNANT (wanted)
If you are male: YOUR SIGNIFICANT OTHER FOUND OUT SHE WAS PREGNANT (wanted)

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 40. If you are female: YOU FOUND OUT YOU WERE PREGNANT (unwanted)
If you are male: YOUR SIGNIFICANT OTHER FOUND OUT SHE WAS PREGNANT (unwanted)

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 41. If you are female: A PREGNANCY WAS TERMINATED (miscarriage, abortion)
If you are male: THE PREGNANCY OF YOUR SIGNIFICANT OTHER WAS TERMINATED (miscarriage, abortion)

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 42. If you are female: YOU HAD DIFFICULTY GETTING PREGNANT WHEN YOU WANTED TO
If you are male: YOUR SIGNIFICANT OTHER HAD DIFFICULTY GETTING PREGNANT WHEN SHE WANTED TO

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 43. A FAMILY MEMBER BECAME PREGNANT OR HAD A BABY

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 44. If you are female: YOU HAD A BABY
If you are male: YOUR SIGNIFICANT OTHER HAD A BABY

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 45. YOU ADOPTED A CHILD

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 46. YOU GAVE UP A BABY FOR ADOPTION

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 47. YOU HAD A CUSTODY BATTLE WITH A FORMER SPOUSE OR PARTNER

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 48. YOU BECAME SERIOUSLY ILL, WERE INJURED, OR INVOLVED IN AN ACCIDENT

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 49. YOUR SIGNIFICANT OTHER BECAME SERIOUSLY ILL, WAS INJURED, OR WAS IN AN ACCIDENT

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 50. A FRIEND OR FAMILY MEMBER BECAME SERIOUSLY ILL, WAS INJURED, OR WAS IN AN ACCIDENT

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 51. YOUR PET WAS INJURED OR BECAME SERIOUSLY ILL

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 52. YOU DEVELOPED AN EMOTIONAL PROBLEM REQUIRING MEDICAL TREATMENT (e.g., depression, anxiety)

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 53. YOUR SIGNIFICANT OTHER DEVELOPED AN EMOTIONAL PROBLEM REQUIRING MEDICAL TREATMENT

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 54. A FRIEND OR FAMILY MEMBER DEVELOPED AN EMOTIONAL PROBLEM WHICH REQUIRED MEDICAL TREATMENT

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 55. YOU HAD PROBLEMS RELATED TO ALCOHOL OR DRUGS (e.g., rehab, cited for driving under the influence)

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 56. YOU WERE THE VICTIM OF A NATURAL DISASTER (e.g., fire, mudslides, etc.)

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 57. YOUR SIGNIFICANT OTHER DIED

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 58. A FRIEND OR FAMILY MEMBER DIED

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 59. YOUR PET WAS LOST OR DIED

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 60. YOU HAD MAJOR LEGAL PROBLEMS (e.g., arrested, prison)

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 61. YOUR SIGNIFICANT OTHER HAD MAJOR LEGAL PROBLEMS (e.g., arrested, prison)

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 62. A FRIEND OR FAMILY MEMBER HAD MAJOR LEGAL PROBLEMS (e.g., arrested, prison)

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 63. YOU WERE THE VICTIM OF A CRIME

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 64. YOUR SIGNIFICANT OTHER, A FRIEND, OR FAMILY MEMBER WAS THE VICTIM OF A CRIME

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 65. SOMETHING YOU OWN WAS DAMAGED OR STOLEN (e.g., vandalism)

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 66. YOU WERE INVOLVED IN A LAW SUIT

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 67. YOU MOVED AWAY FROM HOME FOR THE FIRST TIME

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 68. YOU HAD DIFFICULTY FINDING HOUSING

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 69. YOU MOVED WITHIN THE SAME CITY OR AREA (other than going home for the summer)

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 70. YOU MOVED TO A DIFFERENT CITY OR AREA (other than going home for the summer)

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 71. YOUR SIGNIFICANT OTHER MOVED TO NEW CITY OR AREA

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 72. A CLOSE FRIEND MOVED AWAY TO ANOTHER CITY OR AREA

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 73. THE COMPOSITION OF YOUR LIVING SITUATION AT SCHOOL CHANGED BECAUSE SOMEONE NEW MOVED IN OR A ROOMMATE MOVED OUT

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 74. THE COMPOSITION OF YOUR FAMILY'S HOME CHANGED BECAUSE SOMEONE NEW MOVED IN OR A FAMILY MEMBER MOVED OUT (other than you going to college)

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 75. YOU WERE EVICTED FROM YOUR HOME

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

YES NO 76. OTHER: Please explain _____

No Impact	A Little Impact	Some Impact	A Lot of Impact	Huge Impact
1	2	3	4	5

BDI-II

Please read each group of statements carefully, then pick out the one statement in each group which best describes the way you have been feeling the past week, including today. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, simply circle the statement which has the largest number.

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 failures.
- 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 the things I enjoy.
- 1 I don't 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 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 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 Crying
- 0 I don't cry any more 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.

10 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 I have to keep moving or doing something.

11 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.

12 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.

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

14 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.

15 Change 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.

16 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.

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

18 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.

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

20 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.

CES-D

Circle the number for each statement which best describes how often you felt or behaved this way – DURING THE PAST WEEK.

DURING THE PAST WEEK:	Rarely or none of the time (Less than 1 day)	Some or a little of the time (1-2 days)	Occasionally or a moderate amount of time (3-4 days)	Most or all of the time (5-7 days)
1. I was bothered by things that usually don't bother me	0	1	2	3
2. I did not feel like eating; my appetite was poor	0	1	2	3
3. I felt that I could not shake off the blues even with help from my family or friends	0	1	2	3
4. I felt that I was just as good as other people	0	1	2	3
5. I had trouble keeping my mind on what I was doing	0	1	2	3
6. I felt depressed	0	1	2	3
7. I felt that everything I did was an effort	0	1	2	3
8. I felt hopeful about the future	0	1	2	3
9. I thought my life had been a failure	0	1	2	3
10. I felt fearful	0	1	2	3
11. My sleep was restless	0	1	2	3
12. I was happy	0	1	2	3
13. I talked less than usual	0	1	2	3
14. I felt lonely	0	1	2	3
15. People were unfriendly	0	1	2	3

	Rarely or none of the time (Less than 1 day)	Some or a little of the time (1-2 days)	Occasionally or a moderate amount of time (3-4 days)	Most or all of the time (5-7 days)
DURING THE PAST WEEK:				
16. I enjoyed life	0	1	2	3
17. I had crying spells	0	1	2	3
18. I felt sad	0	1	2	3
19. I felt that people disliked me	0	1	2	3
20. I could not get “going”	0	1	2	3

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