

Psychosocial Factors, Maladaptive Cognitive Schemas, and

Depression in Young Adults: An Integration

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(Abstract)

The present study examined a psychosocial-cognitive model that integrates recent findings on the independent effects of early maladaptive cognitive schemas (EMSs; Young, 1994) and psychosocial factors/stressors; viz., social support, expressed emotion, stressful life events and daily hassles, on level of depressive symptoms in young adults. Consistent with Beck's theory of depression, the expectation was that individuals with the EMSs would be more likely to respond to psychosocial stressors with higher levels of depression. Questionnaires measuring the selected psychosocial factors and EMSs were administered to 244 (82 male and 162 female) undergraduate students, mean age 19. Previous findings on the direct relationships between stressful life events, social support and EMSs, and level of depression were replicated. Except for daily hassles, the moderator role of the EMSs was largely disconfirmed when a conservative statistical test (Bonferroni correction) was applied to moderator analyses. With regard to perceived social support received from family and friends, present results were promising for the moderator effect of the EMSs of self sacrifice, functional dependency/incompetence and abandonment. The prediction equation to the criterion of depression indicated independent contributions of stressful life events, and the EMSs of abandonment, functional dependency/incompetence, and insufficient self control, accounting for half of the variance in depression. Taken together, the present data provided little support for the moderator effect of the EMSs rather supported Young's theory (1990) that maladaptive

cognitions in themselves can produce increased levels of depression regardless of the presence of triggering stressors.

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Psychosocial Factors, Maladaptive Cognitive Schemas, and Depression in Young Adults: An Integration

Researchers have identified a number of psychosocial variables that correlate with and are hypothesized to be important in the etiology and prediction of depression. For instance, research on correlates of depression in children and young adults has provided support for the main effects of family pathology (e.g., Keitner, & Miller, 1990; Keitner, Ryan, Miller, & Norman, 1992), family interactions (e.g., Coiro, & Gottesman, 1996; Keitner, & Miller, 1990; Keitner et al., 1992; Spiegel, & Wissler, 1986), social support (e.g., Aneshensel, & Frerichs, 1982; Barrera, & Garrison-Jones, 1992; Goering, Wasylenki, Lancee, & Freeman, 1983; Kessler, Price, & Wortman, 1985; Krantz, & Moos, 1988; Sherbourne, Hays, & Wells, 1995; Swindle, Cronkite, & Moos, 1989), and life stressors/events (e.g., Billings, & Moos, 1985; Kessler et al., 1985; Swindle et al., 1989; see for review, Mazure, 1998). Cognitive theories of depression (Abramson, Seligman, & Teasdale, 1978; Beck, 1972; Seligman, 1975; Young, 1990) have emphasized the role of cognitive variables, such as coping skills, self-regard, and attributions, in the etiology of depression with a number of studies (e.g., Jaenicke et al., 1987; Olinger, Kuiper, & Shaw, 1987, Persons, & Rao, 1985; Wise, & Barnes, 1986; Schmidt, Joiner, Young, & Telch, 1995) providing supportive evidence.

If explored as single factors, these correlates provide a limited understanding of psychosocial factors of depression, but have more explanatory value when their additive and interactive effects on depressive symptomatology are considered (Susser, 1973). Further, a variety of researchers (Ingram, & Price, 2001; Lewinsohn, Hoberman, & Rosenbaum, 1988; Susser, 1973) have suggested that current efforts in research on

depression be directed towards a thorough multivariate analysis, where moderator and mediator relationships of multiple factors are explored above and beyond the independent contributions of risk factors.

Several researchers have attempted to integrate several models to provide a more comprehensive view of depression. For instance, Safran and Segal (1990) proposed an integrative interpersonal-cognitive model in which interpersonal relationships and cognitions, conceptualized by interpersonal schemas, were proposed to be uniquely related to the development of depression. In Safran and Segal's model of depression, cognitions were the mechanism that explains the effects of interpersonal relationships on depressive symptomatology. Similarly, Hammen (1992) suggested a transactional model of depression, where life stressors, cognitive and interpersonal factors were examined in terms of their additive and interactive effects on the course of depression with the focus centered around the developmental pattern of the individual from childhood to adulthood. Gotlib (1992) also suggested that the effects of interpersonal factors on the course of depression were dependent on the individual's perceptions about them, which may lead to either negative or positive views of self in relation to others. Hence, Gotlib proposed that interpersonal cognitive schemas, i.e., how the individual perceives him/herself in relation to interpersonal relationships, should be emphasized in research on interpersonal pathways to depression. In line with these integrative interpersonal models of depression, Schmidt, Schmidt, & Young (1999) noted that schema-based formulations of interpersonal relationships can be useful in understanding the role of interpersonal factors in the course of depression.

Two lines of theorizing inform how cognitive schemas and interpersonal relationships interact to produce depression. According to Beck's theory of depression (1972), dysfunctional cognitive styles such as magnification and overgeneralization, and the cognitive triad, i.e., negative views of self, others and the future, are significant components of depressive symptomatology. Beck theorized that early parenting style, and early negative life experiences may result in the development of maladaptive, negative core beliefs or schemas about oneself and how the world functions. When early maladaptive schemas are activated by related interpersonal or stressful events later in life, the individual is likely to develop a negative view of self and the event, and cognitively distort relevant information, which may lead him/her to experience depression. Hence, Beck proposed maladaptive schemas and dysfunctional cognitive styles as vulnerability factors to depression that potentially exacerbate the effects of stressors on depression. In general, research with children as well as adults on the role of cognitions in depression provided support for Beck's theory of depression (Schmidt, Schmidt, & Young, 1999).

Following Beck's theory, but focusing on personality disorders, Young (1994) proposed a hierarchical model of early maladaptive cognitive schemas (EMSs), wherein 16 cognitive schemas were described using 6 domains of interpersonal functioning. In line with Beck's theory (1972), Young (1994) theorized that the EMSs are a result of early negative experiences with caregivers, which form the basis for how the child perceives and understands him/herself and the environment. Young, however, suggested that EMSs always actively affect an individual's cognitions and perceptions regardless of the presence of any stressful life event. Hence, an individual's cognitive processing is always biased if new information is inconsistent with individual's core beliefs. Thus, the

individual cognitively distorts the environment to correct for inconsistencies between schemas and actual experiences. Accordingly, as Young theorized, the EMSs are universal, unconditional, and resistant to change throughout an individual's lifetime. As individuals look for confirming evidence for their cognitive schemas, the cognitive schemas become integrated into the individual's description of self regardless of their adaptiveness for his/her developmental level. Hence, the EMSs are theorized to be vulnerability factors for psychopathology regardless of whether they are accompanied by relevant stressors (Schmidt, Schmidt, & Young, 1999).

The critical point here is whether the EMSs predict depression directly as well as when the individual is under stress. No studies to date have directly explored the moderator role of the EMSs in the relationship between stressful life events and depression. However, the single and interactive effects of dysfunctional attitudes as measured by the Dysfunctional Attitudes Scale (DAS; Weissman, & Beck, 1978) and stressful life events on depressive symptomatology have been examined in several studies. The DAS assesses excessive and rigid beliefs about oneself and others and involves conditional statements reflecting 'if-then' beliefs, as opposed to the measure of the EMSs (Schema Questionnaire; Young, 1994) reflecting cross-situational or generalized beliefs. Olinger, Kuiper, and Shaw (1987) have provided empirical support for the direct relationship between the dysfunctional attitudes and life events. On the other hand, Wise and Barnes (1986) provided evidence for a significant interaction between adverse life events and the dysfunctional attitudes in the normal college student group but not in the clinical sample. Similarly, Persons and Rao (1985) showed that although independently related to depression, the interaction between life events and

cognitions operationalized by irrational beliefs (Beck, 1976) was nonsignificant in psychiatric patients. Further, in their prospective study, Lewinsohn, Hoberman, and Rosenbaum (1988) have shown that cognitive variables such as low self-esteem, dissatisfaction with self, and perception of control were correlated with and predictive of level of depressive symptoms but not diagnosable depressive episodes. In addition, life events and prior history of depression were found to be the best predictors of future diagnosable depressive episodes, where no variables including cognitions moderated the relationship between life events and depression, which was noted to be an unexpected finding based on previous research and literature. Overall, there appears to be no conclusive evidence that cognitive schemas interact with stressors to produce depression, with data from normal and clinical samples providing divergent results.

The question of which cognitive schemas as measured by Young's Schema Questionnaire (SQ; Young, 1994) were related to depression has been examined in several studies. Schmidt et al. (1995) reported that 'dependency' and 'defectiveness' predicted depression in an undergraduate student sample. 'Mistrust/abuse', 'abandonment', and 'social isolation' predicted depression in college students in Harris, Curtin, and Vicente's study (1999). 'Defectiveness/shame', 'self-sacrifice', and 'insufficient self-control' in a clinical sample and 'vulnerability to harm' in a nonclinical sample predicted depression in Shah and Waller's study (2000). Further, Shah and Waller showed that the EMSs; 'vulnerability to harm' in the nonclinical sample, and 'vulnerability to harm', 'dependence/incompetence', 'emotional inhibition', 'failure to achieve', and 'unrelenting standards' in the clinical sample were the subscales of the SQ that acted as mediators in the relationship between early parental experiences and

depressive symptomatology. Taken together, while inconsistent across studies, the seven cognitive schemas directly related to depression in previous research afforded the highest likelihood of establishing connections to depression.

The decision of what interpersonal factors to focus on, given their hypothesized interactions with cognitive schemas in predicting depression, is critical. One approach is to focus on interpersonal constructs that have been empirically connected to depression. Two such constructs were perceived social support and expressed emotion.

The literature has shown that social support has been empirically examined, not only as a stand-alone risk factor for depression, but also as a factor moderating the relationship between life events and depression. In his review, Mazure (1998) reported that the majority of studies have provided support for both the direct effect of social support on depression (e.g., Barrera & Garrison-Jones, 1992, Billings & Moos, 1984), and the effect of its interaction with stressful life events (e.g., Brown & Harris, 1978). Further, perceived availability of social support has been shown to reduce the likelihood of future depression in depressed patients (Billings & Moos, 1985; Sherbourne, Hays, & Wells, 1995). Hence, in line with the literature, the present study examined low social support as both a stressor directly related to levels of depressive symptomatology, and a variable moderating the relationship between life events and depression. In addition, social support was conceptualized as a measure of current interpersonal relationships, the effects of which could be moderated by negative cognitive schemas.

Family environment, broadly conceived, has been related to the development and progress of depression (Keitner et al., 1987). One prominent way of conceptualizing the role of family environment in the course of psychiatric disorders has been to

operationalize the family environment in terms of the concept of “expressed emotion” (EE; Brown, Birley, & Wing, 1972), originally measured by the Camberwell Family Interview (CFI; Brown & Rutter, 1966). Examination of what is measured by the EE construct reveals that it is essentially a measure of family members’ or significant others’ interaction with individuals when experiencing stress or a specific clinical syndrome. The dimensions of EE; viz., critical comments, emotional overinvolvement, and irritability, were identified as important for prognosis in psychiatric disorders, such as schizophrenia and depression (Vaughn & Leff, 1976; Brown, 1985). Accordingly, patients from high EE families, where family members react to the symptomatology of the identified patient with high levels of criticism, hostility, or emotional overinvolvement, are at a higher risk for the maintenance and relapse of psychiatric disorders. Based on a meta-analysis of studies on EE as measured by the CFI, Butzlaff and Hooley (1998) provided strong support for its predictive value in mood disorders. The predictive validity of EE as perceived by the identified patient has also been supported in several studies with patients with schizophrenia and depression (Cole & Kazarian, 1993; Gerlsma & Hale, 1997).

The constructs of EE and social support received from family members are closely related, though they reflect positive and negative responses, respectively. Negative family response, operationalized as ‘high’ EE, was expected to increase vulnerability to depression, while social support was conceptualized as increasing positive mood and was predicted to decrease vulnerability to depression. As Beck and Young theorized, schemas learned early in life about how the world functions, come to dominate perceptions about interpersonal relationships later in life. When these cognitive

schemas are negative, they can be expected to potentiate negative family responses to an individual who is under stress or who becomes depressed.

In addition to social support and family relationships, stressful life events were included as a factor to be explored in the present model of depression. In his review, Mazure (1998) concluded that the role of stressful life events in depression is a consistent finding across studies. Mazure reported that the majority of studies have shown that at least 80% of community/non-medical cases of major depression are preceded by a severe adverse life event. Further, several studies, where depressive cases were compared to a non-medical sample, revealed that experience of a major adverse life event was 2.5 times as likely to occur for depressive patients as for controls (Shrout et al., 1989).

Several researchers (Kanner, Coyne, Shaefer, & Lazarus, 1981; Lazarus, DeLongis, Folkman, & Gruen, 1985) have proposed an alternative conceptualization of stressful life events in terms of 'daily hassles' operationalized as irritating, frustrating, and distressing minor everyday events. Further, daily hassles and major life events have been tested for their relative power in predicting the course of psychiatric disorders. Kanner et al. (1981) found that the daily hassles and uplifts accounted for most of the variance in symptomatology of psychiatric disorders when compared to major life events. However, in his literature review, Mazure (1998) noted that the majority of studies have examined daily hassles with regard to their effects on general psychological symptomatology rather than a particular psychiatric disorder, such as depression. The relative predictive power of daily hassles as compared to major life events in the development of depression is inconclusive (Mazure, 1998).

Based on the literature examining the relationships of psychosocial factors and cognitive schemas in the development of depression, several goals were identified for this study. The first goal was to replicate findings on the contribution of stressors, social support, expressed emotion and cognitive schemas to the level of depression in a sample of undergraduates. To this end two different measures of stressors were used – life change events and daily hassles – to examine their independent contribution to depression. In addition, two different measures of social support were identified, one that emphasized the degree of perceived supportive behaviors and the other that emphasized the existence of socially-supportive family, friends, and others. Also, a measure of family response to negative behaviors in the reporting individual was added; viz., a measure of expressed emotion, to examine the independent effects of the negative side of interpersonal response. Young’s Schema Questionnaire (Young, 1994) was identified as a measure specifically developed to measure negative interpersonal schemas. Consistent with Beck’s theory of depression, the expectation was that individuals with specific negative EMSs would be more likely to respond to psychosocial stressors with higher levels of depressive symptomatology. Hence, a second goal of the present study was to examine interaction effects between cognitive schemas and the psychosocial predictors, with an emphasis on determining whether cognitive schemas potentiate the effects of perceived social support and expressed emotion on the severity of depression. Consequently, based on previous literature and theoretical considerations, the following hypotheses were tested:

- (1) There are significant relationships between early maladaptive cognitive schemas (EMSs) and depression.

- (2) There is a significant relationship between social support and depression.
- (3) There is a significant relationship between expressed emotion and depression.
- (4) There is a significant relationship between stressful life events and depression.
- (5) There is a significant relationship between daily hassles and depression.
- (6) Social support moderates the relationship between stressful life events and depression.
- (7) Expressed emotion moderates the relationship between stressful life events and depression.
- (8) The relationship between social support and depression is moderated by the EMSs.
- (9) The relationship between expressed emotion and depression is moderated by the EMSs.
- (10) The relationship between significant life events and depression is moderated by the EMSs.
- (11) The relationship between daily hassles and depression is moderated by the EMSs.

A third goal of the present study was to arrive at a psychosocial-cognitive model that would best predict levels of depression. Therefore, in addition to the above hypotheses, all four psychosocial factors and the EMSs were examined as independent predictors of depression.

Method

Participants The sample was composed of 82 male and 162 female, in total 244, undergraduate students with a mean age of 18.95 (SD = 1.84) and a mean grade level of 1.82 (SD = 0.98) (Freshman = 1; Sophomore = 2, etc.) who were taking the introductory psychology course at Virginia Tech. The demographics of subjects are reported in terms of gender, age, ethnicity and grade level in Table 1. The level of depression ranged from 0 to 42 on the BDI-II with a mean of 9.21 (SD = 0.48) and a median of 7.5.

Predictor Measures

Young's Schema Questionnaire (SQ). The SQ (Young, 1994) (Appendix A) is a self-report inventory composed of 16 subscales, each of which measures early maladaptive cognitive schemas. There are a total of 205 items, which are rated using a six-point Likert scale (1= completely untrue of me, 2= mostly untrue of me, 3= slightly more true than untrue, 4= moderately true of me, 5= mostly true of me, 6= describes me perfectly). Respondents are required to rate each item with respect to how well the item represents their thoughts and beliefs about themselves. Total scores for each subscale are computed by summing the number of items rated with either 5 or 6. The SQ has been found to have adequate test-retest reliability - the stability scores for subscales range from 0.50 to 0.82 (Schmidt, Joiner, Young, & Telch, 1995). As was shown in a previous study (Shah & Waller, 2000), the internal consistency of the SQ was adequate in the present study, with cronbach alphas for its subscales ranging from 0.85 to 0.94. Schmidt et al. (1995) also have shown the convergent and discriminant validity of the SQ with respect to measures of positive-negative affectivity, self-esteem, personality disorder traits, and cognitive vulnerability factors to depression.

The selected EMSs and corresponding SQ scales for the present study are as follows:

- (a) 'Functional Dependence/Incompetence' scale (15 items) assesses the belief that one is unable to competently manage everyday responsibilities,
- (b) 'Defectiveness' scale (15 items) measures the belief that one is internally defective and fundamentally unlovable,
- (c) 'Mistrust/Abuse' scale (15 items) measures the belief that leads one to expect harm and exploitation from others,
- (d) 'Abandonment' scale (18 items) measures the expectation that significant others will not provide emotional support or protection because they are believed to be emotionally unstable,
- (e) 'Social Isolation' scale (10 items) measures the belief that one is isolated from others due to some outwardly undesirable feature,
- (f) 'Self-Sacrifice' scale (18 items) points to exaggerated expectations of responsibility to others.
- (g) 'Insufficient Self-Control' scale (15 items) assesses the belief that self-discipline is unimportant and that emotions and impulses require little restraint.

Multidimensional Scale of Perceived Social Support (MSPSS). The MSPSS (Zimet, Dahlem, Zimet, & Farley, 1988) (Appendix B) is a self-report measure of perceived social support composed of 12 items, with four items comprising each of three sources of social support, viz, family, friends, & significant others. The respondents rate each item on a 7-point scale ranging from very strongly disagree (1) to very strongly agree (7). Hence, the total score ranges from 12 to 84.

Zimet, Dahlem, Zimet, and Farley (1988) reported that the significant other and friends dimensions were moderately correlated ($r=.63$), whereas the family dimension was found to have low correlations with the significant other ($r=.24$) and friends ($r=.34$) dimensions. Test-retest reliabilities over 2-3 months was 0.72, 0.85, and 0.75, for the item clusters of significant other, family, and friends, respectively. Test-retest reliability for the entire scale was .85. In the present study, the total scale had a cronbach's alpha of 0.93.

With regard to construct validity, the MSPSS negatively correlated with depression and anxiety levels as measured by the Hopkins Symptom Checklist (HSCL; Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974). Correlations between the composite score of perceived social support and levels of depression and anxiety were higher for men ($r= -.43$) than for women ($r= -.21$).

The Social Support Behaviors Scale (SSBS). The SSBS (Vaux, Riedel, Stewart, 1987) (Appendix C) is a measure of social support that addresses 5 different modes of support, viz., emotional, socializing, practical, financial, and advice/guidance. A total of 45 items are rated for both family members and friends on a five-point scale ranging from 'no one would do this' (1) to 'most family members/friends would certainly do it' (5). The total score ranges from 45 to 225. Individuals were instructed to respond to the items by considering how family members and friends have responded to them when they needed help, or how they will respond if they need their help. Vaux, et al. reported mean cronbach alphas of .90 and .89 for family and friend ratings for an African American sample, respectively. For the caucasian sample, mean cronbach alphas for family and

friend ratings were 0.86 and 0.83, respectively. In the present study, the cronbach alphas were 0.95 for family and 0.94 for friends ratings.

The scale's content validity was supported by the percentages of judges who correctly identified the item classification: 92 % for emotional support, 89% for socializing, 91% for practical assistance, 82% for financial assistance, and 90% for advice/guidance. Further, differential sensitivity of the subscales to different scenarios reflecting lack of social support in different areas of functioning, was provided as support for the SSBS's construct validity. The divergent validity of the SSBS scale was shown when compared to a similar measure of social support, viz., the Inventory of Socially Supportive Behaviors (Barrera, Sandler, & Ramsay, 1981). The divergence of different modes of social support as measured by the SSBS was shown across different stressors, such as academic, work, health problems, and relationship problems. Emotional support and socializing subscales, were more consistently related to relationship problems than to other kind of stressors.

For the purposes of the present study, the emotional support and socializing scales were used for the analyses. The emotional support and socializing scales are composed of 10 items and 7 items, respectively. The composite scores of these scales range from 1 to 170.

Level of Expressed Emotion (LEE) Scale. The LEE scale (Cole & Kazarian, 1988; Gerlsma, & Hale, 1997) (Appendix D) was used to measure perceived expressed emotion (EE), a construct examining the response of significant family members to the behavior of the individual when under stress. The LEE scale is a self-report measure, composed of four subscales, with a total of 38 items rated on a four-point Likert scale (1=

not true, 2= mostly untrue, 3= mostly true, 4= true). Respondents are required to rate the items based on their perceptions of the significant other's attitudes towards them in the last three months. In the present study, the significant other was operationalized as being the parent or the caretaker with the most important role. The total score ranges from 38 to 152.

The subscales of the LEE scale that have been most closely linked to prognosis in depression include: 1) The Perceived Intrusiveness Scale (7 items) explores the tendency of significant others to become overly involved in respondents' lives by giving unsolicited advice and insisting on helping. In the present study, the scale had a Cronbach alpha of 0.82. Gerlsma and Hale (1997) showed a Cronbach alpha of 0.84 in the clinical sample and 0.83 in healthy sample, and two-month retest reliability of 0.78. 2) The Perceived Irritability Scale (7 items) had Cronbach alphas of 0.88 in a clinical sample and 0.84 in a healthy sample, and two-month retest reliability of 0.75 (Gerlsma & Hale, 1997). This scale examines respondents' perception of significant others' reactions to events that are upsetting. In the present study, the scale had a Cronbach alpha of 0.74. 3) The Perceived Criticism Scale (5 items) describes respondents' perceptions of how critical their interactions were with significant others. Cronbach alphas for this scale were 0.72 and 0.65 in the clinical and healthy sample, respectively (Gerlsma & Hale, 1997). The present study showed a Cronbach alpha of 0.76 for the scale.

Life Experiences Survey (LES). The LES (Sarason, Johnson, & Siegel, 1978) (Appendix E) is a self-report measure of life changes experienced during the past year. The LES is composed of two sections, with 47 and 10 items in each section, that reflect frequently experienced life events in the general population and in academic

environments, respectively. The respondents were instructed to indicate which events they experienced during the last year, and rate these experiences in terms of their positive or negative impact. Ratings were made on a 7-point scale ranging from extremely negative impact (-3) to extremely positive impact (3). The scores for positive [LES(+)] and negative [LES(-)] life experiences were obtained by adding the relevant impact scores. The total score, ranging from -171 to 171, is the sum of the LES(-) and LES(+) scores. In the two studies carried out by Sarason et al. (1978), the test-retest correlations over 5 to 6 weeks-interval were found to be moderate [$r[\text{LES}(+)] = 0.19$ ($p < .001$) and 0.53 ($p < .001$); $r[\text{LES}(-)] = 0.56$ ($p < .001$) and 0.88 ($p < .001$); $r(\text{total change scores}) = 0.63$ ($p < .001$) and 0.64 ($p < .001$)].

The divergent validity of the LES was shown via comparing the LES to another measure of life events, namely, the Schedule of Recent Experiences (SRE; Holmes, & Rahe, 1967). Significant correlations with depression were found for the LES but not the SRE. Further, evidence for the validity of the LES came from finding a significant correlation of LES(-), but not SRE, with two adjustment scales of the Psychological Screening Instrument (PSI; Lanyon, 1970). Further, the correlation between LES and the Marlowe-Crowne Social Desirability Scale (Strahan & Gerbasi, 1972) was shown to be nonsignificant.

The LES(-) and total change scores but not LES(+) were found to positively correlate with state and trait anxiety as measured by State-Trait Inventory. In the present study, LES(-) was used in data analyses.

The Hassles Scale (HSL). The HSL (Kanner, Coyne, Shaefer, & Lazarus, 1981) (Appendix F) is a self-report measure composed of 117 hassles regarding the areas of

work, health, family, friends, environment, practical considerations, and chance occurrences. Respondents were required to rate each hassle for severity using a 3-point scale ranging from somewhat (1) to extremely (3). The summary scores of the scale are the number of hassles, viz., frequency, sum of 3-point scale ratings, viz., cumulated severity, and cumulative severity rating divided by frequency, viz., intensity. For the purposes of the present study, the intensity ratings measured daily hassles. Items that related to depression on a face valid basis were eliminated during the data analysis.

The HSL had average reliability scores of .79 and .48 for frequency and intensity scores, respectively, for monthly assessments for 10 months. The HSL and the Hopkins Symptom Checklist (HSCL; Derogatis et al., 1970) were significantly correlated - .49 ($p < .001$) for the total sample, .41 ($p < .01$) for men, and .60 ($p < .001$) for women.

Criterion Measure

Beck Depression Inventory, 2nd Edition (BDI-II). The BDI-II (Beck, & Steer, 1987) is a self-report measure composed of 21 items that reflect the cognitive-affective and somatic symptoms of depression. Beck and Steer report cronbach alphas of 0.92 in the clinical sample and 0.83 in the healthy sample. The items are rated using a four-point Likert scale ranging from 0 to 3, with 0 reflecting no experience of depressive symptom and 3 reflecting the experience of a significant degree of depressive symptom in question. Respondents are required to rate the items considering their experience within the last two weeks. The BDI-II score is the total of the rating for each item, which has a range from 0 to 63. Higher scores indicate the presence and severity of depression.

Procedure

The study took place during the fall semester of 2001. Participation in the study was voluntary and participants were given extra credit for their participation. Questionnaires were administered to groups of about 20 participants at a time. Before responding to the questionnaires, participants were required to read the consent form (Appendix G), where they were informed about the nature of the questionnaires, the time needed to complete the questionnaires and the purpose of the study. The consent form explained the study as being about interpersonal relationships and mood. Participants were assured that all information is kept confidential.

Participants also completed the demographic information sheet (Appendix H) where they reported their age, ethnicity, grade level and gender. Participants were then instructed to carefully attend to the procedures outlined before beginning each questionnaire and were requested to complete the questionnaires as carefully and completely as possible. It took the participants approximately 2 hours to complete all the questionnaires. After participants completed the questionnaires, they were informed that they would receive an email in approximately one year summarizing the results of the study.

Results

The distributions of the scales of the Schema Questionnaire were not normal. Hence, analyses were conducted using ‘square root’ transformations of the ratings for these scales.

Initial statistical analyses involved a series of first order correlations. Correlations between and among each predictor variable and depression are summarized in Table 2. No significant relationships were found between demographic variables and depression. As can be seen, ‘daily hassles’ was the only variable that was not found to be significantly correlated with depression. Correlations between the measures of early maladaptive cognitive schemas (EMSs) and measures of social support were low to moderate in degree.

Moderator effects were examined next. The moderator effects of expressed emotion and social support on the relationship between stressful life events (LES) and depression were examined using multiple regression analyses. In step 1, subscales of social support and expressed emotion were entered, followed by interaction terms in step 2. Only the interaction between LES and the irritability subscale of the Lee scale (LIRR) was significant (see Table 3).

Next, hypotheses regarding the moderator role of the EMSs on the relationships between social support, expressed emotion, significant negative life events and daily hassles, and depression were examined in a series of regression analyses. As shown in Table 4, four of the seven EMSs significantly interacted with daily hassles in predicting depression.

Further, as indicated in Table 4, several subscales of social support; viz., MSPSS and SSBS, significantly interacted with subscales of the SQ, providing partial support for the moderator role of EMSs in the effect of social support on depression. Social support from family members as measured by MSPSS (MFA) and emotional social support from family members as measured by SBSS (SEFA) interacted with the EMS of abandonment. Further, MFA and the socializing – family subscale of SSBS (SSFA) showed significant interaction effects with the EMS of self-sacrifice. MFA but none of the scales of SSBS significantly interacted with the EMS of functional dependency. When social support from friends was measured by the SSBS, no interaction effects with the EMSs were found. When social support from friends was measured by the MSPSS, however, five of the seven EMSs, including abandonment, mistrust/abuse, functional dependency/incompetence, self-sacrifice, and insufficient self-control, showed interaction effects. Social support received from significant others other than family members and friends was measured by the others subscale of MSPSS (MOTH). Only the EMS of self-sacrifice showed a significant interaction effect with the MOTH.

For the subscales of the LEE scale, interaction effects were found between intrusiveness (LINT) and mistrust/abuse; irritability (LIRR) and defectiveness; and criticism (LCRT) and abandonment. Negative life events as measured by the LES significantly interacted with the EMS of self-sacrifice.

A bonferroni correction was then applied to the statistical results presented in Table 4. The goal was to correct for the high number of interaction factors examined to test a general hypothesis of whether the EMSs interact with psychosocial factors in influencing level of depression. According to the hypotheses, there were 84 interaction

effects, resulting from 7 EMSs and 12 psychosocial factors. The Bonferroni correction involved the division of the significance level of .05 by the number of interaction terms (84). The resulting significance level was .001. According to this corrected significance level, none of the interactions except for those between daily hassles and the EMSs was significant. The nature of the interactions were as expected, with the interaction of higher levels of daily hassles and EMS producing the highest levels of depression (Table 5).

Building a Predictive Model of Depression

The next set of analyses involved the formation of a predictive model of depression. The intent was to examine the independent contributions of psychosocial variables as well as EMS subscales both alone and in interaction.

First, using forward multiple regression analysis and with the BDI as the criterion variable, all psychosocial variables including the LES and HSL scales and the subscales of the SS and EE, were entered as predictor variables. This model tested the contribution of psychosocial variables previously reported in the research literature to predict depression. Results of this analysis are presented in Table 6. The Life Events Scale (LES), the emotional support from family subscale of the SSBS (SEFA), and the friends subscale of the MSPSS (MFR) were the only scales that significantly contributed to the prediction of depression.

Next examined were the additive effects of the EMSs to the predictor variables presented in Table 6. These analyses included a series of multiple regression analyses (MRAs) using the SPSS- method 'enter'. The first analysis examined the independent contributions of the seven EMS subscales to depression after including LES, SEFA, and MFR as predictors. In subsequent MRAs, the EMS subscales that contributed the least to

the prediction of depression, i.e., the predictor variable with the lowest p value, were deleted. This procedure was repeated until all beta coefficients of the EMSs left in the model were significant. As can be seen in Table 7, the result of these sequential analyses resulted in a model of depression that included the EMS subscales of abandonment, defectiveness, functional dependence/incompetence, and insufficient self-control, in addition to the LES as the only significant psychosocial factor.

Discussion

The main purpose of the present study was to examine the moderator role of cognitive schemas in the relationship between psychosocial factors and depression. Consistent with Beck's theory of depression, the expectation was that individuals with maladaptive interpersonal cognitions; viz., EMSs, would react to psychosocial stressors with higher levels of depressive symptomatology. However, when a conservative statistical test (Bonferroni correction) was applied to the set of moderator analyses, the only significant interactions were the ones between daily hassles and certain EMSs. Hence, except for daily hassles, the present study did not provide convincing empirical support for Beck's (1972) contention that stressors are requisite to activate maladaptive cognitions, which, in turn, exacerbate their effects on depression.

As was shown in the predictive model of depression, stressful life events but none of other psychosocial factors; viz., social support and expressed emotion, significantly contributed to levels of depression above and beyond the independent contributions of certain EMSs (i.e., abandonment, defectiveness, functional dependency/incompetence and insufficient self-control). More specifically, the predictive model suggested that negative stressful life events, and the EMSs of abandonment, defectiveness, functional dependency/incompetence and insufficient self-control were powerful independent predictors of depression, accounting for 48% of the variance in depression. Based on these results and those on the moderator effects, it can be concluded that the preponderance of evidence supported Young's theory (1990) that maladaptive cognitions by themselves produce increased levels of depression regardless of the presence of triggering stressors.

The robust moderator effect of maladaptive cognitions with daily hassles was an interesting result given that daily hassles was the only psychosocial variable not directly related to depression. Contrary to predictions, no direct relationship was found between daily hassles and depression. As Mazure (1998) noted in his literature review, there has not been consistent evidence for a direct relationship between daily hassles and specific psychiatric disorders and the present findings for daily hassles added to the disconfirming bulk of evidence. By themselves, therefore, daily hassles were not sufficiently stressful to independently lead to higher levels of depression. However, as the results suggested, individuals experienced increased levels of depression when the stress of daily hassles was accompanied by schemas of abandonment, mistrust/abuse (expectations for emotional exploitation from others), social isolation (worries about being lonely), and defectiveness (beliefs of being unworthy of another's love). Compared to the remaining schemas, these schemas seem to reflect an emotional vulnerability to interpersonal loss.

The above results were also particularly interesting given the absence of similar interaction effects between stressful life events and the EMSs. Daily hassles is conceptually different from stressful life events in terms of the intensity of the stress and its importance to one's life. Stressful life events were conceptualized as higher intensity stressors likely to provoke more extreme responses. This expected relationship was confirmed in the present study, as reflected in the direct relationship between LES and depression. Further, a series of multiple regression analyses supported the independent effects of the LES but not daily hassles on levels of depression above and beyond the independent effects of other psychosocial factors/stressors and the EMSs.

Compared to the direct relationship between stressful life events and depression (Mazure, 1998), the interactive effects between stressful life events and cognitive schemas as well as between daily hassles and cognitive schemas have not been well established (e.g., Lewinsohn, Hoberman, & Rosenbaum, 1988; Persons & Rao, 1985; Wise & Barnes, 1986). Present results surprisingly supported only the latter relationship. It may be that negative schemas do not increase the already moderate relationship between LES and depression. Daily hassles, which had no predictive power alone, however, were more important when certain maladaptive schemas were in place. These results need to be interpreted considering the characteristics of the present sample – college students with a mean age of 19. Accordingly, the present study suggested that young adults during their first years of college do react to daily minor stresses with higher levels of depressive symptoms if these daily hassles are accompanied by certain EMSs. On the other hand, regardless of any concomitant EMSs, stressful life events do lead to higher depressive symptomatology.

A further result that deserves discussion is the lack of independent contribution of perceived social support if considered simultaneously with interpersonal cognitive schemas; viz., EMSs, in predicting depression. More specifically, a series of analyses were designed to determine whether cognitive schemas would add to the prediction of depression beyond that afforded by stress, social support and EE alone. Results showed the independent effects of stressful life events, supportive behaviors received from family members on an emotional basis, as measured by the SSBS, and perceived support received from friends, as measured by the MSPSS, on levels of depression. However, when the EMSs were entered into the model, social support factors no longer contributed

to the prediction of depression, while stressful life events remained important. This result called into question the importance of the independent contribution of concurrent levels of perceived social support and the EMSs when both are considered simultaneously in predicting depression. It may be that interpersonal schemas affect an individual's perception of social support, which, in previous studies, may have acted as a proxy for these schemas. Hence, the possibility of the EMSs as factors/mediators explaining the relationship between social support and depression need to be examined in future studies.

For their informational value as well as to provide guidance for future research, the results of the direct and interactive effects of psychosocial variables and the moderator relationships found prior to the Bonferroni correction were considered to be noteworthy of discussion.

The present study replicated the empirical literature on the relationships between depression and social support, life events and expressed emotion. Further, as was predicted and shown in previous studies (e.g., Schmidt, Schmidt, & Young, 1999), all of the examined cognitive schemas (EMSs); viz., abandonment, mistrust/abuse, social isolation, defectiveness, functional dependency/incompetence, self sacrifice, and insufficient self-control, were significantly related to depression.

As established in previous studies (Mazure, 1998), lower social support was predicted to increase the risk for depression in individuals experiencing high levels of stressful life events. Surprisingly, present findings did not support this prediction. A further prediction was that expressed emotion (EE) would interact with negative life events/losses in affecting levels of depression. Each of the three dimensions of EE describes negative responses of a significant family member to the individual under

stress. Given the relationship of stressors to depression, negative responses from an important family member were predicted to increase vulnerability to life stressors and, therefore, increase depression. Only the EE dimension of perceived irritability interacted with stressors to predict level of depression. Most of the research (e.g., Donat, 1996; Gerlsma & Hale, 1997) relating EE to depression has been done on clinical samples, and has focused on the relationship of EE to prognosis. Accordingly, it may be that higher levels of stress or depression are requisite before triggering responses of family intrusiveness or criticism, but not before triggering irritability. The fact that a college sample was used in the present study, many of whom were in the normal range of depression, may have mitigated against finding an interaction between EE, social support and stressful life events.

Results of interactions between social support and cognitive schemas in relation to depression were mixed. Contrary to predictions, results with regard to the moderator role of the EMSs in the relationship between social support and depression were inconsistent across the two measures; viz., the MSPSS and the SSBS. For example, only two of 28 interactions between cognitive schemas and social support, as measured by the SSBS, were significant. For the MSPSS, on the other hand, ten of 21 interactions with the EMSs were significant. For the two scales of the MSPSS likely to produce interactions with cognitive schemas, viz., family and friends subscales, nine of 14 interactions were significant. A possible explanation for the divergent findings was suggested by comparing the item content of both measures. Examination of the items of the MSPSS reveals a scale designed to measure the level of perceived support. The SSBS, on the other hand, examines social support by determining whether family

members and friends are expected to engage in behaviors that were defined as supportive by the authors of the scale. Hence, it may be that it is the perception of having supportive family or friends, not whether these individuals engage in supportive actions, that determines whether the effects of cognitive schemas on depression will be enhanced. Hence, future studies may want to consider the difference between measures of social support in examining moderator effects of the EMSs or any other vulnerability factors on depression.

Given the preponderance of interactions between cognitive schemas and the friends and family support scales of the MSPSS prior to Bonferroni correction, further attention was focused on the nature of these interactions. The most promising results were the moderator relationships between perceived social support from family and friends as measure by the MSPSS and the EMSs of self-sacrifice, functional dependence/incompetence, and abandonment. In contrast to the trend for interactions between certain cognitive schemas and social support, interactive effects between expressed emotion (EE) and EMSs were largely absent. For each of the three subdimensions of EE, viz., perceived intrusiveness, perceived irritability and perceived criticism, only one interaction with one of the cognitive schemas; viz., mistrust/abuse, defectiveness and abandonment, respectively, was found. Overall, there appeared to be a synchrony between the cognitive schemas and perceived social response that increased vulnerability to depression.

Taken together, given the absence of prior empirical evidence on the EMSs as moderators between psychosocial variables and depression, the present study provided some useful directions for future research to take, especially in examining the

independent role of cognitive schemas in depression relative to their interactions with measures of daily hassles and perceived social support. However, the results of the present study would have been statistically more powerful if a limited number of, hence, more specific, predictions were investigated. Based on the results of the present study, future studies should consider refinements in moderator hypotheses. A further improvement to the present study would have been the choice of measures used to examine psychosocial factors. It is a future research question awaiting to be answered whether selection of psychosocial factors more relevant to certain EMSs would produce expected interaction effects. For instance, while the expressed emotion construct has been fruitful in predictive research on depression, for the purposes of the present study, it may not have been the best measure to assess current family interactions. Furthermore, as there are other cognitive variables, such as coping skills and causal attributions (e.g., Jaenicke et al., 1987; Persons, & Rao, 1985), with established direct and interactive relationships to depression, future studies should compare the relative predictive value of these variables concomitantly with cognitive schemas.

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Table 1

Demographics of Participants

| Variable | N | % Percent | Cumulative Percent |
|-----------------------------------|-----|-----------|--------------------|
| Gender | | | |
| Male | 82 | 33.6 | 33.6 |
| Female | 162 | 66.4 | 100.0 |
| Age | | | |
| 18 | 102 | 41.8 | 41.8 |
| 19 | 80 | 32.8 | 74.6 |
| 20 | 28 | 11.5 | 86.1 |
| 21 | 21 | 8.6 | 94.7 |
| 22 | 8 | 3.3 | 98.0 |
| 23 | 3 | 1.2 | 99.2 |
| 24 | 2 | .8 | 100.0 |
| Ethnicity | | | |
| American Indian or Alaskan Native | 1 | .4 | .4 |
| Asian or Pacific Islander | 20 | 8.2 | 8.6 |
| African-American | 19 | 7.8 | 16.4 |
| Hispanic | 6 | 2.5 | 18.9 |
| Caucasian | 195 | 79.9 | 98.8 |
| Bi/Multicultural | 3 | 1.2 | 100 |

Table 1 (continued)

Demographics of Participants

| Variable | N | % Percent | Cumulative Percent |
|-----------------------|-----|-----------|--------------------|
| Grade | | | |
| 1 st year | 117 | 48.0 | 48.0 |
| 2 nd year | 78 | 32.0 | 79.9 |
| 3 rd year | 27 | 11.1 | 91 |
| 4 th year | 20 | 8.2 | 99.2 |
| 5 th year | 2 | .8 | 100 |
| Marital Status | | | |
| Single | 235 | 96.3 | 96.3 |
| Married | 0 | 0.0 | 96.3 |
| Cohabiting | 2 | .8 | 97.1 |
| Seperated | 0 | 0.0 | 97.1 |
| Divorced | 1 | .4 | 97.6 |
| Widowed | 0 | 0.0 | 97.6 |
| Other | 6 | 2.5 | 100 |

Table 2

Correlations among predictor and criterion variables

| <u>Variable</u> | AB | MA | SI | DS | DI | SS | IS | MFA | MFR | MOTH |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| MA | .64** | | | | | | | | | |
| SI | .57** | .62** | | | | | | | | |
| DS | .59** | .55** | .60** | | | | | | | |
| DI | .33** | .23** | .29** | .25** | | | | | | |
| SS | .36** | .42** | .36** | .28** | .29** | | | | | |
| IS | .55** | .46** | .37** | .39** | .29** | .35** | | | | |
| MFA | -.34** | -.24** | -.31** | -.28** | -.19** | -.13* | -.22** | | | |
| MFR | -.44** | -.30** | -.43** | -.42** | -.10 | -.23** | -.27** | .52** | | |
| MOTH | -.36** | -.23** | -.25** | -.32** | -.13* | -.15* | -.22** | .47** | .63** | |
| SSFR | -.30** | -.18** | -.31** | -.27** | -.14* | -.17** | -.21** | .29** | .59** | .48** |
| SSFA | -.28** | -.22** | -.32** | -.24** | -.26** | -.18** | -.23** | .69** | .39** | .40** |
| SEFR | -.22** | -.16** | -.22** | -.20** | -.07 | -.12 | -.18** | .23** | .55** | .43** |
| SEFA | -.33** | -.25** | -.35** | -.31** | -.30** | -.23** | -.29** | .65** | .40** | .36** |
| LINT | .14* | .11 | .10 | .17** | .10 | .09 | .12 | -.11 | -.14* | -.22** |
| LIRR | .21** | .16* | .16* | .13* | .17** | .16* | .18** | -.34** | -.24** | -.20** |
| LCT | .18** | .13** | .11 | .12 | .17** | .19** | .23** | -.34** | -.26** | -.28** |
| LES | .3** | .35** | .24** | .17* | .17** | .26** | .35** | -.18** | -.10 | -.17** |
| HSL | -.04 | -.05 | -.03 | -.03 | .09 | .05 | .06 | -.13* | .00 | .00 |
| BDI | .56** | .51** | .43** | .47** | .35** | .32** | .57** | -.29** | -.32** | -.30** |

Table 2 (continued)

Correlations among predictor and criterion variables

| <u>Variable</u> | SSFR | SSFA | SEFR | SEFA | LINT | LIRR | LCT | LES | HSL |
|-----------------|--------|--------|--------|--------|-------|-------|-------|-------|------|
| SSFA | .46** | | | | | | | | |
| SEFR | .68** | .27** | | | | | | | |
| SEFA | .42** | .85** | .31** | | | | | | |
| LINT | -.12 | -.12 | -.15* | -.16* | | | | | |
| LIRR | -.18** | -.31** | .21** | -.37** | .51** | | | | |
| LCT | -.26** | -.39** | -.24** | -.43** | .53** | .61** | | | |
| LES | -.1 | -.18** | -.07 | -.14* | .07 | .25** | .20** | | |
| HSL | .02 | -.01 | -.04 | -.1 | .09 | .22** | .22** | .04 | |
| BDI | -.26** | -.29** | -.21* | -.34** | .15** | .20** | .25** | .44** | -.02 |

Note. AB = abandonment; MA = mistrust/abuse; SI = social isolation; DS = defectiveness; DI = functional dependence/incompetence; SS = self-sacrifice; IS = insufficient self-control; MFA = family subscale of the multidimensional scale of perceived social support (MSPSS); MFR = friends subscale of the MSPSS; MOTH = others subscale of the MSPSS; SSFR = socializing-family subscale of the social support behaviors scale (SSBS); SSFA = socializing-friends subscale of the SSBS; SEFR = emotional –friends subscale of the SSBS; SEFA = emotional -family subscale of the SSBS; LINT = intrusion subscale of the LEE scale; LIRR = irritability subscale of the LEE scale; LCRT = criticism scale of the LEE scale; LES = significant negative life events; HSL = Hassles Scale; BDI = Beck Depression Inventory.

* $p < .05$. ** $p = .00$.

Table 3

Summary of Multiple Regression Analysis for the Interaction between LES and LIRR In Predicting Depression

| Variable | <u>B</u> | <u>SE B</u> | <u>β</u> |
|---------------|------------|-------------|----------|
| Step 1 | | | |
| LES | .47 | .07 | .41** |
| LIRR | .22 | .13 | .10 |
| Step 2 | | | |
| LES | .94 | .21 | .82** |
| LIRR | .53 | .19 | .24* |
| LESXLIRR | -4.042E-02 | .02 | -.48* |

Note. LIRR = intrusion subscale of the level of expressed Emotion (LEE) scale; LES = significant negative life events; LESXLIRR = interaction between LES and LIRR.

R² = .20 for Step 1; R² = .21 for Step 2 (ps = .000).

*p < .05. **p = .00.

Table 4

Beta coefficients for interactions between subscales of maladaptive cognitive schemas and psychosocial measures to the BDI

| | Cognitive Schemas | | | | | | | |
|------------------------------|-------------------|--------|--------|-------|-------|-------|-------|--|
| | AB | MA | SI | DS | DI | SS | IS | |
| <u>Psychosocial Measures</u> | | | | | | | | |
| SSFR | .07 | .06 | .15 | .13 | -.11 | -.28 | .02 | |
| SSFA | -.06 | .03 | .09 | .09 | -.13 | -.33* | .03 | |
| SEFR | .09 | .09 | .23 | .13 | -.12 | -.25 | -.00 | |
| SEFA | -.70* | -.25 | .03 | .09 | -.22 | -.61 | -.17 | |
| MFA | -.41* | -.22 | -.21 | -.10 | -.36* | -.76* | -.35 | |
| MFR | -.50* | -.49* | -.25 | -.23 | -.51* | -.77* | -.51* | |
| MOTH | -.24 | -.14 | -.04 | -.13 | -.33 | .72* | -.35 | |
| LINT | .22 | .50* | .32 | .17 | .17 | .16 | .23 | |
| LIRR | .11 | -.19 | -.05 | -.60* | .06 | .16 | -.02 | |
| LCRT | .34* | .29 | .27 | .10 | .28 | .31 | .16 | |
| LES | -.01 | -.10 | .10 | -.00 | .10 | .28* | -.02 | |
| HSL | .90** | 1.05** | 1.19** | .88** | N/A | N/A | N/A | |

Note. AB = abandonment; MA = mistrust/abuse; SI = social isolation; DS = defectiveness; DI = functional dependence/incompetence; SS = self-sacrifice; IS = insufficient self-control; MFA = family subscale of the multidimensional scale of perceived social support (MSPSS); MFR = friends subscale of the MSPSS; MOTH = others subscale of the MSPSS; SSFR = socializing – friends subscale of the social

support behaviors scale (SSBS); SSFA = socializing - family subscale of the SSBS;
SEFR = emotional- friends subscale of the SSBS; SEFA = emotional- family subscale of
the SSBS; LINT = intrusion subscale of the LEE scale; LIRR = irritability subscale of the
LEE scale; LCT = criticism scale of the LEE scale; LES = negative life events; HSL =
Hassles Scale; BDI = Beck Depression Inventory.

* $p < .05$. ** $p = .000$.

Table 5

BDI-II Scores for Low and High Levels of Hassles and the EMSs Based on MedianCutoff Scores

| Variable | Hassles | |
|------------------|---------|-------|
| | Low | High |
| Abandonment | | |
| Low | 5.28 | 6.27 |
| High | 9.25 | 15.76 |
| Mistrust/Abuse | | |
| Low | 5.05 | 9.53 |
| High | 8.65 | 14.47 |
| Social Isolation | | |
| Low | 5.68 | 10.19 |
| High | 9.75 | 16.91 |
| Defectiveness | | |
| Low | 5.50 | 10.95 |
| High | 11.82 | 16.54 |

Table 6

Summary of Forward Multiple Regression Analysis for Psychosocial Variables

Predicting Depression

| Variable | <u>B</u> | <u>SE B</u> | <u>β</u> |
|----------|----------|-------------|----------|
| Step 1 | | | |
| LES | .55 | .07 | .45** |
| Step 2 | | | |
| LES | .51 | .07 | .42** |
| SEFA | -.36 | .07 | -.29** |
| Step 3 | | | |
| LES | .49 | .07 | .42** |
| SEFA | -.26 | .08 | -.22** |
| MFR | -.30 | .10 | -.18** |

Note. LES = negative life events; SEFA = emotional - family social support subscale of the SSBS; MFR = friends subscale of the MSPSS.

R² = .20 for Step 1; R² = .28 for Step 2; R² = .30 for Step 3 (ps = .00).

**p = .00.

Table 7

Model Summary for LES, MFR, SEFA and EMS Subscales Predicting Depression

| Variable | <u>B</u> | <u>SE B</u> | <u>β</u> |
|----------|------------|-------------|----------|
| LES | .27 | .06 | .24*** |
| SEFA | -9.580E-02 | .07 | -.08 |
| MFR | -4.144E-02 | .09 | -.03 |
| AB | 1.55 | .56 | .18** |
| DS | 2.12 | .76 | .17** |
| DI | 1.55 | .72 | .11* |
| IS | 2.21 | .52 | .25*** |

Note. LES = negative life events; MFR = friends subscale of the MSPSS; SEFA = emotional – family social support subscale of the SSBS; AB = abandonment; DS = defectiveness; DI = functional dependence/incompetence; IS = insufficient self-control.

R² = .48 (p = .00).

*p < .05. **p < .01. ***p = .00.

Appendix A

Appendix A is a copy of the latest version of Young's Schema Questionnaire (YSQ-L2; 1994) developed by Jeffrey Young and Gary Brown. Due to copyright laws, this questionnaire is not being reproduced here.

Appendix B

MSPSS

We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement by circling the appropriate number using the following scale:

- 1 = Very strongly disagree
- 2 = Strongly disagree
- 3 = Mildly disagree
- 4 = Neutral
- 5 = Mildly agree
- 6 = Strongly agree
- 7 = Very strongly agree

- | | |
|---|---------------|
| 1. There is a special person who is around me when I am in need. | 1 2 3 4 5 6 7 |
| 2. There is a special person with whom I can share my joys and sorrows. | 1 2 3 4 5 6 7 |
| 3. My family really tries to help me. | 1 2 3 4 5 6 7 |
| 4. I get the emotional help and support I need from my family. | 1 2 3 4 5 6 7 |
| 5. I have a special person who is a real source of comfort for me. | 1 2 3 4 5 6 7 |
| 6. My friends really try to help me. | 1 2 3 4 5 6 7 |
| 7. I can count on my friends when things go wrong. | 1 2 3 4 5 6 7 |
| 8. I can talk about my problems with my family. | 1 2 3 4 5 6 7 |
| 9. I have friends with whom I can share my joys and sorrows. | 1 2 3 4 5 6 7 |
| 10. There is a special person in my life who cares about my feelings. | 1 2 3 4 5 6 7 |
| 11. My family is willing to help me make decisions. | 1 2 3 4 5 6 7 |
| 12. I can talk about my problems with my friends. | 1 2 3 4 5 6 7 |

Appendix C

SSBS

People help each other out in a lot of different ways. Suppose you had some kind of problem (were upset about something, needed help with a practical problem, were broke, or needed some advice or guidance), how likely would (a) members of your family, and (b) your friends be to help you out in each of the specific ways listed below. We realize you may rarely need this kind of help, but if you did, would family and friends help in the ways indicated. Try to base your answers on your past experience with these people. Use the scale below, and circle one number under family, and one under friends, in each row.

- 1 = No one would do this
- 2 = Someone might do this
- 3 = Some family member/friend would probably do this
- 4 = Some family member/friend would certainly do this
- 5 = Most family members/friends would certainly do this

| | (a) Family | (b) Friends |
|--|------------|-------------|
| 1. Would suggest doing something just to take my mind off my problems. | 1 2 3 4 5 | 1 2 3 4 5 |
| 2. Would visit with me, or invite me over. | 1 2 3 4 5 | 1 2 3 4 5 |
| 3. Would comfort me if I was upset. | 1 2 3 4 5 | 1 2 3 4 5 |
| 4. Would give me a ride if I needed one. | 1 2 3 4 5 | 1 2 3 4 5 |
| 5. Would have lunch or dinner with me. | 1 2 3 4 5 | 1 2 3 4 5 |
| 6. Would look after my belongings (pets, etc.) for a while. | 1 2 3 4 5 | 1 2 3 4 5 |
| 7. Would loan me a car if I needed one. | 1 2 3 4 5 | 1 2 3 4 5 |
| 8. Would joke around or suggest doing something to cheer me up. | 1 2 3 4 5 | 1 2 3 4 5 |
| 9. Would go to a movie or concert with me. | 1 2 3 4 5 | 1 2 3 4 5 |
| 10. Would suggest how I could find out more about a situation. | 1 2 3 4 5 | 1 2 3 4 5 |
| 11. Would help me out with a move or other big chore. | 1 2 3 4 5 | 1 2 3 4 5 |
| 12. Would listen if I need to talk about my feelings. | 1 2 3 4 5 | 1 2 3 4 5 |
| 13. Would have a good time with me. | 1 2 3 4 5 | 1 2 3 4 5 |
| 14. Would pay for lunch if I was broke. | 1 2 3 4 5 | 1 2 3 4 5 |
| 15. Would suggest a way I might do something. | 1 2 3 4 5 | 1 2 3 4 5 |
| 16. Would give me encouragement to do something differently. | 1 2 3 4 5 | 1 2 3 4 5 |
| 17. Would give me advice about what to do. | 1 2 3 4 5 | 1 2 3 4 5 |
| 18. Would chat with me. | 1 2 3 4 5 | 1 2 3 4 5 |
| 19. Would help me figure out what I wanted to do. | 1 2 3 4 5 | 1 2 3 4 5 |
| 20. Would show me that they understood how I was feeling. | 1 2 3 4 5 | 1 2 3 4 5 |
| 21. Would buy me a drink if I was short of money. | 1 2 3 4 5 | 1 2 3 4 5 |
| 22. Would help me decide what to do. | 1 2 3 4 5 | 1 2 3 4 5 |
| 23. Would give me a hug, or otherwise show me I was cared about. | 1 2 3 4 5 | 1 2 3 4 5 |

- | | | |
|--|-----------|-----------|
| 24. Would call me just to see how I was doing. | 1 2 3 4 5 | 1 2 3 4 5 |
| 25. Would help me to figure out what was going on. | 1 2 3 4 5 | 1 2 3 4 5 |
| 26. Would help me out with some necessary purchase. | 1 2 3 4 5 | 1 2 3 4 5 |
| 27. Would not pass judgement on me. | 1 2 3 4 5 | 1 2 3 4 5 |
| 28. Would tell me who to talk to for help. | 1 2 3 4 5 | 1 2 3 4 5 |
| 29. Would loan me money for an indefinite period. | 1 2 3 4 5 | 1 2 3 4 5 |
| 30. Would be sympathetic if I was upset. | 1 2 3 4 5 | 1 2 3 4 5 |
| 31. Would stick by me in a crunch. | 1 2 3 4 5 | 1 2 3 4 5 |
| 32. Would buy me clothes if I was short of money. | 1 2 3 4 5 | 1 2 3 4 5 |
| 33. Would tell me about the available choices and options. | 1 2 3 4 5 | 1 2 3 4 5 |
| 34. Would loan me tools, equipment, or appliances if I needed them. | 1 2 3 4 5 | 1 2 3 4 5 |
| 35. Would give me reasons why I should or should not do something. | 1 2 3 4 5 | 1 2 3 4 5 |
| 36. Would show affection to me. | 1 2 3 4 5 | 1 2 3 4 5 |
| 37. Would show me how to do something I didn't know how to do. | 1 2 3 4 5 | 1 2 3 4 5 |
| 38. Would bring me little presents of things I needed. | 1 2 3 4 5 | 1 2 3 4 5 |
| 39. Would tell me the best way to get something done. | 1 2 3 4 5 | 1 2 3 4 5 |
| 40. Would talk to other people, to arrange something for me. | 1 2 3 4 5 | 1 2 3 4 5 |
| 41. Would loan me money and want to "forget about it". | 1 2 3 4 5 | 1 2 3 4 5 |
| 42. Would tell me what to do. | 1 2 3 4 5 | 1 2 3 4 5 |
| 43. Would offer me a place to stay for a while. | 1 2 3 4 5 | 1 2 3 4 5 |
| 44. Would help me think about a problem. | 1 2 3 4 5 | 1 2 3 4 5 |
| 45. Would loan me a fairly large sum of money (say the equivalent of a month's rent of mortgage). | 1 2 3 4 5 | 1 2 3 4 5 |

Appendix D

LEE SCALE

The following are a number of statements that describe the ways in which someone may act towards you. Please indicate whether the most influential parent (father/mother) or caretaker in your life has acted in these ways during the past 3 months.

untrue more or more or true
 less less
 untrue true

1. Calms me down when I'm upset.
2. Is tolerant with me, even when I'm not meeting his/her expectations.
3. Is sympathetic towards me when I'm ill or upset.
4. Can see my point of view.
5. Is always interfering.
6. Can't think straight when things go wrong.
7. Will help me when I'm upset.
8. Makes me feel valuable as a person.
9. Knows how to handle my feelings when I am unwell.
10. Understands my limitations.
11. Often checks up on me to see what I'm doing.
12. Is able to be in control in stressful situations.
13. Tries to make me feel better when I'm ill.

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untrue more or more or true
 less less
 untrue true

31. Gets irritated when things don't go right.

32. Tries to reassure me when I'm not feeling well.

33. Expects the same level of effort from me, even if I don't feel well.

34. Is critical of me.

35. Tries to change me.

36. Gets annoyed when I want something from him/her.

37. Usually agrees with me.

38. Shows me he/she loves me.

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Appendix E

Life Experiences Survey

Listed below are a number of events which sometimes bring about change in the lives of those who experience them and which necessitate social readjustment. Please check those events which you have experienced in the past year. Be sure that all checkmarks are directly across from the items to which they correspond.

Also, for each of the items listed below, please indicate the extent to which you viewed the event as having either a positive or negative impact on your life at the time the event occurred. That is, indicate the type and extent of impact the event had. A rating of -3 would indicate that the event had an extremely negative impact, a rating of 0 a neutral impact and a + 3 would indicate an extremely positive impact.

| | Rating | | | | | | |
|---|--------|----|----|---|---|---|---|
| 1. Marriage | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 2. Detention in jail or comparable instructions | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 3. Death of a spouse | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 4. Major change in sleeping habits | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 5. Death of a close family member: | | | | | | | |
| a. Mother | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| b. Father | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| c. Brother | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| d. Sister | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| e. Grandmother | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| f. Grandfather | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| g. Other | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 6. Major change in eating habits | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 7. Foreclosure on mortgage or loan | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 8. Death of close friend | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 9. Outstanding personal achievement | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 10. Minor law violation | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 11. Male: wife/girlfriend' pregnancy | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 12. Female: pregnancy | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 13. Changed work situation | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 14. New job | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 15. Serious illness or injury of close family member: | | | | | | | |
| a. Mother | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| b. Father | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| c. Brother | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| d. Sister | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| e. Grandmother | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| f. Grandfather | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| g. Spouse | -3 | -2 | -1 | 0 | 1 | 2 | 3 |

| | | | | | | | |
|--|----|----|----|---|---|---|---|
| h. Other | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 16. Sexual difficulties | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 17. Trouble with employer | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 18. Trouble with inlaws | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 19. Major change in financial status | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 20. Major change in closeness of family member | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 21. Gaining a new family member | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 22. Change of residence | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 23. Marital separation | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 24. Major change in church activities | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 25. Marital reconciliation | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 26. Major change in number of arguments with spouse | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 27. Married male: change in wife's work outside home | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 28. Married female: change in husband's work | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 29. Major change in recreation | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 30. Borrowing more than \$10,000 | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 31. Borrowing less than \$10,000 | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 32. Being fired from a job | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 33. Male: wife/girlfriend having an abortion | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 34. Female: having an abortion | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 35. Major personal illness or injury | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 36. Major change in social activities | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 37. Mjor change in living conditions of family | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 38. Divorce | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 39. Serious injury or illness of a close friend | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 40. Retirement | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 41. Son or daughter leaving home | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 42. Ending of formal spouse | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 43. Seperation from a spouse | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 44. Engagement | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 45. Breaking up with boyfriend/girlfriend | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 46. Leaving home for the first time | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 47. Reconciliation with boyfriend/girlfriend | -3 | -2 | -1 | 0 | 1 | 2 | 3 |

List other recent experiences which have had an impact on your life:

| | | | | | | | |
|-----------|----|----|----|---|---|---|---|
| 48. _____ | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 49. _____ | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| 50. _____ | -3 | -2 | -1 | 0 | 1 | 2 | 3 |

Appendix F

The Hassles Scale

Directions: Hassles are irritants that can range from minor annoyance to fairly major pressures, problems, or difficulties. They can occur few or many times.

Listed below are a number of ways in which a person can feel hassled. First, circle the hassles that have happened to you in the past month. Then look at the numbers on the right of the items you circled. Indicate by circling a 1, 2, or 3 how SEVERE each of the circled hassles had been for you in the past month. If a hassle did not occur in the last month do NOT circle it.

SEVERITY

1 = somewhat severe

2 = moderately severe

3 = extremely severe

HASSLES

| | | | |
|---|---|---|---|
| 1) Misplacing or losing things | 1 | 2 | 3 |
| 2) Troublesome neighbors | 1 | 2 | 3 |
| 3) Social obligations | 1 | 2 | 3 |
| 4) Inconsiderate smokers | 1 | 2 | 3 |
| 5) Troubling thoughts about your future | 1 | 2 | 3 |
| 6) Thoughts about death | 1 | 2 | 3 |
| 7) Health of a family member | 1 | 2 | 3 |
| 8) Not enough money for clothing | 1 | 2 | 3 |
| 9) Not enough money for housing | 1 | 2 | 3 |
| 10) Concerns about owing money | 1 | 2 | 3 |
| 11) Concerns about getting credit | 1 | 2 | 3 |
| 12) Concerns about money for emergencies | 1 | 2 | 3 |
| 13) Someone owes you money | 1 | 2 | 3 |
| 14) Financial responsibilities for someone who does'nt live with you | 1 | 2 | 3 |
| 15) Cutting down on electricity, water, etc. | 1 | 2 | 3 |
| 16) Smoking too much | 1 | 2 | 3 |
| 17) Use of alcohol | 1 | 2 | 3 |

SEVERITY

1 = somewhat severe

2 = moderately severe

3 = extremely severe

| | | | |
|---|---|---|---|
| 18) Personal use of drugs | 1 | 2 | 3 |
| 19) Too many responsibilities | 1 | 2 | 3 |
| 20) Decisions about having children | 1 | 2 | 3 |
| 21) Non-family members living in your home | 1 | 2 | 3 |
| 22) Care for pet | 1 | 2 | 3 |
| 23) Planning meals | 1 | 2 | 3 |
| 24) Concerned about the meaning of life | 1 | 2 | 3 |
| 25) Trouble relaxing | 1 | 2 | 3 |
| 26) Trouble making decisions | 1 | 2 | 3 |
| 27) Problems getting along with fellow workers | 1 | 2 | 3 |
| 28) Customers or clients give you a hard time | 1 | 2 | 3 |
| 29) Home maintenance (inside) | 1 | 2 | 3 |
| 30) Concerns about job security | 1 | 2 | 3 |
| 31) Concerns about retirement | 1 | 2 | 3 |
| 32) Laid-off or out of work | 1 | 2 | 3 |
| 33) Don't like current work duties | 1 | 2 | 3 |
| 34) Don't like fellow workers | 1 | 2 | 3 |
| 35) Not enough money for basic necessities | 1 | 2 | 3 |
| 36) Not enough money for food | 1 | 2 | 3 |
| 37) Too many interruptions | 1 | 2 | 3 |
| 38) Unexpected company | 1 | 2 | 3 |
| 39) Too much time on hands | 1 | 2 | 3 |
| 40) Having to wait | 1 | 2 | 3 |
| 41) Concerns about accidents | 1 | 2 | 3 |

SEVERITY

1 = somewhat severe

2 = moderately severe

3 = extremely severe

| | | | |
|--|---|---|---|
| 42) Being lonely | 1 | 2 | 3 |
| 43) Not enough money for health care | 1 | 2 | 3 |
| 44) Fear of confrontation | 1 | 2 | 3 |
| 45) Financial security | 1 | 2 | 3 |
| 46) Silly practical mistakes | 1 | 2 | 3 |
| 47) Inability to express yourself | 1 | 2 | 3 |
| 48) Physical illness | 1 | 2 | 3 |
| 49) Side effects of medication | 1 | 2 | 3 |
| 50) Concerns about medical treatment | 1 | 2 | 3 |
| 51) Physical appearance | 1 | 2 | 3 |
| 52) Fear of rejection | 1 | 2 | 3 |
| 53) Difficulties with getting pregnant | 1 | 2 | 3 |
| 54) Sexual problems that result from physical problems | 1 | 2 | 3 |
| 55) Sexual problems other than those resulting from physical problems | 1 | 2 | 3 |
| 56) Concerns about health in general | 1 | 2 | 3 |
| 57) Not seeing enough people | 1 | 2 | 3 |
| 58) Friends or relatives too far away | 1 | 2 | 3 |
| 59) Preparing meals | 1 | 2 | 3 |
| 60) Wating time | 1 | 2 | 3 |
| 61) Auto maintenance | 1 | 2 | 3 |
| 62) Filling out forms | 1 | 2 | 3 |
| 63) Neighborhood deterioration | 1 | 2 | 3 |
| 64) Financing children's education | 1 | 2 | 3 |
| 65) Problems with employees | 1 | 2 | 3 |

SEVERITY

1 = somewhat severe

2 = moderately severe

3 = extremely severe

| | | | |
|---|---|---|---|
| 66) Problems on job due to being a woman or a man | 1 | 2 | 3 |
| 67) Declining physical abilities | 1 | 2 | 3 |
| 68) Being exploited | 1 | 2 | 3 |
| 69) Concerns about bodily functions | 1 | 2 | 3 |
| 70) Rising prices of common goods | 1 | 2 | 3 |
| 71) Not getting enough rest | 1 | 2 | 3 |
| 72) Not getting enough sleep | 1 | 2 | 3 |
| 73) Problems with aging parents | 1 | 2 | 3 |
| 74) Problems with your children | 1 | 2 | 3 |
| 75) Problems with persons younger than yourself | 1 | 2 | 3 |
| 76) Problems with your lover | 1 | 2 | 3 |
| 77) Difficulties seeing or hearing | 1 | 2 | 3 |
| 78) Overloaded with family responsibilities | 1 | 2 | 3 |
| 79) Too many things to do | 1 | 2 | 3 |
| 80) Unchallenging work | 1 | 2 | 3 |
| 81) Concerns about meeting high standards | 1 | 2 | 3 |
| 82) Financial dealings with friends or acquaintances | 1 | 2 | 3 |
| 83) Job dissatisfaction | 1 | 2 | 3 |
| 84) Worries about decisions to change jobs | 1 | 2 | 3 |
| 85) Trouble with reading, writing, or spelling abilities | 1 | 2 | 3 |
| 86) Too many meetings | 1 | 2 | 3 |
| 87) Problems with divorce and separation | 1 | 2 | 3 |
| 88) Trouble with arithmetic skills | 1 | 2 | 3 |

SEVERITY

1 = somewhat severe
 2 = moderately severe
 3 = extremely severe

| | | | |
|---|---|---|---|
| 89) Gossip | 1 | 2 | 3 |
| 90) Legal problems | 1 | 2 | 3 |
| 91) Concerns about weight | 1 | 2 | 3 |
| 92) Not enough time to do the things you need to do | 1 | 2 | 3 |
| 93) Television | 1 | 2 | 3 |
| 94) Not enough personal space | 1 | 2 | 3 |
| 95) Cocerns about inner conflicts | 1 | 2 | 3 |
| 96) Feel conflicted over what to do | 1 | 2 | 3 |
| 97) Regrets over past decisions | 1 | 2 | 3 |
| 98) Menstrual (period) problems | 1 | 2 | 3 |
| 99) The weather | 1 | 2 | 3 |
| 100) Nightmares | 1 | 2 | 3 |
| 101) Concerns about getting ahead | 1 | 2 | 3 |
| 102) Hassles from boss or supervisor | 1 | 2 | 3 |
| 103) Difficulties with friends | 1 | 2 | 3 |
| 104) Not enough time for family | 1 | 2 | 3 |
| 105) Transportation problems | 1 | 2 | 3 |
| 106) Not enough money for transportation | 1 | 2 | 3 |
| 107) Not enough money for entertainment and recreation | 1 | 2 | 3 |
| 108) Shopping | 1 | 2 | 3 |
| 109) Prejudice and discrimination from others | 1 | 2 | 3 |
| 110) Property, investments or taxes | 1 | 2 | 3 |
| 111) Not enough time for entertainment and recreation | 1 | 2 | 3 |

SEVERITY

1 = somewhat severe
2 = moderately severe
3 = extremely severe

| | | | |
|--|---|---|---|
| 112) Yardwork or outside home maintenance | 1 | 2 | 3 |
| 113) Concerns about news events | 1 | 2 | 3 |
| 114) Noises | 1 | 2 | 3 |
| 115) Crime | 1 | 2 | 3 |
| 116) Traffic | 1 | 2 | 3 |
| 117) Pollution | 1 | 2 | 3 |

HAVE WE MISSED ANY OF YOUR
HASSLES? IF SO,
WRITE THEM IN BELOW:

118) _____ 1 2 3

ONE MORE THING: HAS THERE BEEN A CHANGE IN YOUR LIFE THAT
AFFECTED HOW YOU ANSWERED THIS SCALE?
IF SO, TELL US WHAT IT WAS:

Appendix G

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Informed Consent for Participants of Investigative Projects

Title of Project: Psychosocial factors, maladaptive cognitive schemas and depression in young adults: An Integration

Investigators: George A. Clum, Ph.D., & Banu Cankaya.

I. The Purpose of this Research/Project:

Our social environment and our cognitions play important roles in determining our mood. The present study investigates whether these factors, viz. our social environment, life stresses, and our thoughts about ourselves, interact to affect mood.

There will be two sessions, three months apart from each other. The first phase investigates the relationships of social factors and thoughts to moods. The second phase, conducted approximately 12 weeks later, evaluates whether these same factors account for any change in mood experienced during that time.

II. Procedures:

As stated above the study involves two sessions. Each session will involve completing questionnaires in paper-pencil format, and will take approximately two hours.

If I agree to participate I will be required to complete the set of questionnaires in small groups of approximately 20 students. Before taking the questionnaires, I will be required to read the Informed Consent form where I will be informed about the nature of the study. My signature will confirm my voluntary participation. I will then be given a package of questionnaires, where I will be required to think and report about my relationships with my friends and my parents, the life stresses I have gone through during the last year, and how I have been feeling during the last week. Further, I will be instructed to carefully attend to the procedures before responding to each questionnaire, and will be required to fill out each questionnaire as carefully and completely as possible.

III. Risks:

I realize that I may experience fatigue or psychological distress during the completion of the questionnaires. The fatigue may be a result of the length of the questionnaires and the distress may be caused by questions that will remind me of past stressors, negative moods and negative interpersonal events.

IV. Benefits of this Project:

I will receive two (2) extra credit points for my participation in each of the sessions. A further benefit of the study may involve obtaining information about

the relationship between my social environment, my thoughts about myself, and my mood. The study will also contribute to the field of psychology in terms of its theoretical implications for the role of social and cognitive factors in mood.

V. Extent of Anonymity and Confidentiality:

The last four digits of my social security number will serve as my identification number throughout the study. The identification number will be used for purposes of data analysis, where my responses to the questionnaires at the first session will be compared with my responses to the questionnaires at the second session. My name will not appear on any form other than the consent form. My consent form will be placed in a locked file drawer and kept separate from the research forms. No other identifying information about myself will appear on the questionnaires.

If my responses indicate a moderate or higher level of suicide ideation, or a high level of depression, I understand that the head investigator, namely, Banu Cankaya, or the faculty supervisor, George A. Clum, has the obligation to contact me, and conduct a further evaluation in which the following things will be assessed: (1) intention to commit suicide, and (2) a plan to carry out the suicide. If either or both of these conditions are present, the head investigator or the faculty supervisor will take action to arrange an appointment for me to see a mental health professional. If I am currently seeing a mental health professional I or the investigators will call to ensure they are aware of my suicidal intent. If I am depressed but have no suicidal intent or if I have suicidal ideation but no intent I will be given phone numbers of mental health agencies, and will be strongly encouraged to contact them.

The researcher will be performing the data collection and data analyses. All the questionnaires, consent forms, and relevant back-up devices, such as floppy-disks, will be stored in locked file drawers. In addition to the researcher, the research advisor, Dr. George A. Clum, will have access to the data.

VI. Compensation:

I may earn two extra credit points in the designated course for participating in each session of the study, which adds up to four (4) extra credit points if I participate in both parts of the study. If I elect to participate only in the first session of the study, I understand that I will earn 2 extra-credit points. I also understand that I will be provided by the instructor of the designated course with alternate ways to earn extra credit points apart from participating in this study.

If after the participation in this research project, I feel upset because of any reasons related to the session, I understand that I may contact the following people for assistance:

| | |
|--------------------------------|--------------|
| David M. Moore, DVM, IRB Chair | 540-231-4991 |
| David W. Harrison, Ph.D. | 540-231-4422 |
| George A. Clum, Ph.D. | 540-231-5701 |

The Psychological Services Center 540-231-6914
The Cook Counseling Center 540-231-6567

VII. Freedom to Withdraw:

I am free to withdraw from the study at any time without penalty. I am also free to not answer any questions I choose without penalty, including the reduction of the extra credit points or grade in the designated course.

VIII. Approval of Research:

This project has been approved by the Human Subjects Committee of the Department of Psychology and by the Institutional Review Board of Virginia Tech.

IX. Participant's Responsibilities:

I voluntarily agree to participate in this study. I have the following responsibilities:

1. I will be present at the time I have scheduled to participate.
2. I will carefully read and follow all the instructions of each questionnaire.
3. I will give my best effort to truthfully and completely answer all questions.
4. I will not discuss the project with other potential participants.

X. Participant's Permission:

I have read and understand the Informed Consent and conditions of this project. I have been given the opportunity to ask questions and have them all answered. I hereby acknowledge the above and give my voluntary consent for participation in this project. I understand that if I participate, I may withdraw at any time without penalty. I agree to abide by the rules of this project. I further understand that I must be given a complete copy or duplicate of the signed Informed Consent form.

Participant's Signature

Date

Appendix H

Experiment # 01-388

| | |
|-------------------------|--|
| Last 4 Digits of SS # : | |
| Gender: | M / F |
| Age: | |
| Ethnicity: | American Indian or Alaskan Native / Asian or Pacific Islander/ African-American / Hispanic / Caucasian / Bi/Multicultural (specify) _____ |
| Grade level: | 1 st year / 2 nd year / 3 rd year / 4 th year / 5 th year |
| Marital Status: | Single / Married / Cohabiting / Seperated / Divorced Widowed / Other (specify) _____ |

General Guideline:

The present package includes 8 questionnaires examining your cognitions, social environment, and emotions. It will take you approximately 1 hour to fill out the questionnaires.

Please do not write your name on the questionnaires, rather, write the last 4 digits of your SS # at the top of each page (for precaution against any misplacement). Please pay attention to the instructions of each questionnaire, and try to fill them out as completely and correctly as you can.

If you have any questions, do not hesitate to ask the examiner, Banu Cankaya.

Thanks a lot for your participation.

CURRICULUM VITAE

Banu Cankaya

Home Address: 406 Winston Ave.
Blacksburg, VA 24060
E-Mail Address: bcankaya@vt.edu
Telephone: 540-951-1372
Date of Birth: Dec 20, 1976
Place of Birth: Istanbul, Turkey

EDUCATION:

Virginia Polytechnic Institute and State University, Blacksburg, VA
M.S. in Clinical Psychology May 2002; Q.C.A. = 3.62/4.00
University of Illinois at Urbana-Champaign, IL
Exchange student, Department of Psychology, August 1998- May 1999
Bogazici University, Istanbul, Turkey
B.S. in Psychology with high honors awarded August 1999; GPA = 3.72/4.00;
Ranking: 2nd amongst 54 graduating psychology students

RESEARCH EXPERIENCE:

Thesis project; Psychosocial Factors, Early Maladaptive Schemas, and Levels of Depression in Young Adults: An Integration,
VA Tech, Blacksburg, VA, January 2001- May 2002.
Research Advisor: George A. Clum, Ph.D.

Literature Review Article on the Scales of the Concept of Expressed Emotion,
VA Tech, August 2000- October 2001.
Status: Submitted for publication as the first author in Journal of Psychopathology and Behavioral Assessment, October 2001.
Research Advisor: George A. Clum.

Study on Couple's Communication Strategies During Receiving and Delivering Criticisms,
University of Illinois at Urbana-Champaign, IL, February 1999- May 1999.
Duties: participation in the evaluation of a new coding system, coding videotapes of problem-solving sessions for Kelly Flanagan, senior student, 9 hours weekly.
Research Advisor: James V. Cordova, Ph.D.

Study on Schizophrenia,
University of Illinois at Urbana-Champaign, IL, August 1998- Dec 1998.
Duties: carrying out experiments, administering questionnaires, data analyses for John Kerns, fellow graduate student, 6 hours weekly.
Research Advisor: Howard Berenbaum, Ph.D.

Study on Perception of Intimacy in Turkish Culture,
Independent group project, Bogazici University, Istanbul, Turkey, February 1998- June 1998.
Duties: literature review, data analyses using SPSS-PC, writing the results in APA-format, presentation of results.

Research Advisor: Brenda D. Townes, Ph.D.

Study on Hemispheric Differences Concerning Emotional States,
Independent group project, Bogazici University, Istanbul, Turkey, February 1998-
June 1998.

Duties: carrying out experiments, literature review, data analyses using SPSS-PC,
writing the results in APA-format.

Research Advisor: Resit Canbeyli, Ph.D.

CLINICAL EXPERIENCE:

Voluntary Work: Kuzguncuk Health Center, Istanbul, December 1999- February 2000.

Duties: participating in the consultation services of earthquake survivors.

Supervisor: Ahmet Arzik, M.D., 3 hours weekly.

Voluntary Work: Marmara University Medical School Hospital, Istanbul, Turkey,
September 1999- February 2000.

Duties: participating in the meetings of health professionals and patients in physical
therapy inpatient unit, and oncology unit in consultation with psychiatrists.

Supervisor: Ahmet Arzik, M.D., 3 hours weekly.

Voluntary Work: Psychiatry Inpatient Unit, Marmara University Medical School
Hospital, Istanbul, Turkey, June 1997- August 1997.

Duties: working with nurses in the psychiatry inpatient unit, participating in case
discussions, observing couple, family, and group therapies.

Supervisor: Ahmet Arzik, M.D., 3 hours weekly.

CLINICAL EDUCATION:

Clinical Practicum: VA Tech Psychological Services Center, Blacksburg, VA, August
2001- May 2002.

88 hours of face to face contact with clients,

Supervisor: Lee D. Cooper, Ph.D., 2.5 hours weekly group meetings, 1 hour weekly
individual supervision.

Clinical Practicum: VA Tech Psychological Services Center, Blacksburg, VA, August
2000- May 2001.

6 hours of face-to-face contact with a client.

Supervisor: George A. Clum, Ph.D., 3 hours weekly group meetings.

Training Program: Couple and Family Therapy, Psycho-Med Center, Istanbul,
October 1999- May 2000. Supervisor: Nusin Sarimurat Baydemir, M.D., 2 hours
weekly.

Workshop: "Cognitive Behavioral Therapy for Bulimia Nervosa" by C. G.

Fairburn, M.D., 4. International Bakirkoy Congress, Istanbul, Turkey, 1999.

Workshop: "Eating Disorders: Theory and Therapy" by Peter Slade, Ph.D., Bogazici
University, Istanbul, Turkey, 1997.

TEACHING EXPERIENCE:

Graduate Teaching Assistant: VA Tech, Blacksburg, VA,

Assisting the graduate coordinator of the Introduction to Psychology class, 12 hours a
week, August 2000- December 2000

Teaching two recitation classes for Intro To Psych class (75 students), 2 hours a week, 12 hours of work a week in total, January 2001- May 2001

CLINICAL ASSESSMENT EXPERIENCE:

Graduate Teaching Assistant: VA Tech, Blacksburg, VA, August 2001- May 2002,

Conducting adult psycho-educational assessment, scoring and report writing using the following assessment tools for the diagnosis of Learning Disability and Attention-Deficit/Hyperactivity Disorder: WAIS-III, WJ-III, and WMS-III; computerized tests; viz., CPT-II and PASAT; self-report measures; viz., SCL-90-R, CAARS-O, CAARS-S, WPRS and WURS; interview; viz., RSCI.

12 hours a week, a total of 12 clients,

Faculty Supervisor: Lee D. Cooper, Ph.D., 1 hour group supervision weekly.

PROFESSIONAL AFFILIATIONS:

Turkish Psychological Association: 1999-present, Student Affiliate.

COMPUTER SKILLS:

Proficient in SPSS-PC, Microsoft Word, Microsoft Excel, Internet Applications

Banu Cankaya