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**Gender Differences in the Relationship Between Self-Schema and
Interpersonal Schema in Adolescent Depression**

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**Gender Differences in the Relationship Between Self-Schema and
Interpersonal Schema in Adolescent Depression**

by

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Dedication

This is dedicated to my husband, Eric.

Thank you for your endless support, encouragement, and love throughout this process. Having you behind me gave me the strength to move forward.

I would also like to thank my parents and sister, who have always believed in me.

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**Gender Differences in the Relationship Between Self-Schema and
Interpersonal Schema in Adolescent Depression**

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Michelle Bronik Natinsky, Ph.D.

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Based on Beck's (1967, 1979) cognitive theory of depression and the constructs of self-schema and interpersonal schema, this study examined the relationships among self-schema, interpersonal schema, and depressive symptomatology in a clinical and control sample of adolescents. Gender differences were investigated as well. Participants for this study were 59 youngsters, ages 11 to 18, who were receiving psychological services in a residential treatment facility in Texas ($n = 35$) or were nonpsychiatric adolescents from local public schools ($n = 24$). Participants completed a semi-structured diagnostic interview (K-SADS-EP) and the Thematic Apperception Test (TAT). Depression was assessed by the diagnostic interview. Self-schema and interpersonal schema were assessed through verbal transcript coding of the TAT.

Results indicated that, while there was no significant difference between genders for self-schema, there were significant differences between the depressed and nondepressed groups on self-schema. The depressed adolescents had significantly more negative self-schema than nondepressed adolescents. Results indicated no significant interaction between gender and diagnostic group for self-schema.

Results revealed that there were no significant differences between genders or diagnostic groups for interpersonal schema. Results indicated no significant interaction between gender and diagnostic group for interpersonal schema.

Lastly, the investigation examined whether the constructs of self-schema and interpersonal schema are more highly correlated for girls than for boys. Results indicated that self-schema and interpersonal schema were not significantly correlated for boys or for girls. In addition, there was not a significant difference between the girls' and boys' correlations between self- and interpersonal schema.

As the interpersonal schema coding system was created for the purposes of this investigation, it had not been used in prior studies. Despite the advantages of using verbal coding in order to avoid social desirability in responses, further research is needed regarding the coding system's ability to measure interpersonal schema. This study was considered a step in understanding the relationship between self-schema, interpersonal schema, and depressive symptomatology in an adolescent population. Implications of these results are discussed, and directions for future research are offered.

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CHAPTER 1: INTRODUCTION

Depression is one of the most common mental disorders. Empirical studies have found rates of adolescent depression ranging from 2.9% to 8% (Lewinsohn, Hops, Roberts, Seeley, & Andrews, 1993; Rohde, Lewinsohn, & Seeley, 1991). Adolescents experience the same symptoms associated with adult depression (Puig-Antich, 1986), and these symptoms may lead to cognitive, family, and interpersonal impairments (Hammen & Rudolph, 1996). Once an individual has experienced a significant depressive episode, he or she is at a substantially increased risk for a recurrence in the future (Lewinsohn, Rohde, Seeley, & Hops, 1991). The evidence suggests that individuals who experience significant depression during adolescence are unlikely to experience a complete turnaround, because they are at high risk for experiencing a recurrence during adulthood (Harrington, Fudge, Rutter, & Pickles, 1990). More often than not, depressed adolescents experience comorbid symptoms of other psychological disorders, such as conduct problems, anxiety disorders, learning disabilities, substance abuse, eating disorders and other psychopathological symptoms (Cantwell & Baker, 1991; Compas & Hammen, 1994; Kandel, Ravies, & Davies, 1991). Assessment of depression is usually accomplished with self-report measures or diagnostic clinical interviews. Clinical interviews are preferable because they are more sensitive to the different depressive diagnoses as well more effective in determining possible comorbid disorders.

One of the most fascinating features of adolescent depression is the emergence of distinct gender differences in rates of depressive disorders. The

principal finding of higher rates of depressive symptoms and diagnoses in adolescent girls is well established (e.g., Hankin et al., 1998; Lewinsohn, Hops, et al., 1993; McGee, Feehan, Williams, & Anderson, 1992; Nolen-Hoeksema, Girgus, & Seligman, 1991; Petersen, Sarigiani, & Kennedy, 1991; Reinherz, Giaconia, Lefkowitz, Pakiz, & Frost, 1993; see review by Nolen-Hoeksema & Girgus, 1994). Although there are conflicting findings regarding the exact age at which the girls' rates increase, most studies conclude that it is in early to middle adolescence.

Nolen-Hoeksema and Girgus (1994) present three developmental models to explain how these gender differences in childhood and adolescent depression might emerge. However, before evaluating the gender difference literature, it is necessary to be familiar with the various models of etiologies of depression. The following theories and risk factors are discussed: genetic, psychophysiological, psychoanalytic, behavioral, cognitive (i.e., self-control theory, problem-solving theory, learned helplessness/reformulated learned helplessness theory), and social/societal. After the literature regarding gender differences in adolescent depression is placed within the aforementioned models of depression, the evidence is matched again to Nolen-Hoeksema and Girgus's (1994) three developmental models. Their third model, which is similar to a stress-diathesis model, is overwhelmingly supported by the available literature to date.

While there are many theories regarding the etiology and maintenance of depression, the one that is most applicable to this investigation is A. Beck's cognitive theory. A. Beck (1967) hypothesized that our emotions and behaviors are influenced

by our perception of events. The theory asserted that it is not simply a situation in and of itself that determines our feelings but rather the way in which we construe and interpret the situation. A. Beck's early theory contained three central concepts that explain the psychological foundation of depression: schemas, the negative cognitive triad, and cognitive errors or faulty information processing (A. Beck, 1967; A. Beck, Rush, Shaw, & Emery, 1979; Clark, Beck, & Alford, 1999). The theory posits that these views of self, world, and future, known as the negative cognitive triad, are related to depression. In particular, the self-view, or self-schema, influences and is related to information processing. A. Beck et al. (1979) proposed that negative schemas and negatively biased information processing errors comprise a depressogenic cognitive style.

Cognitive theory originally focused on schemas at the individual level, however, there are indications of connections between schemas and early relationships. A. Beck and colleagues hypothesized that early experiences, particularly within a familial context, lead to the development of cognitive patterns associated with depression (A. Beck, et al., 1979). More recently, Clark et al. (1999) emphasized the related interpersonal challenges of a depressive cognitive style. While self-schema has received tremendous attention in the literature, interpersonal schema is a slightly newer concept to the field.

It is proposed that interpersonal schema, like internal working models of attachment, refer to the expectations one has about others' probable responses to the self (Shirk, 1998). These schemas symbolize the predictability of relational patterns

that enable individuals to anticipate others' responses to their own behavior, specifically maintaining relatedness to them (Baldwin, 1992; Safran, 1990a).

Cummings and Davies (1999) theorize that children's views of parental, familial, and personal relationships, in particular those with interrupted emotional security, accrue to fashion a schema with significant implications for long-term adjustment. These interpersonal schemas evolve into abstract images of the self as worthy or unworthy and the other as trustworthy or untrustworthy (Bartholomew & Horowitz, 1991).

Theorists have begun to integrate cognitive theories of depression with interpersonal theories in hopes of better understanding the development of depressive disorders.

Although it is well established in the empirical literature that both cognitive patterns and interpersonal difficulties are associated with depression, it is not yet known in what ways the constructs of self-schema and interpersonal schema might speak to the dramatic gender differences in depression prevalence rates during early adolescence. This investigation is an attempt to examine this gender difference pattern through cognitive constructs of self- and interpersonal schema. Additionally, the relationship between self-schema and interpersonal schema is an area of research not yet understood.

This study sought to replicate findings in which negative self- and interpersonal schema distinguish depressed from nondepressed adolescents. In addition, the present investigation explored how the relationships between negative self-schema and negative interpersonal schema and depression may differ between girls and boys. Based upon notions of social psychology and gender differences, it

was hypothesized that, for boys, a negative self-schema would be more important in determining depression while, in girls, both negative self-schema and negative interpersonal schema would be implicated. This latter hypothesis is based on relational feminist theories of the differences in social roles and the process of coming to know oneself.

Participants included adolescents from a residential treatment facility and sample-wide matched nonpsychiatric controls from a school population. Depression was assessed using the Schedule for Affective Disorders and Schizophrenia for School-Age Children - Epidemiological Version/Present Episode (K-SADS-EP, Orvaschel & Puig-Antich, 1987, 1994; Puig-Antich & Ryan, 1986). Self-schema and interpersonal schema were measured by verbal transcript coding systems designed for use with the Thematic Apperception Test.

CHAPTER 2: REVIEW OF THE LITERATURE

2.1. Depression in Adolescence

Before the 1970s, depression in children was rarely investigated. Clinicians loyal to the psychoanalytic theory of depression felt that children could not be depressed because they are too psychologically immature to engage in the unconscious processes that cause depression (Rie, 1966). Other practitioners believed that children would “mask” their depression by presenting with aggressive behavior, hypochondriasis, anxiety, or other nonnormative behaviors (Kovacs & Beck, 1977). However, in the last thirty years, clinicians have found that children as young as 6 show symptoms of depression (like that of adults) such as guilt, self-hate, pessimism, and sadness (Puig-Antich, 1986). Thus, with such a shift in perspective, childhood and adolescent depression has emerged as an issue at the forefront of developmental psychopathology. Recent research has indicated that adolescence, in particular, is a crucial developmental period to investigate because many significant changes in depressive problems occur during adolescence (Petersen et al., 1993).

2.1.1. Symptoms and Diagnostic Criteria in Adolescents

There are three clinical diagnoses of unipolar depression in the Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV) (American Psychological Association, 1994). Major depressive disorder is the first of the unipolar depressive diagnoses. According to the *DSM-IV* (1994), an individual must be feeling depressed mood or loss of interest for at least 2 weeks, accompanied by

four other symptoms. The additional symptoms may include: depressed mood, loss of interest, weight loss, sleep disturbance, motor disturbances, fatigue, feeling worthless or guilty, concentration difficulties, and frequent thoughts of suicide or death. The second diagnosis is dysthymic disorder, which consists of the same basic symptoms of major depressive disorder. For this diagnosis in children and adolescents, the individual must experience depressed mood or irritability and at least two of the aforementioned symptoms. These symptoms must be chronic, less severe, and present for at least 1 year in children and adolescents. Irritability has been found to be a frequent symptom in depressed youngsters. Ryan et al. (1987) found irritability or anger in 83% of a youth clinic sample, and Goodyer and Cooper (1993) found that 80% of their sample of girls with a major depressive episode reported irritability. A recent study of dysthymic children highlighted a difference between major depression and dysthymia; that is, with dysthymia, there was an emphasis on gloomy thoughts and other negative affect while children reported fewer symptoms such as social withdrawal, fatigue, reduced sleep, poor appetite, and anhedonia (Kovacs, Akiskal, Gatsonis, & Parone, 1994). The third diagnosis is depressive disorder not otherwise specified. This is used in cases in which the person is experiencing distress and functional impairment, but not to the severity necessary for either major depressive disorder or dysthymic disorder (APA, 1994). Research is revealing that children can also experience double depression, an episode of major depression superimposed on the persistent dysthymic disorder (Stark, Bronik, Wong, Wells, & Ostrander, 2000).

Often misdiagnosed, double depression is particularly detrimental, and thus recognition of this condition is crucial for effective treatment.

In addition to the differences in diagnostic criteria, research has shown that there are age-specific associated features and symptoms of depression across the lifespan. Specifically, pre-pubertal children are more likely to present with somatic complaints, social withdrawal, disruptive behavior, attention problems, and comorbid anxiety disorders (APA, 1994). In contrast, depressed adolescents often experience psychomotor retardation, hypersomnia, substance abuse, and are more likely to evidence comorbid disruptive behavior disorders and eating disorders (APA, 1994). As demonstrated by the diagnostic criteria, depressed youth experience the same symptoms associated with adult depression (Puig-Antich, 1986), such as affective, cognitive/motivational, physiological, and social/interpersonal disturbances (Gotlib, 1992; Kovacs & Beck, 1977).

2.1.1.1. Affective Symptoms

Depressed mood, or dysphoria, is one of the most common symptoms of depression. Adolescents may also experience anhedonia (a loss of interest or pleasure in once enjoyable activities), boredom, irritability, anger, and frustration. They may have feelings of excessive guilt and/or worthlessness. When assessing depressed mood, questions regarding the possible differences between depressed mood and grief and loss are appropriate. Depressed individuals will distinguish between the sadness of losing a friend or relative versus their depressed mood. The extent to which their

depressed mood can be improved is also an important matter to pursue. Some depressed individuals find certain times of day to be more difficult with regard to their mood so questions regarding diurnal mood variations are significant. These affective clues help to guide the assessor to the most appropriate diagnosis.

2.1.1.2. Cognitive and Motivational Symptoms

In addition to affective symptoms, depressed adolescents also endure a variety of cognitive symptoms. Self-criticism (Blatt, Hart, Quinlan, Leadbeater, & Auerbach, 1993) and hopelessness (Abramson, Seligman, & Teasdale, 1978; A. Beck, 1967) may be cognitive components of the disorder. Other cognitive impairments may include a negative sense of self and dysfunctional attitudes and beliefs. In a study of 8 to 13-year-old inpatients, Asarnow and colleagues (1987) found that children who are depressed tend to report lower perceived levels of competence. Similarly, Kaslow, Rehm, and Siegel (1984) found, in a sample of children ages 6 to 14, that depressed children display lower self-esteem than their nondepressed peers. Cognitive symptoms, such as attention and concentration difficulties, may interfere with academic achievement. Depressed youngsters often have school-related problems such as tardiness, truancy, and school refusal. Suicidal ideation is quite common in depressed adolescents, as found with 61% to 68% of adolescents in two clinic samples (Mitchell, McCauley, Burke, & Moss, 1988; Ryan et al., 1987).

Suicidal ideation is the most serious of the cognitive or motivational symptoms and, as such, assessment of these thoughts and behaviors is exceedingly

important. A thorough assessment of suicidal risk includes the following: the existence of any thoughts of suicide, the elaboration of detail of these thoughts, actual attempts and their level of seriousness. In addition to cognitive symptoms, depressed individuals may experience intense physical problems as well.

2.1.1.3. Physiological Symptoms

Physiological symptoms of depression may manifest as sleep disturbances, such as insomnia or fitful sleep, or appetite disturbances, such as weight gain, weight loss, or cravings for sweets. Depressed youth may also have somatic complaints including headaches, stomachaches, or body aches. Problems with psychomotor agitation (Katz, Shaw, Vallis, & Kaiser, 1995) may be noted if they are physically overactive or fidget excessively. In contrast, psychomotor retardation may be displayed through slowed body movements or speech. Questions regarding basic functioning, such as eating and sleeping, are crucial to include in the assessment of depression. Some individuals experience various kinds of insomnia (i.e., initial, middle, terminal, etc.) or circadian reversal, in which they are asleep during the day and awake at night. Others may sleep more than usual or experience restless sleep. Just as problems with psychomotor agitation or retardation may be noted by the assessor during an interview, similarly, social or interpersonal difficulties may be observed as well.

2.1.1.4. Social/Interpersonal Symptoms

There are also social and interpersonal symptoms associated with depression, such as decreased participation in social activities, passivity in social situations, and greater discomfort in social situations (Gotlib, 1992). Social withdrawal is common in depressed youth, as found in a community sample (Kashani, Rosenberg, & Reid, 1989), in 93-100% of groups of depressed girls (Goodyer & Cooper, 1993), and in 76% of Mitchell et al.'s (1988) clinic sample of children and adolescents. Family difficulties may reflect strained parent-child relationships, and interpersonal problems may involve peer rejection or social withdrawal (Hammen & Rudolph, 1996). In addition, depressed youth (from a sample of 12-year-olds in a school population) report fewer social resources and lower levels of social support in comparison to nondepressed peers (e.g., Feldman, Rubenstein, & Rubin, 1988). Panak and Garber (1992) found that increases in peer rejection significantly predicted increases in self-reported depression among children with a depressogenic attributional style. Thorough assessment should include an examination of the individual's perception of his or her relationships with key significant others such as parents, siblings, teachers, and peers. Changes with regard to the individual's social situation should be noted.

In conclusion, depression has been found to leave children impaired affectively, cognitively, educationally, motivationally, physiologically, and socially (Gotlib, 1992; Kovacs, 1989; Kovacs & Beck, 1977; Kovacs & Goldston, 1991; Stark, 1990). It is evident that the experience of depression affects every facet of an individual's life. As this section has demonstrated the depth to which an individual's

life is influenced by depression, the extent of the phenomenon within the broader society, the prevalence of adolescent depression, is discussed.

2.1.2. Prevalence of Adolescent Depression

Empirical studies have found rates of adolescent depression ranging from as low as 2.9% to 8% (Kashani et al., 1990; Lewinsohn, Hops, et al., 1993; Rohde et al., 1991). In a study with a community sample of high school seniors, 9.4% met the diagnostic criteria for major depression (Reinherz et al., 1993). Results from a study by Cooper and Goodyer (1993) revealed that 20.7% of their female sample of 11- to 16-year-olds had significant symptoms but did not meet full criteria for a depressive disorder. A decade-long longitudinal study of youth aged 11 to 15 found lifetime prevalence rates of depression increased from 1% to 5.6% during the move from preadolescence to young adulthood (Hankin et al., 1998). According to these researchers, by age 18, the lifetime prevalence rate had increased to 20.67% (Hankin et al., 1998).

Lifetime prevalence rates of dysthymic disorder in school populations of children and adolescents have been reported between 12% (Kashani, Venzke, & Millar, 1981) and 14% (Pfeffer, Zuckerman, Plutchik, & Mizruchi, 1984), and 13.8% in a psychiatric inpatient sample. Kovacs et al. (1994) found that early onset dysthymia is strongly predictive of future mood disorders, with 81% estimated to develop into major depressive disorder. These researchers believe that early onset dysthymia is a risk factor for recurrent depressive disorders. The picture is obscured

further in light of the fact that many researchers do not investigate dysthymic disorder or distinguish it from major depression. This complicates progress with treatment, in that dysthymic disorder may be more insidious than major depression because of its long-term deleterious impact on psychosocial functioning as well as its resistance to treatment (Kovacs, Feinberg, Crouse-Novak, Paulauskas, & Finkelstein, 1984).

Compas and colleagues (1993) proposed a sequential and hierarchical model for the associations among measures of symptoms, syndromes, and disorders of depression. The authors argue that the broadest and most nonspecific indicator is depressed mood (Kandel & Davies, 1982), experienced by 30 to 40% of adolescents at any one point in development. A smaller subset of these adolescents, approximately 5 to 6% of the total population, is classified as "high scorers" on the anxious/depressed syndrome of the Achenbach taxonomic approach (Achenbach, 1991). A still smaller segment of the population (2-3%) meets criteria for a depressive disorder (APA, 1994). Individuals of all three groups share negative affect, however they differ with respect to their constellation of symptoms (Compas et al., 1993). In this model, the three groups are viewed as being embedded within each other, and these levels are hypothesized to develop sequentially over time. Thus, the researchers call for further investigation as all three have varying and unique contributions for understanding the significance of depressive symptomatology in adolescence. Initial empirical investigations have provided partial support for such a model (e.g., Edelbrock & Costello, 1988).

There has been some evidence to date that suggests that the prevalence of depression in children and adolescents is increasing. Birth-cohort effects reflecting these increased rates of depression (e.g., Gershon, Hamovit, Guroff, & Nurenberger, 1987; Klerman et al., 1985) have been replicated even more recently (Cross-National Collaborative Group, 1992; Lewinsohn, Rohde, Seeley, & Fischer, 1993; Ryan et al., 1992). Analyses of these results seem to indicate social changes, such as family disruption and stressors, as being responsible for the increased vulnerability to depression rather than methodological issues. Following puberty, the rate of major depressive disorder is twice as common in girls as in boys. This phenomenon is discussed at length in the following section. With regard to ethnicity, higher rates of depression are reported by African-American (Garrison, Jackson, Marsteller, McKeown, & Addy, 1990) and Hispanic girls (Emslie, Weinberg, Rush, Adams, & Rintelmann, 1990) in comparison to Caucasian boys and girls.

2.1.3. Course and Recurrence of Adolescent Depression

Depressive disorders during childhood and adolescence tend to be episodic, of long duration (Strober, Lampert, Schmidt, & Morrell, 1993), and more severe than adult variations. Additionally, these episodes tend to recur (Ambrosini, Bianchi, Rabinovich, & Elia, 1993). Longitudinal research has indicated that major depression and dysthymia follow different courses. Researchers found the average length of major depressive episodes to be 16 weeks in a mixed sample of community youth and children of depressed parents (Keller et al., 1988), which was similar to that of an

inpatient sample (Strober et al., 1993). Other community and inpatient samples have yielded figures between 21 weeks and 36 weeks (Kovacs et al., 1984; Lewinsohn, Hops, et al., 1993; McCauley et al., 1993; Strober et al., 1993). Within 6 months of onset, however, the episode had remitted for 40% of children. However, 1 year later, approximately 20% of the children were still experiencing a depressive episode (Keller et al., 1988; McCauley et al., 1993; Strober et al., 1993). In contrast, the average length of a dysthymic episode is 3 years (Kovacs et al., 1984). Hence, the seriousness and potential impairment of the aforementioned double depression is clear.

Several variables have been detected that appear to predict the duration of an episode. Age of onset has been explored, yet there seem to be conflicting results. In some studies, age of onset was associated with a more protracted course of depression (Kovacs et al., 1984; McGee & Williams, 1988); however, others have found that adolescents whose first depressive episode was post-pubertal suffered a more difficult course of depression (Harrington et al., 1990). The more severe the symptomatology of an episode, the longer the course seems to be (McCauley et al., 1993). In addition, family dysfunction has also been implicated as being related to a more protracted course of depression (McCauley et al., 1993).

Recurrence of major depressive episodes is common in children and adolescents. Results from a study by Kovacs et al. (1984) revealed that 26% had experienced a new episode within one year of recovery, 40% within 2 years, and 72% within 5 years. Within a hospital population, Asarnow et al. (1988) found that 45% of

their sample were rehospitalized within 2 years. Community samples uncovered rates of 18 to 25% relapse within one year (Lewinsohn, Hops et al., 1993; McCauley et al., 1993). Once an individual has experienced a significant depressive episode, he or she is at a substantially increased risk for a recurrence in the future (Lewinsohn, Rohde, et al., 1991). The evidence suggests that individuals who experience significant depression during adolescence are unlikely to experience a complete turnaround, because they are at high risk for experiencing a recurrence during adulthood (Harrington et al., 1990).

Many of the challenges that are prevalent in adolescents' lives continue to be prevalent through adulthood. Nolen-Hoeksema and Girgus (1994) cite two reasons why adolescent girls, in particular, are at risk for depression as adults. The first reason given is that depression affects one's performance in school, work, and relationships with others. Depressed girls (and boys) may have fewer opportunities or pursue unsatisfying paths, which could serve to contribute to adult depression. Secondly, depressed mood affects our thinking in that negative memories and interpretations are easily accessible and affect decision making (Blaney, 1986; Bower, 1981). Girls making unhealthy decisions may also develop more negative self-concepts and put themselves at increased risk for adult depression.

Kandel and Davies (1986) conducted a longitudinal study in which they measured levels of depression beginning at age 15 or 16 through early adulthood. Participants who scored in the depressed range of a depression questionnaire were significantly more likely to be depressed at age 24 or 25 than non-depressed

adolescents. Female participants who were depressed in adolescence were more likely to have visited a mental health professional and have been hospitalized for a mental disorder during the nine year study than those who were not depressed as adolescents. For both men and women, those who were depressed as adolescents reported more physical problems, more lost work days, and poorer interpersonal relationships than those not depressed as adolescents. These findings emphasize the need for strong, empirically supported treatments for adolescent depression.

To summarize, research has demonstrated that adolescents experience depressive symptoms and disorders that influence their emotional, cognitive, educational, and social development. Unfortunately, the likelihood is that adolescents' mood disorders do not exist alone but rather co-occur with other disorders, a condition known as comorbidity.

2.1.4. Comorbidity of Adolescent Depression

More often than not, depressed adolescents often experience comorbid symptoms of other psychological disorders. Research has shown that depression in children and adolescents is often comorbid with conduct problems, anxiety disorders, learning disabilities, and other psychopathological symptoms (Cantwell & Baker, 1991; Compas & Hammen, 1994; Kandel et al., 1991). Depressed children are more likely to experience comorbid disruptive behavior disorders and anxiety disorders (Kovacs, 1990; Rohde et al., 1991), while adolescents may struggle with substance abuse or eating disorders. Rohde et al. (1991) reported that 42% of depressed

adolescents in a community sample possessed a comorbid disorder. Females are more likely to have comorbid anxiety and depressive disorders, while comorbid disruptive behavior disorders and depression occur more frequently in males (Cohen et al., 1993). Interestingly, studies of comorbidity indicate that depressive problems typically follow rather than precede other problems (e.g., Kovacs, Gatsonis, Paulauskas, & Richards, 1989), highlighting the importance of intervention and prevention in this area. Research has shown that children with comorbid depression and conduct disorder have a significantly poorer prognosis than those with only a single diagnosis (Kovacs, Paulauskas, Gatsonis, & Richards, 1988).

In summary, depressed youth experience a wide array of symptoms, both depressive and otherwise, during their development. Comorbid disorders are more difficult to diagnose and treat effectively. Thus, it is extremely important that their complex symptomatology be assessed as thoroughly as possible, taking care to examine all domains of functioning that may be affected. A discussion of various techniques for the assessment of depression follows.

2.1.5. Assessment of Depression

When assessing the severity of depression, it is important to gather the frequency, intensity, duration, and variability of each symptom. This information may be indicative of the child's degree of functional impairment and have implications for treatment. Researchers utilize several approaches to assess depression for empirical and clinical purposes. Diagnostic interviews and self-report questionnaires are the

most commonly used methods. In general, clinical interviews, which may be structured or unstructured, are thought to be superior for two reasons. First, diagnostic interviews are more sensitive to features that distinguish among depressive diagnostic categories. Second, diagnostic interviews are able to assess for a variety of psychological disorders, thus detecting possible comorbidity (Hodges, 1994). The disadvantages of using such interviews consist of the level of training required for interviewers and the longer administration time (Sholomaskas, 1990). Two regularly used interviews are the Schedule for Affective Disorders for School-Age Children (K-SADS; Puig-Antich & Ryan, 1986) and the Diagnostic Interview Schedule for Children (DISC; Costello, Edelbrock, Dulcan, Kalas, & Klaric, 1984).

Self-report measures are also commonly used to assess depressive symptomatology. These questionnaires are intended to assess the number or severity of symptoms (Katz et al., 1995) or level of distress, and diagnostic information is usually not yielded. Children can accurately convey information regarding their depressed mood and symptoms and can easily distinguish various emotions by 9 years of age (Kazdin, 1994). Advantages of using self-report instruments involve the ease of administration and scoring as well as the ability to assess a large number of individuals at one time (Reynolds, 1994). In most cases, self-report measures provide cut-off points for different levels of depression based on the number of symptoms endorsed (Reynolds, 1994). While they are efficient and easy to use, self-report questionnaires lack the diagnostic usefulness of interviews and also require certain levels of cognitive ability of the participant (Reynolds, 1994). Among the most

commonly used self-report measures are: the Children's Depression Inventory (CDI; Kovacs, 1985), the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977), the Child Depression Scale (Reynolds, Anderson, & Bartell, 1985), and the Reynolds Adolescent Depression Scale (Reynolds, 1987).

2.2. Gender Differences in Adolescent Depression

2.2.1. Introduction

One of the most interesting features of adolescent depression is the emergence of distinct gender differences in rates of depressive disorders. The principal finding of higher rates of depression symptoms and diagnoses in adolescent girls is well established (e.g., Hankin et al., 1998; Lewinsohn, Hops, et al., 1993; McGee et al., 1992; Nolen-Hoeksema et al., 1991; Petersen et al., 1991; Reinherz et al., 1993; see review by Nolen-Hoeksema & Girgus, 1994). Although there are conflicting findings regarding the exact age at which the girls' rates increase, most studies conclude that it is in early to middle adolescence (e.g., Angold & Rutter, 1992; Cohen et al., 1993; Petersen et al., 1991). Studies of depression in children suggest that, before adolescence, there is a tendency for boys to have an equal or greater number of depressive symptoms than girls, but by age 13 or 14, girls are more likely to report these symptoms (Hankin et al., 1998; Nolen-Hoeksema et al., 1991; Petersen et al., 1991). Kandel and Davies (1986) found that 23% of girls age 15 or 16 reported levels of moderate to severe depression whereas only 10% of boys of similar age did. Kashani et al. (1987) yielded similar results in a study of 14 to 16 year old

participants. Thirteen percent of the girls and 3% of the boys reported depressive symptoms which met the criteria for major depressive disorder or dysthymic disorder. Hankin and colleagues (1998) found that both boys and girls became more depressed between the ages of 15 and 18 (from 2.7% to 16.8%), however that increase was greater for girls (from 4.4% to 23.2%) than for boys (from 1% to 10.7%). Their findings also revealed that after the age of 18, approximately one-fourth of previously depressed participants experienced a recurrent episode.

The reporting bias hypothesis suggests that the gender differences in adolescent depression are due to the fact that females are more likely than males to report depressive symptoms and negative feelings. Little empirical support has been found for this idea (Nolen-Hoeksema, 1990). Taken together, these findings suggest that, before adolescence, there is a tendency for boys to have equal or greater depressive symptoms than girls, but by age 13 or 14, girls are more likely to report these symptoms. Being aware of gender differences is essential in conceptualizing how to assess, treat, and prevent child and adolescent depression (Culbertson, 1997; Hammen & Padesky, 1977; Nolen-Hoeksema & Girgus, 1994). In order to understand the complexity of these gender differences, investigators need a framework within which to evaluate the research conducted in this area. Nolen-Hoeksema and Girgus (1994) present just such a framework.

2.2.2. Developmental Models of Gender Differences in Depression

Nolen-Hoeksema and Girgus (1994) present three developmental models to explain how these gender differences in childhood and adolescent depression might emerge. The first model (see Figure 1) suggests that the “same factors cause depression in both girls and boys, but these factors become more prevalent in girls than boys in early adolescence” (p. 426). This model assumes that before early adolescence there exist no gender differences in the prevalence of risk factors, but, by early adolescence, the prevalence of risk factors for girls has surpassed those for boys. To test this model, one must demonstrate not only a divergence between girls and boys in early adolescence in the prevalence of risk factors, but also that the prevalence is associated with depression in boys and girls. To accomplish this task, one would need longitudinal data from a large sample of children as they move from childhood to adolescence to track changes in personality and behavior as well as in depressive symptoms.

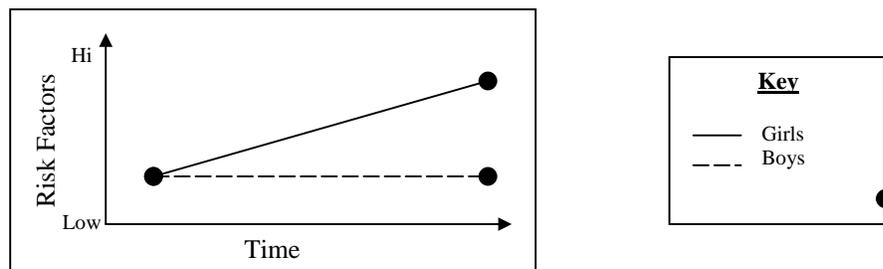


Figure 1. Diagram of Nolen-Hoeksema & Girgus's (1994) developmental model 1.

Nolen-Hoeksema and Girgus's second model (see Figure 2) proposes that the factors leading to girls' depression vary from those which lead to boys' depression. The model further assumes that in childhood these factors are equally prevalent, but that in early adolescence, those risk factors for girls increase more than those for boys. To support this model, a researcher would need to establish two points: that the presence of girls' risk factors actually increases during the early teen years, and that the presence of boys' risk factors does not increase during that time.

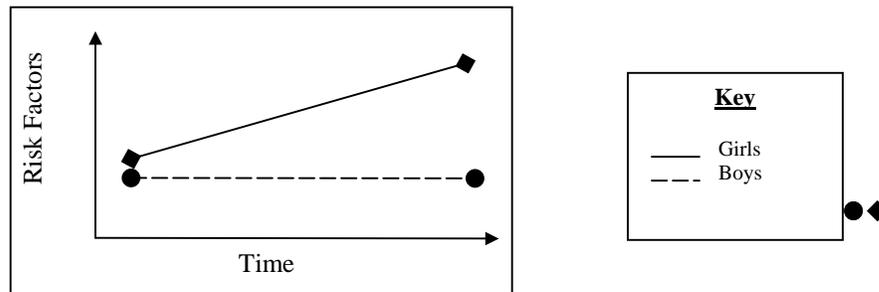


Figure 2. Diagram of Nolen-Hoeksema & Girgus's (1994) developmental model 2.

The third model (see Figure 3) that Nolen-Hoeksema and Girgus present is “an interactive model much like the diathesis-stress or buffer model...(Cohen & Wills, 1985; Garber, 1992) and the models of risk and protective factors in current developmental models of the effects of stress (Garmezy, 1991; Rutter, 1987)” (p. 427). This model states that girls are more likely to have characteristics which place them at risk for depression in childhood, but it is only when these characteristics interact with the obstacles of early adolescence that girls develop increased rates of depression as compared to boys. To support this model, one would need longitudinal

data in which the following variables are evaluated for boys and girls as they move from childhood to adolescence: severity of depression, risk factors for depression, and challenges that interact with risk factors.

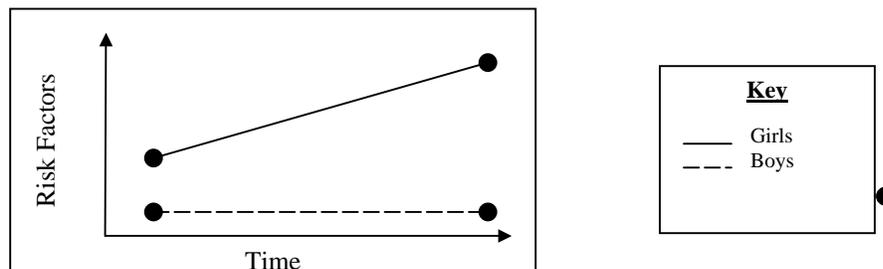


Figure 3. Diagram of Nolen-Hoeksema & Girgus's (1994) developmental model 3.

In order to understand the developmental models of gender differences in depression, it is important to examine the various models of the etiology of depression in general.

2.2.3. Etiology and Risk Factors in the Development of Gender Differences in Adolescent Depression

In order to examine the gender differences in adolescent depression, the literature addresses various models of the etiology of depression and the different types of risk factors within them. A widely held perspective among depression theorists and researchers is that there are multiple etiological pathways to the development of depressive disorders including genetic, psychophysiological, psychoanalytic, behavioral, cognitive, and social/societal.

The predominant etiological model is the stress-diathesis model in which stress is hypothesized to interact with a vulnerability within the child to develop

depressive symptoms. The stressors may take many forms (e.g., chronic strains, daily hassles, major life events) and may be chronic or acute in nature. The diathesis (or pathway) varies across theories and includes such variables as a deficit in neurotransmitter production (Schildkraut, 1965), social skill disturbances (Lewinsohn, 1975), an insidious attributional style and a sense of hopelessness (Abramson, Metalsky, & Alloy, 1989), a lack of perceived competence (Cole & Turner, 1993), or depressogenic schema (A. Beck, 1967). It is believed that a combination of biological, cognitive, behavioral, and familial/environmental variables reciprocally interact with each other and with stress to produce and maintain a depressive disorder (Stark, Laurent, Livingston, Boswell, & Swearer, 1999). Figure 4 illustrates a possible multidimensional, transactional model of child and adolescent depression (Hammen & Rudolph, 1996, p. 185). A review of such theories of depression and risk factors is provided.

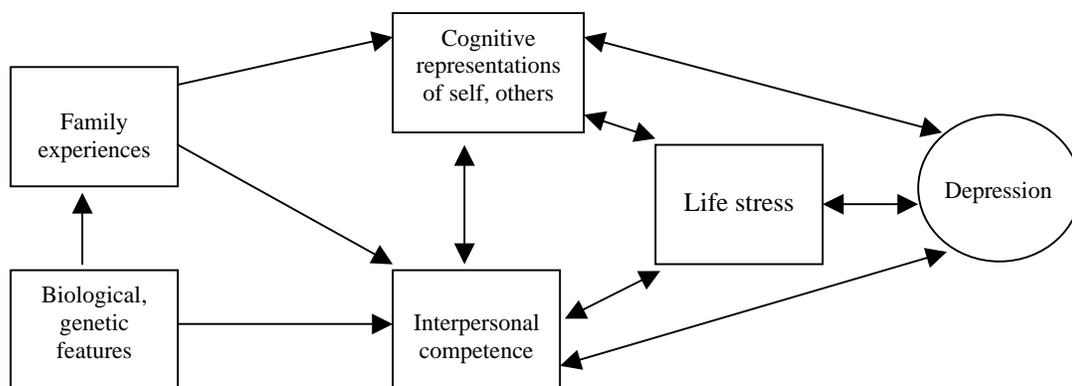


Figure 4. Diagram of a multifactorial, transactional model of child and adolescent depression.

2.2.3.1. Genetic Models of Depression

Research has revealed a relationship between a genetic vulnerability and depressive disorders in youth (Clarkin, Hass, & Glick, 1988). A comparison of concordance rates of depressive disorders among family members, especially twins, is the usual method for evaluating the impact of genetics (Stark et al., 1998).

Monozygotic (MZ) twins are almost three times as likely to develop a depressive disorder than dizygotic (DZ) twins (Clarkin et al., 1988). In addition to twin studies, researchers have also compared the rates of depressive disorders of first-degree relatives (i.e., parents, children, and siblings) to those of second-degree relatives (i.e., grandparents, aunts, uncles, etc.). It appears that first-degree relatives have a higher concordance rate than the general population (Gershon et al., 1982). Williamson, Ryan, Birmaher, and Dahl (1995) found that first-degree relatives of adolescents with major depressive disorder (MDD) have an increased lifetime rate of MDD and other psychiatric disorders. Second-degree relatives of adolescents with MDD have higher lifetime rates not of depression, but of other types of psychopathology. Because these first-degree relatives usually live together, they share a common social environment. In order to address these confounds, adoption studies are also conducted. For example, Mendlewicz and Rainer (1977) studied depressed individuals who were adopted as infants. Depressive disorders were evident in 31% of the participants' biological parents as compared to 12% in the adoptive parents. Studies such as this, which compare the differing concordance rates in biological and adoptive parents, offer support for the genetic contribution to the development of depression. Just as a

genetic vulnerability may be passed from parent to child, it is thought possible that psychophysiological vulnerabilities may be so as well. Biologically-based theories of depression are examined.

2.2.3.2. Psychophysiological Models of Depression

Depression has been viewed by some researchers to be the combination of psychological stress and biological vulnerability. Biological factors that are implicated in the development of depression during adolescence include dysregulation of neurotransmitters, neuroendocrine processes, and dysregulation of biological rhythms, such as sleep patterns (e.g., Brooks-Gunn, Petersen, & Compas, 1994). In addition, several aspects of physical pubertal changes, such as body dissatisfaction and timing of pubertal changes, have been explored.

The monoamine neurotransmitter system model of depression asserts that depression is caused by insufficient activity of monoaminergic neurons (dopamine, serotonin, and norepinephrine) in certain areas of the brain. Kolb and Whishaw (1996) postulated that depression results from dysfunction in multiple specialized receptor sites within the monoamine system. Monoaminergic mechanisms play a critical role in the nervous system and affect sleep, arousal, and response to incoming stimuli. Thus, disruptions in this system seem to explain the symptomatic expression of depression (Shelton, Hollon, Purdon, & Loosen, 1991).

Abnormalities in two neuroendocrine systems, the hypothalamic-pituitary-thyroid (HPT) axis and the hypothalamic-pituitary-adrenal (HPA), are related to

depression. As the hypothalamus (within the limbic system) regulates sleep, appetite, and mood, it is believed that depressive disorders appear to be related to hypothalamic dysfunction. Hypothyroidism has also been associated with depressive disorders as thyroid replacement therapies have been found to lessen adults' symptoms (Burke & Puig-Antich, 1990). Similar results have not been found in depressed pre-pubertal children (Burke & Puig-Antich, 1990).

Hormonal changes, particularly the presence of estrogen in girls, also have been linked to depression. Estrogen accounts for some individual difference between boys and girls in growth hormone (GH) secretion, with girls secreting more GH than boys (Burke & Puig-Antich, 1990). GH release during sleep in depressed prepubertal children was found to be significantly greater than in controls. This finding, however, was not found in depressed adolescents (Burke & Puig-Antich, 1990). The authors hypothesize that age and puberty may interact in the control of GH release.

The most popular biological theory of females' greater risk for depression is that dysregulation of ovarian hormones causes depression (Nolen-Hoeksema, 1990). Several studies (Susman, Dorn, & Chrousos, 1991; Susman, Nottelmann, Inoff-Germain, Dorn, & Chrousos, 1987) found no significant relationship between estradiol or other hormone levels and depressive symptoms in either adolescent girls or boys. Brooks-Gunn and Warren (1989) did find a curvilinear relationship between estradiol levels and depressive symptoms. Their data suggest that girls are at increased risk of depressive symptoms during the early stages of development of their hormonal systems (when it is first being activated), but once the hormone production

stabilizes, girls' depressive symptoms decrease. These results were not found, however, in the 72 girls assessed at follow-up, nor have the results been replicated in other studies (Susman et al., 1987). Overall, there is not sufficient evidence that hormonal changes are related to the increased risk of girls' depression.

Disruptions in the processes of sleep patterns and circadian activity rhythms may hold part of the explanation of the development of depression in children and adolescents. Depressed adolescents were found to have significantly higher 12 hour hemicircadian rhythms, which may be related to diurnal mood variation (Teicher et al., 1993). Sleep disturbances are implicated via electroencephalographic (EEG) studies in depressed patients. A shortened latency to the onset of rapid eye movement (REM) sleep has been found in depressed adults and adolescents, but not children (Burke & Puig-Antich, 1990; Shelton et al., 1991). While these findings have helped researchers to begin to hypothesize about the biological risk factors of depression, it is possible that different neurobiological systems and processes may be responsible for depression at different ages (Newman & Garfinkel, 1992), highlighting the importance of continued study of depression across the lifespan.

Another investigated biological vulnerability concerns the physical changes that occur during puberty. Girls experience a swift growth in height and gain body fat (Warren & Peterson, 1983). Around age 9 or 10 girls experience a large increase in estrogen and progesterone production. The age of onset of menarche varies from 10 to 15 (Faust, 1983). The weight that boys gain is in lean body mass and skeletal mass rather than body fat.

The development of secondary sex characteristics, may have a stronger influence on the emotional development of girls and boys than hormonal development (Brooks-Gunn, 1988). While boys like the muscle mass they gain and other pubertal changes they experience, girls dislike the weight gain in fat and loss of the thin physique valued in our culture (Dornbusch et al., 1984; Koff, Rierdan, & Stubbs, 1990; Petersen, 1979; Rierdan, Koff, & Stubbs, 1988, 1989; Simmons, Blyth, Van Cleave, & Bush, 1979; Tobin-Richards, Boxer, & Petersen, 1983). Some girls also dislike the inconvenience, physical symptoms, and potential for embarrassment associated with menstruation (Greif & Ulman, 1982).

Brooks-Gunn (1988) and other researchers have asserted that boys and girls who are dissatisfied with their bodies are more likely to be depressed (see Rierdan et al., 1988). It is important to note that girls are more likely to be dissatisfied with their bodies, making them more prone to depression. Several studies, such as Girgus, Nolen-Hoeksema, and Seligman (1989) have demonstrated that of a sample of sixth, eighth, and tenth graders, girls reported much more negative body images than boys, and that, in turn, girls had more depressive symptoms than boys. It is well known and acknowledged that children are bombarded by messages in our society as to which physical attributes are desirable and esteemed. Children are aware, from a very early age, that physical attractiveness is highly valued in many cultures, especially North American culture.

The timing of these pubertal changes may also place an adolescent at increased risk for depressive symptoms. Petersen et al. (1991) found that girls who

moved from elementary to junior high school within 6 months of the peak time of pubertal change had significantly more depressive symptoms at that time, as well as in 12th grade. In addition, they found that adolescents who experience pubertal changes early compared to their peers showed higher levels of depressive symptoms and anxiety than other teenagers. All of these results indirectly suggest that biological changes, particularly the emotional response to these changes, may interact with a propensity to experience depressive symptoms.

To summarize, a body of research has begun to accrue regarding potential biological markers of depression in adolescents. However, many studies have presented unequivocal results. Clearly, there is a need to continue this type of research and, in particular, integrate biological and psychological phenomena to explicate the depth and breadth of clinical depressive symptomatology (Shelton et al., 1991).

2.2.3.3. Psychoanalytic Theories of Depression

Unlike genetic and psychophysiological explanations of depression, which focus on one's genetic or biological makeup, psychoanalytic theories consider the stimulus of the development of depression to be a loss of a loved object. The loved objects are most often caregiving individuals from one's early years, in particular, mothers. This intense loss is thought to be a diathesis, or vulnerability, to developing depression if the individual faces another significant loss. More recently, Bowlby (1988) contends that individuals who do not develop strong attachment bonds with

their primary caregiver (most frequently mothers) may become vulnerable to psychological difficulties and impaired interpersonal relationships. Bowlby (1980) hypothesizes that if this attachment bond is disrupted due to physical separation or through emotional unresponsiveness, the individual will become vulnerable to developing depression. Further explanation regarding attachment theory, interpersonal schema, and their relationship to depression are discussed in following sections. Gotlib and Hammen (1992) stress, however, that such a diathesis-stress conceptualization of depression is common to both psychoanalytic and cognitive theories of depression.

2.2.3.4. Behavioral Theories of Depression

Rather than focusing on early life experiences or internal processes as psychoanalytic theories do, behavioral theories of depression regard the development of depression as an overgeneralized response to a stimulus (negative event) (Gotlib & Hammen, 1992). Lewinsohn (1974) proposed a behavioral model of depression that considers depression as a reaction to low rates of “response-contingent positive reinforcement.” This low rate of response-contingent positive reinforcement leads to depressed mood, fatigue, and somatic symptoms. Several cognitive complaints, such as decreased self-esteem, guilt, and pessimism, originate from the difficulty related to the labeling of the dysphoric feelings. Thus, the nature of the symptom is determined by the label attached to it. For instance, if the individual labels the sad feeling as “I am worthless-inadequate”, it could lead to decreased self-esteem.

Lewinsohn (1974) suggests that there are three variables that affect the amount of positive reinforcement a person receives. First, the environment may lack positive reinforcers or may be ridden with aversive experiences. Second, the individual may suffer a decrease in his or her ability to enjoy positive reinforcement (anhedonia) or may experience an increased sensitivity to negative life events. Third, and most importantly, the individual may possess a skill deficit that prevents him or her from obtaining positive reinforcers or effectively coping with life stressors. As depressed individuals begin exhibiting depressive symptoms, significant others around them unintentionally reinforce the depressive behavior by showing greater concern, interest, or sympathy. However, even this positive reinforcement is fleeting because interactions with depressed people tend to be unpleasant. In time, the significant others retreat, resulting in a further decline in the availability of reinforcement. Thus, Lewinsohn's behavioral model of depression underscores the effects of the individual's social skill deficits and subsequent lack of social reinforcement. This lack of reinforcement is then thought to cultivate anhedonia, inactivity, and dysphoria (Lewinsohn, 1974).

Similarly, Coyne (1976) proposed a behavioral theory in which the depressed individual elicits a pattern of rejection in others that reinforces his or her depression. Thus, the individual creates an aversive social climate in which the depressed person behaves in an increasingly symptomatic way in an attempt to elicit support. In doing so, the depressed individual becomes increasingly distasteful to the others in the

environment. Ultimately, this transactional social experience leads to rejection and avoidance thereby reinforcing the individual's depression.

In summary, behavioral theories of depression concentrate on reduced rates or diminished effectiveness of positive reinforcement from others in the individual's environment, which are involved in the etiology and maintenance of depression (Gotlib & Hammen, 1992). However, these models do not attend to the role that cognition plays in this process. In an effort to examine the influence of cognitive variables on the development of depression and in specific consideration of the methodology of the present investigation, a review of cognitive theories of depression is required.

2.2.3.5. Cognitive Theories of Depression

Cognitive theories of depression differ from behavioral theories in that they center more on covert rather than overt behaviors, such as attitudes, self-statements, memories, attributions, and beliefs (Gotlib & Hammen, 1992). Cognitive theories specify that cognitive distortions and irrational beliefs are the fundamental factors in the etiology and maintenance of depressive disorders. Numerous cognitive and psychological patterns have been investigated with hope of elucidating the mystery regarding the gender differences in depression in early adolescents. Several cognitive theories of depression are discussed in this section; however, A. Beck's theory, including the concept of self-schema, is described in detail in the following section, as it requires a thorough review in explaining the methodology of this study.

2.2.3.5.1. Self-control theory of depression.

Kanfer's (1977) three stage model of self-control includes self-monitoring, self-evaluation, and self-reinforcement. Rehm (1977) extended this model by adding an attributional element to the model. According to Rehm (1977), depression results from the failure to adjust to or cope with an unfavorable outcome. Depressed individuals self-monitor by selectively attending to negative events and selectively ignoring positive events following their own behavior. In addition, they tend to concentrate on immediate consequences and neglect to recognize delayed outcomes (Gotlib & Hammen, 1992). A deficit in self-evaluation is seen in which depressed individuals set unrealistic, unachievable goals for themselves. Negative self-evaluations are thus sure to follow. Lastly, depressed individuals fail to self-reward and instead engage in extreme self-punishment that results in lowered activity levels.

2.2.3.5.2. Problem-solving theory of depression.

Another theory of depression concerns the role that ineffective problem-solving abilities have on the etiology and maintenance of depression. According to Nezu (1987), effective problem-solving skills may moderate the relationship between stress following negative life events and depression. Individuals who possess unsuccessful problem-solving skills are considered to be "at risk" for developing depressive symptomatology (Nezu, 1987). Some studies have uncovered a positive correlation between depressed mood and deficits in the ability to generate useful

alternative solutions to hypothetical problems (Kaslow, Tanenbaum, Abramson, Peterson, & Seligman, 1983; Sacco & Graves, 1984), while others have been unable to support these results (Doerfler, Mullins, Griffin, Siegel, & Richards, 1984; Mullins, Siegel, & Hodges, 1985).

Rumination, incessantly focusing on one's negative emotional state, has been the focus of much research to date. Investigators believe that it may be extremely destructive and contribute to the development of depressogenic thoughts. Nolen-Hoeksema (1993) writes that "people who focus inward and chronically ruminate about their negative emotional states tend to experience longer and more severe periods of depression than do people who are able to disengage their attention from their emotional state" (p. 306). It is important to distinguish between ruminating and actively trying to solve one's problem. Ruminating occurs when a person passively focuses on his or her sad mood without attempting to remedy the situation. People in depressed moods are more likely to remember sad memories from their past (Bower, 1981; Clark & Teasdale, 1982; Teasdale & Fogerty, 1979), remember more negative evaluations they have experienced (Natale & Hantas, 1982), interpret their own behavior in social situations more negatively (Forgas, Bower, & Krantz, 1984), rate the life satisfaction lower (Schwarz & Clore, 1988), and create more negative interpretations of ambiguous events (Bower, 1981).

Nolen-Hoeksema (1993) describes three ways in which a ruminative style may prolong depressive episodes. First, ruminating may improve the accessibility of negative cognitions and memories thereby increasing the chances of coming to

negative conclusions about the causes of the depressed mood. Second, ruminating may interfere with attention, concentration, and assertive behaviors, contributing to a sense of failure and helplessness. Lastly, a consequence of poor attention and concentration may be decreased effectiveness in problem-solving skills.

Several researchers have found that, like adult women, female children and adolescents endorsed more ruminating responses than did their male peers (Broderick, 1998; Hart & Thompson, 1996; Koenig & Juhasz, 1991; Schwartz & Koenig, 1996). Koenig and Juhasz (1991) did not find, however, that boys use more distractive techniques to deal with their sadness than girls. Results also indicated that rumination and distraction are moderately to strongly associated with current severity of depression (Hart & Thompson, 1996; Koenig & Juhasz, 1991). Although distraction did not significantly contribute to the prediction of depression, rumination did in Koenig and Juhasz's (1991) sample. All of these findings taken together suggest that if response styles play a role in gender differences in adolescent depression, it is most likely due to the vulnerability presented with rumination, rather than possible protective effects of distraction. Similarly, Ingram, Cruet, Johnson, and Wisnicki (1988) found that participants' sex roles predicted whether or not they chose to focus on themselves after a negative event. Feminine-typed participants were more likely to self-focus than masculine-typed participants. Therefore, it may not be gender, but sex role, that predicts a ruminating response to depressed mood.

If females tend to ruminate and focus on their negative feelings and are more likely to be depressed, does that mean that males are less likely to be depressed

because they do not ruminate? Several authors have pursued this possibility by examining the ways that men, and possibly boys, cope with depressed mood.

Depressive symptoms in males are more likely to lead to rejection by others than any other kind of psychological symptoms (see Siegel & Alloy, 1990). Men may be more likely to use alcohol to cope with their depressed feelings (Hanninen & Aro, 1996; Nolen-Hoeksema, 1987) or engage in conduct-disordered behavior in addition to being depressed (Craighead, 1991). While the rate of depression in women is twice as high as men, conversely the rate of alcoholism is twice as high in men as in women (Williams & Spitzer, 1983). Nolen-Hoeksema (1993) suggests that using alcohol is not an extension of distracting response style, but rather that “men who engage in alcohol abuse may be those who are otherwise prone to ruminating, and turn to drastic measures to stop their ruminations” (p. 317). It appears that men and women may respond to the same circumstances with different symptoms and disorders, rather than showing different symptoms of the same disorder (Nolen-Hoeksema, 1987).

Nolen-Hoeksema and Morrow (1993) surveyed men and women about the causes of depression. Interestingly, men were more likely to describe it as a problem to adjust, while women subscribed to a more biological etiology, feeling that depression is uncontrollable. Clearly, further research on rumination in adolescents will facilitate our understanding of this cognitive process and its relationship to depression. Perhaps what goes hand-in-hand with ineffective problem-solving is the notion of learned helplessness.

2.2.3.5.3. Learned helplessness/Reformulated learned helplessness theories of depression.

After observing the behavior of animals exposed to uncontrollable, inescapable shock, Seligman and Maier (1967) noted that the animals would rarely attempt to escape subsequent shock and would tolerate continued shock. From this, they surmised a person who experiences a lack of control over important events will often develop an expectation that future events are uncontrollable. Learned helplessness occurs when life experiences teach an individual to see problems as insurmountable (Seligman, 1975). This expectation may lead to decreased motivation, sadness, and an inability to recognize opportunities when they do arise. Seligman believes that some depression may result from the idea that one has little control over one's life. The repetitive nature of these events over time may lead to an increased risk of depression. However, the theory could not account for the loss of self-esteem of the helpless individuals. In addition, it did not address individual differences in the persistence of depression or the generality of depression across situations (Gotlib & Hammen, 1992).

Thus, the theory was reformulated to include an attributional component, specifically that the degree of helpless feelings or depression depends on the attributions people make for these uncontrollable events (Abramson et al., 1978). Abramson and colleagues (1978) proposed three important dimensions of attributions: internality, stability, and globality. If negative events are attributed to characteristics within the individual, helplessness may develop and self-esteem may

decrease. If negative events are thought to be permanent and unchanging, helplessness may continue. If it is believed that the negative event will occur in a variety of settings as opposed to a single, specific situation, helplessness will be persistent.

Learned helplessness in children, as in adults, is often accompanied by problem-solving difficulties. Seligman et al. (1984) asked a group of 8- to 13-year-olds to complete block designs and anagrams as well as questionnaires on attributional style and depression. Results indicated that children who attributed failure to internal, stable, and global causes were more likely to report depressive symptoms than children who reported external, unstable, specific causes. Thus, attributional style is posited as being a risk factor for developing depression as the children who demonstrated a depressive attributional style at the time of the study were found to have depressive symptoms when retested 6 months later.

There also seem to be some gender differences in the types of attributions made. Girls are more likely than boys to show helpless patterns of attributions and are more likely to make internal, stable attributions for their failures. Girls tend to blame their own poor ability for failure, whereas boys persist despite their failure, blame bad luck, and place more emphasis on the role of their own effort (Crandall, Katkovsky, & Crandall, 1965; Dweck & Reppucci, 1973; Nicholls, 1975). In a sample of 10- and 11-year-old girls, Blumberg and Izard (1985) found girls to be more like depressed adults than boys in that they reported sadness, anger, self-directed hostility, and

shame. More girls than boys explained negative events in terms of internal, stable, global causes.

In summary, the theory of learned helplessness states that individuals develop an attributional style, as a way to explain the causes of positive and negative events. A depressogenic attributional style is characterized by internal, stable, and global attributions for negative life events. As a result, these individuals develop cognitive, motivational, and emotional deficits that may lead to depression. There are many social situations that may foster helplessness in adolescents, and in girls in particular. The next section reviews social and societal roles and situations that may place adolescents at risk for the development of a depressive disorder.

2.2.3.6. Social and Societal Risk Factors for Depression

Adolescence is a time of exploration of self-identity and upheaval in social relationships. Some researchers contend that the sociological influences and challenges on girls during this time function as risk factors for developing depressive symptoms (Hill & Lynch, 1983; Nolen-Hoeksema & Girgus, 1994). The challenges discussed here include sexual abuse and victimization and female social/societal roles.

2.2.3.6.1. Sexual abuse and victimization.

Overall rates of sexual abuse increase significantly for girls during the ages 10 to 14 (Finkelhor, Hotaling, Lewis, & Smith, 1990). Some researchers estimate that

14- to 15-year-old girls have the highest risk of being raped (Hursch & Selkin, 1974). Although boys are sometimes the victims of rape or sexual abuse, girls are 2 to 3 times more likely to be the victims of abuse (Finkelhor, 1979; Trickett & Putnam, 1993). Allen and Tarnowski (1989) found a significant association between abuse (sexual, physical, neglect, and/or emotional) and the diagnosis of a major depressive episode or dysthymia. Finkelhor (1990) has concluded that boys who experience sexual abuse are more likely to respond with aggression or substance abuse, while girls are more likely to become depressed. Cutler and Nolen-Hoeksema (1991) estimated the extent to which sexual abuse occurring before the age of 18 accounts for gender differences in depression in adults. The authors estimate that possibly 35% of the differences in rates of depressive disorders in adults might be attributable to the higher rate of sexual abuse before age 18, and lifelong depression in women. They were not able to distinguish the effects of sexual abuse in childhood and adolescence because the meta-analysis data did not separate by age of the victim. Nevertheless, being a victim of sexual abuse can lead to a feeling of helplessness, chronic fear, and social stigma (Carmen, Rieker, & Mills, 1984) and therefore lead to depression. Further awareness of this experience is germane to the understanding of self- and interpersonal schema as it is probable that victims of abuse develop schemas regarding the extent to which others may be trusted, as evidenced by Young and Lindemann's (1992) Mistrust/Abuse and Vulnerability to Harm schemas. Being physically or sexually abused are strong risk factors for developing depressive symptoms, but there are other ways in which girls and women are made to feel

helpless or devalued in our society (Gove & Herb, 1974; Hill & Lynch, 1983; Nolen-Hoeksema, 1990; Nolen-Hoeksema & Girgus, 1994). Another area of risk factors for female adolescents may concern societal roles.

2.2.3.6.2. Female roles within society.

Roles, or constellations of socially acceptable behavior, are present in nearly every aspect of an individual's life. In order to examine these factors, four topics are addressed: female roles in relationships with others, expected roles and lack of opportunity in school and work, role messages from family, and role overload.

2.2.3.6.2.1. Female roles in relationships.

Researchers have found relationships between female gender roles and a lack of psychological well-being (Baron & Peixoto, 1991; Hart & Thompson, 1996; Jack, 1991, Lamke, 1982). Hart and Thompson (1996), with a sample of 14-year-olds from a school population, studied three gender role related variables, “instrumentality”, “silencing-the-self”, and “ruminative style”, to learn more about the gender differences in depressive symptomatology. Spence (1984) defined instrumentality as encompassing socially desirable self-assertive traits (e.g., risk-taking, dominant, self-reliant, forceful) that are most often connected with masculine ways of being. Expressiveness, usually connected to feminine traits, consisted of more interpersonally oriented characteristics such as being sympathetic, understanding, and gentle. There is strong support for the notion that psychological

well-being is associated with instrumental rather than expressive traits (Waelde, Silvern, & Hodges, 1994; Whitley & Gridley, 1993). In an adolescent sample, Lamke (1982) found that high levels of instrumentality were associated with high self-esteem for both boys and girls. However, expressiveness was not associated significantly with self-esteem. Similarly, Baron and Peixoto (1991) found that adolescents with high scores on sociotropy (the socially undesirable aspects of the feminine gender role) reported more depressive symptomatology than did those with lower scores.

Jack (1991) developed a theoretical model, based upon the work of Chodorow (1974, 1978) and Gilligan (1982), around the notion of silencing-the-self, to account for the gender differences in depression. Although Jack's research has been conducted with adults, empirical studies with adolescents seem to mirror that of adults. Her theory purports that as women organize their experience around their relationships with others, expression may be related to the value they place on establishing and maintaining close relationships (Gilligan, 1993; Jack, 1991). Influenced by cultural norms, women's schemas regarding appropriate female roles may play a part in a vulnerability to depression. Silencing-the-self consists of deferring to the needs of others, censoring self-expression, repressing angry feelings, judging the self against a selfless ideal, and censoring experiences to maintain safe, close relationships (Jack & Dill, 1992). Hart and Thompson (1996) assert that silencing-the-self is an extreme and unhealthy aspect of the feminine gender role as such characteristics are associated with decreased levels of well-being (Jack & Dill, 1992; Thompson, 1995). Hart and Thompson (1996) found that instrumentality was

correlated negatively with silencing-the-self for both sexes and with depressive symptoms for boys. Low instrumentality and undesirable feminine characteristics were associated with increased symptomatology. During adolescence, girls become acutely aware of what is expected of them as women and respond to societal cues to conform appropriately (Chodorow, 1978; Gilligan, 1982; Wichstrom, 1999).

In summary, research with both women and girls seems to point to a possible vulnerability to depression due to maladaptive, yet socially expected, behaviors that comprise female gender roles in relationships. In addition to unhealthy ways of being in close relationships with others, restricted choices and opportunities in work or school may also present a risk factor for girls.

2.2.3.6.2.2. Expected roles for girls and lack of opportunities in school.

Nolen-Hoeksema (1990) highlights that women experience a lack of choices with respect to the roles they maintain within society. In most cultures and for thousands of years, men and women have held different social roles. As Nolen-Hoeksema (1990) writes:

...theorists have argued that women and the work they do have been less highly valued than men and the work they do. As a consequence, women have less power to influence society and less freedom to choose what role to play. Women's lack of power also leads to frequent victimization in the workplace and at home by men who have

been given authority over them. According to the social-role theories..., women's inferior social status and lack of power in society contribute to their vulnerability to depression. (p. 78)

Some theorize that there may be links between such rigid roles and this inaccessibility to opportunity and female's depression. Beginning in early adolescence, girls may encounter greater expectations to conform to a restrictive social role, and such expectancies may contribute to their tendency toward depression (Gove & Herb, 1974; Radloff, 1975). These restrictive roles seem to address what girls should do and how they should be. Gurian (1987) reviewed the literature and found that teachers reward girls more for proximity to the teacher and dependent behavior while boys are rewarded more for actions producing results. Gove and Herb (1974) propose that as girls enter adolescence the pressure from parents and others to pursue stereotypically feminine activities and occupations increases and decreases for stereotypically masculine activities and occupations. For girls, choosing to participate in female-typed activities may lead them to lower-paying jobs and becoming married with children at a young age. These factors are individually associated with an increased risk of depression (Nolen-Hoeksema, 1990). Parents typically encourage independence and achievement in their sons and nurturance and nonassertiveness in their daughters. Hill and Lynch (1983) refer to this push of sex-role socialization and adoption as *gender intensification*. In addition, Gove and Herb (1974) state that girls who assert their intelligence and pursue stereotypically masculine activities may be rejected or teased, especially by boys, which might lead to their tendency to develop

depressive symptoms. Block, Gjerde, and Block (1991) examined antecedents of depressive tendencies at age 18 in a longitudinal study of 88 adolescents. The researchers found a significant positive correlation between intelligence and depressive symptoms. For boys, however, there was a small negative correlation between intelligence and depressive symptoms. These results indicate that being intelligent may be a possible risk factor for depression for girls and a slight protective factor for boys. So, in essence, girls may be at risk if they subscribe to the expected role and may be at risk for rejection and subsequent depression if they do not. The pressure for girls to value physical beauty, poise, modesty, marriageability, and femininity above all other accomplishments is tremendous (Brown & Gilligan, 1992).

To summarize, in both close relationships with others and in work and school, girls may be at increased risk for feeling helpless and depressed due to societal expectations for their behavior. Within the family is yet another setting in which rigid roles and expectations may be transmitted.

2.2.3.6.2.3. Role messages from family.

It is believed that self- and interpersonal schema are formed during our earliest experiences in life. Thus, examining the roles girls have within their families may be a necessary endeavor in understanding the gender differences in depression. Eccles, Jacobs, and Harold (1990) conducted a longitudinal study of children ages 5 to 12 who were recruited through a school district. They found that parents' perceptions of their daughters' abilities at stereotypically masculine activities, such as

math, were lower than their daughters' actual abilities. Girls were also given less encouragement for pursuing their aspirations (Nolen-Hoeksema & Girgus, 1995), and were given more help in problem-solving, regardless of whether they needed the help (Rothbart & Rothbart, 1976). Girls may internalize these expectations and begin to doubt their own competence. Feelings of inadequacy may lead to an increased risk of depressive symptoms. In several studies of 6th, 8th, and 10th graders (Girgus, Nolen-Hoeksema, Paul, & Spears, 1991; Girgus, Nolen-Hoeksema, & Seligman, 1989), children identified the activities in which they were involved. The activities were grouped by level of stereotypic gender. Involvement in stereotypically feminine activities, but not involvement in stereotypically masculine activities, was associated with depressive symptom scores.

Parents typically encourage independence, achievement, and behavioral expression in their sons, while girls appear to be socialized to be cooperative, dependent, nurturing, and nonassertive (Hetherington, Cox, & Cox, 1978; Huston, 1983). Parents allow their sons more independence than their daughters (Block et al., 1991), and girls gain independence from their families more slowly (Huston & Alvarez, 1990). Girls receive closer monitoring of their activities (Huston & Alvarez, 1990) and have more disclosing (Noller, 1994) and more conflictual (Montemayor, 1982) relationships with their parents. These findings highlight a situation in which a young woman may receive a message of helplessness from her parents, as she feels trapped or unable to change her predicament, which may be a risk factor for developing depression. Girls may internalize these expectation messages, which

originate from their parents, and begin to doubt their own competence. These messages of expectation may deal with ideas about themselves, the world, and the future, reflecting the cognitive triad, which is described in the following section. These messages may be communicated explicitly or implicitly through some of the parental behaviors mentioned previously. Negative feelings about themselves (e.g., my parents think I am incompetent), the world (e.g., my parents will not grant me independence so the world must be an unsafe place), and the future (e.g., my parents underestimate my abilities so there must not be much hope for my future) may lead to an increased risk of depressive symptoms. Taken together, it seems that a family context with negative role messages may be a potential breeding ground for the development of negative self- and interpersonal schema. Furthermore, this environment may be more detrimental for girls than for boys. In thinking about the messages girls receive regarding their future, the concept and possible impact of role overload should be considered.

2.2.3.6.2.4. Role overload.

Although role overload is a phenomenon experienced by female adults, young women are exposed to it by their mothers, aunts, and teachers. It is thought that women's overload of roles and responsibility may play a part of women's higher rates of depression. It is also well known that despite the fact that two-thirds of women work in and out of the home today; women are still carrying the burden of most of the in-home responsibilities as well. Perhaps the burden of this dual

responsibility places women at risk for developing depressive symptoms. This phenomenon is called the role overload theory (Gove & Tudor, 1973). In reality, most women are fulfilling two full-time jobs. Gove and Tudor (1973) suggest that when individuals are asked to handle more roles than they can satisfactorily complete, they may experience depressive symptoms, unable to live up to expectations in all areas of functioning. It is unknown to date how these adult women's experiences may or may not influence adolescent girls. However, from a social learning perspective, observational learning occurs through imitation of an adults' behavior, even when the adult is no longer present or directing the behavior at the child (Bandura, 1978). Abstract modeling may occur when a child abstracts a general rule of behavior from specific example behaviors. Vicarious reinforcement may occur when a child is encouraged to perform a behavior because he or she observes another individual being reinforced for it. It is conceivable that girls "learn" from observing their mothers and other significant women in their lives that they too will experience rigid roles and role overload, as they grow older. While the aforementioned risk factors of expected roles and role overload have been discussed separately, it is important to note that, more often than not, an interaction of variables most likely accounts for the higher prevalence rates of depression in girls and women (Brems, 1995). There are, however, some groups that do not exhibit these aforementioned gender differences. Examination of these populations may hold a key to better understanding these gender differences.

2.2.3.6.2.5. *Exception populations: Possible role differences?*

Although the findings have been mixed, some studies have found a striking absence of sex differences in depression among college students (Gladstone & Koenig, 1994; Gotlib, 1984; Hammen & Padesky, 1977). Baron and Matsuyama (1988) surmise that perhaps women in this category have felt more equal social roles within the college milieu, have rejected societal expectations, and pursued their own interests. It is possible that these college relationships are more equitable and less typical of established social roles than those of other populations, which could account for the lack of gender differences identified in the college sample. However, some contradictory evidence has been found as well. Hankin and colleagues (1998) conducted a longitudinal study with a large sample of 11- to 21-year-olds. They found depression rates to be equal in a college student subsample and a non-university subsample, hinting at the possibility of methodological problems of previous studies or an artifact of changing times.

A lack of gender differences in depression has also been found among the Old Order Amish (Egeland & Hostetter, 1983). There are some questions regarding the validity of the study; however, if the differences are accurate, Amish social roles may contribute to this finding. While their roles are strictly fixed, the work of both men and women is equally valued. The role of managing the home and taking care of children, a traditionally female role, is one that is prized and respected.

Rates of depression seem to increase for men and decrease for women as they age. Theorists posit that later life for men involves the loss of their livelihood

(retirement) and may strip them of what they feel brings them worth in the world. For women, however, it may be the first time they can pursue their own interests without needing to put others' needs before their own. This may provide a liberating, refreshing experience. It is important for research to continue to investigate exceptions to these gender differences. Perhaps doing so will shed light on possible factors of resiliency in gender differences in depression.

To summarize, there are numerous social and societal factors that have been investigated with regard to a possible connection to gender differences in depression. A significant association has been found between sexual abuse and the diagnosis of major depression or dysthymia. Certain aspects of female social roles, within close relationships and within the broader society of school and work, have been implicated as possibility adding to vulnerability for depression in women. Explicit and implicit messages from parents and teachers communicate what is socially acceptable and expected of teenagers. Some progress has been made in studying populations lacking these gender differences, and researchers have been encouraged to further this fruitful line of investigation. As many models of etiology of the gender differences in adolescent depression have been covered, it is helpful to place these findings into the framework outlined by Nolen-Hoeksema and Girgus (1994).

2.2.4. Evidence Supporting Developmental Models of Emergent

Gender Differences in Depression

The first of Nolen-Hoeksema and Girgus's (1994) models proposes that the same factors cause depression in boys and girls but that these factors become more predominant in girls than in boys during adolescence. Most studies of individual characteristics, such as assertiveness (e.g., Dweck & Bush, 1976), coping (e.g., Compas, Malcarne, & Fondacaro, 1988; Koenig & Juhasz, 1991), and interaction styles (e.g., Allgood-Merten, Lewinsohn, & Hops, 1990), are established before the gender differences emerge and have failed to support this model. Although there are differential biological changes in girls and boys, there is little evidence suggesting that these changes contribute to the development of depression (e.g., Brooks-Gunn & Warren, 1989). The strongest support for this model involves the rate of sexual abuse and societal expectations that are unique to girls. Clearly, more research is needed with regard to this model.

Nolen-Hoeksema and Girgus's (1994) second model suggests that the factors leading to boys' depression are different than those leading to girls', and that those for girls are more common during early adolescence than those for boys. Variables tested regarding this model have been "peer popularity, emotional reactions to loss of relationships, attributional style and learned helplessness, instrumentality, ruminative coping, body dissatisfaction, sexual abuse, and time spent in feminine activities" (p. 438). All of these are correlated with depression for both boys and girls, contradicting the researchers' second model.

The strongest evidence to date supports Nolen-Hoeksema and Girgus's (1994) third model, and the authors believe that research in this area should be conducted with this model in mind. Model 3 describes that it is the interaction between the specific challenges of adolescence and the unique risk factors for girls that lead to the development of depression. Much of the biological and social data reveal greater risk for girls than boys (e.g., Maccoby, 1990; Petersen et al., 1991). Nolen-Hoeksema and Girgus write, "We suggest that what happens in early adolescence is that these preexisting gender differences interact with increased challenges and changes in the conditions of girls' lives to yield the gender differences in depression that emerge at that time" (p. 439). This interpretation allows for the effects of individual differences between girls as not all girls become depressed during adolescence. Those who become depressed may possess vulnerabilities and face enormous challenge while others may not experience those risk factors or face such challenge. The authors feel strongly that research should consider this interaction theory and pursue knowledge accordingly.

Several researchers have designed studies to address this integrated model of the development of depression. Brooks-Gunn and Warren (1989) found that pubertal stage was not related to symptoms of depression or social withdrawal in a sample of adolescent girls. However, negative life events were more likely to be associated with these symptoms in pre- than in postmenarcheal girls. Early maturing girls (Petersen et al., 1991) and late maturing boys (Nottelmann et al., 1987) report more depressed affect, again indicating that the social ramifications of puberty are not to be ignored.

Ewart and Kolodner (1994) found that negative affect, including depressed mood and anger, was related to prevailing blood pressure levels in adolescents. Further, this association was found to be moderated by gender, a nonverbal expressive style, and social setting (e.g., in a classroom vs. with friends). Drawing on a general stress-diathesis model, Robinson, Garber, and Hilsman (1995) found that a negative attributional style interacted with recent stressors to predict depressive symptoms but not externalizing behavior problems. In summation, researchers have begun to cross discipline lines in hopes to more effectively investigate these multiple etiological pathways.

It is important to consider whether the developmental timing of the shift in gender differences in depression is also observed among other psychological disorders or whether this timeline is unique to depression. If the rates of other disorders increase for girls around age 13 as well, then it would be more appropriate for research to concentrate on studying general psychopathology. A study of anxiety disorders in adolescents (Lewinsohn, Gotlib, Lewinsohn, Seeley, & Allen, 1998) found that girls were more likely to report current or past anxiety disorders than were their male peers. In addition, girls developed these disorders at a faster rate than boys, with twice as many girls experiencing their first anxiety disorder before 6 years of age. These data indicate that anxiety disorders develop before the onset of depressive disorders. Finally, this study's findings suggest that depression-specific factors may present a distinctive vulnerability for girls developing depression beyond the usual risk factors for general psychopathology. Similarly, Kaslow, Stark, Printz,

Livingston, and Tsai (1992) used a multiple-gate screening procedure with a sample of children from a school population. Participants were placed into one of four experimental groups: depressed only, depressed and anxious, anxious only, and control. Results demonstrated that diagnostic group membership could be determined based on their scores on a measure of their cognitive triads. Depressed and comorbidly depressed students reported more negative thoughts about the self, world, and future than the anxious or control children. Thus, like Lewinsohn et al.'s (1998) results, research has been able to isolate that which is more characteristic of depression (e.g., negative cognitive triad) than of psychopathology in general.

2.2.5. Summary of Gender Differences in Depression Literature

One distinct feature of adolescent depression is the emergence of gender differences in rates of depressive disorders. Studies of depression in children suggest that, before adolescence, there is a tendency for boys to have an equal or greater number of depressive symptoms than girls, but by age 13 or 14, girls are more likely to report these symptoms (Hankin et al., 1998; Nolen-Hoeksema et al., 1991; Petersen et al., 1991). Many models of etiology and theories of the development of depression have been proposed and investigated, specifically addressing the issue of the dramatic emergence of gender differences. Biologically-related vulnerabilities, such as dysregulation of neurotransmitters, neuroendocrine processes, dysregulation of biological rhythms, body dissatisfaction, and timing of pubertal changes have been explored. Psychoanalytic theories have considered the effects of the loss of a loved

one, as well as potential future loss, as being a possible diathesis to developing depression. Behavioral theories have conceptualized depression as a reaction to low rates of “response-contingent positive reinforcement.” Similarly, the notion of the negative transactional patterns between depressed individuals and those around them has been posited. Cognitive theories of depression deal with covert behaviors, such as attitudes, self-statements, memories, attributions, and beliefs (Gotlib & Hammen, 1992). Rehm (1977) proposed that depressed individuals exhibit deficits in three aspects of self-control, self-monitoring, self-evaluation, and self-reinforcement. Problem-solving theories suggest that depression may result from ineffective problem-solving abilities, such as rumination. The reformulated helplessness theory states that the degree of helpless feelings or depression an individual feels depends on the type of attributions they make. If negative events are attributed to characteristics within the individual and thought to be permanent and unchanging, helplessness may develop and self-esteem may decrease. Lastly, social and societal influences are discussed, such as the effects of sexual abuse and rigid, maladaptive roles that women and girls experience in multiple settings (i.e., in school, work, and close relationships). While several developmental models for these gender differences have been proposed (Nolen-Hoeksema & Girgus, 1994), greatest support has been found for the “diathesis-stress” model. Diathesis-stress models propose that depression is regarded as a function of the interaction between personal vulnerability, many of which were previously discussed, and external stressors. Nolen-Hoeksema and Girgus (1994) believe that it is the interaction between specific challenges of adolescence

and the unique risk factors for girls that lead to their higher prevalence rates of depressive symptomatology.

One area of research that may illuminate the differing cognitive processes between male and female adolescents is that of self- and interpersonal schema. In joining these two concepts together, the cognitive-interpersonal pathway to depression is described. Thus, the next sections define and expand upon these constructs and the empirical support they have received.

2.3. Self-Schema

2.3.1. Beck's Cognitive Theory of Depression

One of the most influential psychological models of depression is A. Beck's cognitive model, which hypothesizes that our emotions and behaviors are influenced by our perception of events. A. Beck (1967) asserted that it is not simply a situation in and of itself that determines our feelings but rather the way in which we construe and interpret the situation. The hallmark of A. Beck's model is an insidious, negative self-referent pattern of thinking about the self, world, and future. This style of thinking is related to the severity, duration, and recurrence of depressive symptomatology. A. Beck's early theory contained three central concepts that explain the psychological foundation of depression: schemas, the negative cognitive triad, and cognitive errors or faulty information processing (A. Beck, 1967; A. Beck et al., 1979; Clark et al., 1999).

2.3.1.1. Schema

The first element of A. Beck's theory involves the construct of schema. Clark and colleagues (1999) write, "Schema are relatively enduring internal structures of stored generic or prototypical features of stimuli, ideas, or experiences that are used to organize new information in a meaningful way thereby determining how phenomena are perceived and conceptualized" (p. 79). Blatt (1991) describes cognitive schemas similarly by stating, "[they] are long-term, enduring psychological structures, modes of processing and organizing information, including affects, that provide templates that guide and direct an individual's interactions with the interpersonal and impersonal world" (p. 450). Schemas contain general knowledge about a particular domain, including details regarding the relationships among attributes of that domain, as well as examples of it (Taylor & Crocker, 1981). They are hierarchically organized and interrelated (Hollon & Kriss, 1984). Schemas are comprised of two components that simultaneously interact, an ideational one and an affective one (Taylor & Crocker, 1981; Turk & Speers, 1983). In this way, cognition influences affect and vice versa. A. Beck and Freeman (1990) propose that different types of schemas have different functions. For example, cognitive schemas involve abstraction, interpretation, and recall while affective schemas handle the creation of feelings. Motivational schemas focus on wishes and desires, and control schemas include self-monitoring and self-regulatory behaviors.

The most fundamental schema is the self-schema, which contains beliefs about the self, also known as core beliefs. In depressed individuals, the self-schemas

ordinarily hold the belief that the self is either unlovable or helpless, or both (J. Beck, 1995). There is a connection between the negative cognitions of a depressed individual and his or her affect, merely continuing the cycle of depressive thinking and feeling (A. Beck, 1967). When a depressogenic schema is active, it influences the information processing patterns of the individual by adding data to support the already negative view of the self (A. Beck et al., 1979; Clark et al., 1999). The depressed individual will interpret experiences and expectations based on the schema's themes of self-blame, personal defects, and personal deficiency (A. Beck, 1967). In severely depressed individuals, the depressogenic schema will direct information processing such that almost all environmental stimuli are incorporated into the negative schema, even if the information does not fit.

Researchers in this area have hypothesized about the content of negative self-schemas. J. Beck (1995) asserts that the most fundamental self-schemas fall into two categories, "unlovable" and "helpless" core beliefs. Examples of "unlovable" core beliefs include statements such as "I am unlovable", "I am undesirable", and "I am unworthy." Examples of "helpless" core beliefs are "I am helpless", "I am incompetent", and "I am a failure."

From a slightly different perspective as he studies personality disorders, Young has also defined and described self-schemas associated with psychopathological symptoms (Young, 1994, 1999; Young & Lindemann, 1992). Several self-schema categories delineated by Young and Lindemann seem to be relevant to A. Beck's negative self-schema such as, Defectiveness/Shame,

Dependence/Incompetence, and Failure. Although these researchers have labeled their categories differently, what they share in common is the notion that negative thoughts about the self influence both information processing, one's affect, and most likely, one's interactions with others. Although more about information processing and interpersonal functioning is discussed later, how self-schema is related to the cognitive triad must be explained.

2.3.1.2. Cognitive Triad

The second component of A. Beck's theory is the cognitive triad. This construct includes the pattern of interpreting events about the self, the world, and the future (A. Beck et al., 1979). Depressed individuals sustain a negative self-concept by attending to their faults and negative attributes. They also interpret their interactions in the world as reflecting their personal deficits and signs of being unworthy of positive regard. Concerning the future, they will expect the negativity and deprivation which they have previously experienced as sure to continue, which may lead to hopeless feelings (A. Beck, 1967). The negative cognitive triad is supported and perpetuated by information processing errors.

2.3.1.3. Information Processing

Schematic processing is thought to include four processes: *selection* of the information available from the environment, *abstraction* of the meaning of the information, *integration* of the meaning with what already exists in the individual's

memory, and *interpretation*, in which the information is altered, distorted, or enhanced by other factors (Alba & Hasher, 1983). Bricker and colleagues (1993) suggest that there are three processes that serve to perpetuate a schema: schema maintenance, schema avoidance, and schema compensation. Schema maintenance refers to the cognitive distortions and maladaptive behavior patterns that directly serve to propagate the schema. Schema avoidance refers to the cognitive and behavioral strategies an individual utilizes to try to avoid the activation of a schema and the related affective experience. Schema compensation refers to cognitions or behaviors that overcompensate for a schema and are the opposite of what would be expected on the basis of the schema itself.

Maladaptive or negative schemas interact reciprocally with an individual's processing of information. Systematic errors in depressive thinking reinforce the individual's negative schemas despite the presence of contradictory evidence (A. Beck, 1967). One cognitive process that influences schemas is the confirmatory bias, which refers to our general tendency to encode, process, and retrieve schema-consistent information (e.g., Swann & Read, 1981). Overgeneralization is an error in which an exception to the rule is cited as being reflective of the norm. As expected, depressed individuals tend to magnify faults and minimize positive events in their thinking. Arbitrary inference, another processing error, refers to the individual drawing conclusions about situations without evidence or support for them. Depressed individuals also engage in selective abstraction, a process in which details are removed from a context and contradictory facts are ignored. Furthermore,

depressed individuals are likely to personalize information when, in reality, it may have had little relation to them at all (A. Beck et al., 1979). Absolute, dichotomous thinking is also common in depressed people.

An individual's cognitions and processing errors affect one's behavior. For example, negative cognitions about one's ability to perform a certain task may cause excessive worry. This heightened anxiety and arousal about the task may render the individual less capable of actually performing the task, thus reinforcing the person's negative thoughts about him or herself. This confirmation may cause the individual to avoid the difficult task altogether. A vicious cycle begins and is maintained in this way.

In summary, maladaptive schemas and information processing errors, combined with negative cognitions about the self, world, and future, affect one's thoughts, emotions, and behavior. The result of this interaction is the possibility of the development of a depressive disorder. It is thought that schemas are formed long before adolescence, during the first few years of an individual's life, and they are proposed to develop within the family environment.

2.3.2. Development of Schemas During Early Family Experiences

According to A. Beck et al. (1979) and others (e.g., Freeman, 1986; Young, 1994), faulty information processing, which leads to the development of depressive schemas, may begin at a very early age. Learning experiences that children have within their family may breed opportunities for these depressive schemas to develop.

In addition to cognitive features within the individual, depression and cognitions appear to be related to family and interpersonal factors (Rudolph, Hammen, & Burge, 1995). Schemas, in general, are formed and maintained within interpersonal contexts (Joiner, Coyne, & Blalock, 1999). These beliefs or rules determine expectations for oneself, as well as the way in which others should be approached. Young and colleagues (Bricker, Young, & Flanagan, 1993; Young, 1994) describe the early maladaptive schema (EMS) as:

[A] long-standing and pervasive theme that originates in childhood; defines the individual's behaviors, thoughts, feelings, and relationships with other people; and leads to maladaptive consequences. Core schemas are developed in early childhood as a result of ongoing noxious experiences, such as severe deprivation, rejection, abuse, instability, criticism, or abandonment. Early maladaptive schemas are therefore central to the person's sense of self and generate high levels of negative affect when activated. (p. 89, Bricker et al., 1993)

Young and colleagues identify several characteristics of the EMS. The schemas serve as models for later experiences and develop throughout life as the individual bases his or her thoughts, feelings, behavior, and interpersonal relationships on them (Young, 1999). The nature of the schema is dysfunctional as it facilitates psychological distress for the person and is a product of enduring dysfunctional experiences with attachment figures during one's early years. Schemas become familiar and

comfortable to individuals, which renders the schema robust and resistant to change (Young, 1999). EMS are absolute, unconditional, and highly rigid. When events related to the EMS encroach on the individual, the schema will become activated. Usually, the activation of the schema brings on strong affect accompanied by various psychological problems (Young, 1999).

Cognitive representations of relationships are thought to guide information processing, which impacts the view of self and others, especially in close relationships (Rudolph et al., 1995). There is a growing body of evidence that suggests a link between depressive cognitive style and family relationships. Hammen and Rudolph (1996) reviewed the childhood depression literature and concluded that children may internalize negative self-views based upon critical interactions with their parents. Similarly, Kendall (1991) hypothesizes that children derive personal meaning from significant experiences in their lives. These influential experiences communicate messages to the child, which become structuralized as schemas when they occur repeatedly. Stark, Humphrey, Laurent, Livingston, and Christopher (1993) wrote:

[In depressed children,] negative schemata about the self, world, and future develop as a result of negative evaluative statements directed at the child from parents, from interactions that communicate rejection, and an overreliance on punitive parenting procedures that once again communicate to the child that he or she is “bad.” (p. 883)

Similarly, Garber and Kashani (1991) assert that social interactions, such as direct communication, modeling, and reinforcement, may provide experiences through which children develop their attributional styles, expectations, schematic processing, and values.

2.3.2.1. Family as a More Salient Environment for Whom?

As previously discussed, the family is typically the primary and influential learning environment for children and adolescents. However, there is conflicting evidence regarding for whom the family is a more salient context, for boys or for girls. Some findings indicate that high levels of family cohesion and supportive family relationships protect girls more strongly than they protect boys (Avison & McAlpine, 1992; Rubin et al., 1992; Slavin & Rainer, 1990; Windle, 1992). It is possible that this more salient familial context predicts girls' greater sensitivity to the quality of their familial relationships. Experiencing a change in the family (such as parental death or divorce) was related to depressed affect for girls, but not boys during early adolescence (Petersen et al., 1991). Girls who are from single parent families and are children of divorce evidenced higher rates of depression and anxiety and more protracted recovery from depressive episodes than do intact family children (Feldman et al., 1988). Girls tend to be more oriented to and invested in interpersonal relationships than are boys (e.g., Gilligan, 1982; Jones & Costin, 1995). This greater centrality of interpersonal concerns may increase adolescent girls' vulnerability to depression (Hops, 1995; Leadbeater, Blatt, & Quinlan, 1995). Girls tend to spend

equal amounts of time with their parents and their peers. In contrast, boys tend to spend significantly more time with their peers (Montemayor, 1983). Together, these findings suggest that the family may be a more influential context for girls than for boys with respect to the development of their schemas.

In contrast, some studies have found the exact opposite, that close family support and relationships may be a buffer more so for boys. For instance, Petersen and colleagues (1991) found that a close relationship with one's parents moderated the negative impact of stressful early adolescent changes for boys. The authors described one possible interpretation of their results by stating:

[The] enhancing effect among boys of negative family events during early adolescence on subsequent changes...indicates that these events may lead...to a change in the developmental trajectory of depressed affect among boys that has a continuing effect on development long after the occurrence of the events. (p. 266-7)

Similarly, Rutter (1981) found that boys who experience stressful family situations learned skills to reduce their depressed affect. One interpretation of these data is that perhaps girls do not learn these same coping skills as their male peers do. However, it is important to consider the higher rate of externalizing disorders among young boys. For example, both Oppositional Defiant Disorder and Conduct Disorder are far more common in boys than girls (e.g., APA, 1994). An alternative explanation of the aforementioned results is that girls are more likely to develop depressed affect in

response to family stressors while boys are more likely to develop externalizing symptoms. Thus, in response to family turmoil, the boys might not be coping more effectively, but rather differently, than the girls.

The data from a longitudinal study by Sheeber, Hops, Alpert, Davis, and Andrews (1997) strongly suggest a causal influence of family relationships on depression for both male and female adolescents. In contrast to previously cited research (Avison & McAlpine, 1992; Rubin et al., 1992; Slavin & Rainer, 1990; Windle, 1992), Sheeber et al.'s (1997) analyses revealed that girls and boys benefited similarly from supportive and nonconflictual family relationships. Though Sheeber et al. (1997) expected the relationship between family characteristics and adolescent depressive symptomatology to be stronger for girls than boys, it was not. It should be noted, however, that the methodology of this study was unique in that it relied on observational data from researchers, as well as data from the family members.

Sheeber et al. write:

Thus it is possible that, though girls' perceptions of the supportiveness of their home environments is more closely related to their depressed symptomatology than are boys' perceptions, the actual quality of family interactions, as assessed with a multisource construct, impacts boys and girls similarly. (1997, p. 342)

These aforementioned findings are mixed and therefore difficult to integrate. It seems that boys are protected to a certain degree. They are undoubtedly at less risk for

developing depression during adolescence than girls. Some assert that it is possible that negative life experiences provide boys with the opportunity for learning essential coping skills and are therefore less likely to develop depressive symptoms.

Alternatively, in consideration of the imbalance of gender differences between externalizing and internalizing behavior, it is possible that the aforementioned coping skill hypothesis is not a sufficient explanation, requiring further research on the topic.

With such varying results in this area, it is clear that continued study is vital. With the familial context as the milieu in which self-schema develops, a review of the empirical work with this construct (and A. Beck's related constructs) is in order.

2.3.3. Empirical Findings Regarding Components of Beck's Theory

2.3.3.1. Self-Schema and Depression

Of the three parts of the cognitive triad, the schemas related to the self are of greatest significance in the development of a depressive disorder. Hammen and Zupan (1984) described self-schema as "a body of knowledge stored in long-term memory which both facilitates and biases the processing of personally relevant information" (p. 598). Hammen (1991) hypothesizes that a negative view of self is the principal vulnerability to depression. A negative perception of self may negatively affect one's views of interactions with others and of future events as a result of attributing unpleasant experiences to physical, mental, or moral failings within him or herself (Abramson et al., 1978; A. Beck, 1967; A. Beck et al., 1979).

Numerous researchers have reported a relationship between a negative view of self and depression in children and adolescents (Asarnow et al., 1987; Kaslow et al., 1992; Prieto, Cole, & Tageron, 1992; Sanders, Dadds, Johnston, & Cash, 1992; Stark et al., 1993). Hammen and Zupan (1984) investigated the applicability of the self-as-schema model to children, as had been done with adults, and examined the extent of negative self-schemas in depressed children. A depth-of-processing incidental recall memory task was employed. They found that children as young as 7 or 8 years of age make definite judgments about their traits. The results of this study confirmed the existence of a “self” in the memory of young children, which organizes information. Zupan, Hammen, and Jaenicke (1987) replicated these results with even stronger findings several years later. They found that depressed children viewed themselves more negatively than nondepressed children, as measured by self-descriptive endorsements and an incidental recall task.

Depressed children and children experiencing comorbid depression and anxiety reported a significantly more negative view of themselves than did anxious or control children (Kaslow et al., 1992). Similarly, Stark et al. (1993) were able to distinguish children with depressive disorders from children with anxiety on the basis of their self-referent cognitions. Depressed children reported a more negative view of self, world, and future than anxious children. Prieto et al. (1992) conducted a study with clinic-depressed, clinic-nondepressed, and nonclinic children ages 8 to 12. Participants made decisions regarding whether or not adjectives described them, followed by an incidental recall task. Subsequently, a recognition task asked them to

select the adjectives that were from the original list. On the incidental recall measures, depressed children again evinced less of a positive self-schema than did the other two groups. On the word recognition measures, depressed children demonstrated a less positive self-schema compared with the two nondepressed groups. On reaction time measures, no differences emerged among the three groups. Overall, results supported the relation of problematic cognitive self-schemas to depression in children and suggest that such schemas affect both storage and accessibility of new information. Kenny, Moilanen, Lomax, and Brabeck (1993), using structural equation modeling, found statistically significant pathways between view of self and depressive symptoms for both male and female eighth graders.

Allen, Woolfolk, Gara, and Apter (1996) found that the presence of negative self-schema was a stronger predictor of depressive symptomatology than was the absence of positive self-concept. These findings pose implications for treatment. Perhaps preventing the development of negative self-concept is a more important goal than enhancing positive self-concept, although it would seem that the two go hand-in-hand.

Although the work of Kuiper and colleagues has been carried out with adults, it has been central to the understanding of depressive self-schema and thus should be reviewed here. In examining the recall of self-referential adjectives, Derry and Kuiper (1981) found superior recall of depressed content adjectives for the depressed group, and superior recall of nondepressed adjectives for the nondepressed group. The reaction times for the groups were not significantly different. Although participants of

the two groups were attending to and recalling different words, they were doing so with equivalent efficiency.

In a replication of the previous study, Kuiper and Derry (1982) investigated the extent to which mild depressives and normal controls differed in their self-referent processing of personal information. They found that depressed college students had an enhanced recall of both types of content, positive and negative. In contrast, mild depressives exhibited enhanced self-referent recall for both types of content when compared to their recall for semantic adjectives. Nondepressed participants displayed superior recall only for self-referenced nondepressed adjectives. The authors maintain that the results suggest that mildly depressed students are intermediate in their self-schema between nondepressed participants who have nondepressed self-schema and clinically depressed participants who have a depressed self-schema. In a similar study, Kuiper and MacDonald (1982) showed that the reaction times for the decisions were significantly faster for the nondepressed students, suggesting that the presence of a distinct self-schema in the nondepressed participants allowed for more efficient processing, whereas the depressed group showed a slower reaction time due to a less well-defined self-schema. The work of these researchers has been especially beneficial in discovering the possibility of a continuum for depressive self-schema. Their results suggest that nondepressed individuals lie at one end of the continuum, processing nondepressed material quickly. At the opposite end of the continuum are the depressed individuals who process depressive content less rapidly. In between

these points lie those who either are moderately depressed or those who have not yet fully integrated a depressive self-schema.

2.3.3.2. Cognitive Triad and Depression

With respect to the world and future views of the cognitive triad, researchers have found that depressed children have a negative view of the world (Asarnow et al., 1987; Kaslow et al., 1992). This negative view of the world may include negative interpersonal schema regarding caretakers and others in general (i.e., “the world”). Depressed individuals tend to see the world as placing unreasonable demands on them and insurmountable obstacles before them. Depressed children also have negative expectations for and views of the future (Benfield et al., 1988; Kazdin, Rodgers, & Colbus, 1986). Depressed individuals believe that their sadness and problems will persist without end. Depressed children maintain constant expectations for failure.

In a study investigating the negative cognitive triad in a residential treatment population of adolescents, Sander, Stark, Joiner, and Schmidt (1999) assessed the cognitive triad of adolescents with internalizing disorders (i.e., major depressive disorder; major depressive disorder with attention deficit-hyperactivity disorder), externalizing disorders (i.e., conduct disorder; conduct disorder with attention deficit-hyperactivity disorder) and comorbid disorders (i.e., major depressive disorder with attention deficit-hyperactivity disorder; major depressive disorder, attention deficit-hyperactivity disorder, and conduct disorder; dysthymic disorder, attention deficit-

hyperactivity disorder, and conduct disorder). The internalizers possessed the most negative cognitive triads, followed by the comorbid group. The externalizers evidenced the least negative cognitive triads. These data suggest that the negative cognitive triad is specific to the depressive experience. Negative cognitions, such as those that form the cognitive triad, and dysfunctional schemas lead to, and are influenced by, errors in information processing.

2.3.3.3. Information Processing and Depression

Research has supported the hypothesized relationship between negative self-schema, distorted negative information processing, and depressive cognitions among depressed children (Hammen & Zupan, 1984; Prieto et al., 1992; Zupan et al., 1987). Garber, Weiss, and Shanley (1993) reported that greater levels of depressive symptoms were significantly associated with more negative automatic thoughts, dysfunctional attitudes, hopelessness, and more helpless attributional styles in adolescents. Specifically, these cognitive disturbances were associated with negatively biased information processing (Haley, Fine, Marriage, Moretti, & Freeman, 1985), which seemed to produce a distortion (i.e., misperception) rather than a deficit (i.e., absence of adaptive cognition) in self-evaluation (Kendall, Stark, & Adam, 1990).

2.3.3.3.1. Processing of evaluative information.

Another area of information processing that has been studied is the processing of evaluative information. The nature and effect of this feedback, particularly with children, seems likely to influence their view of self or self-schema. Roberts and Nolen-Hoeksema (1989) write, in studies of the effects of performance feedback, “...both boys and girls similarly respond to objective feedback about their performance” (Lenney, 1977). Studies show that boys receive far more evaluative attention in the classroom than girls, (Berk & Lewis, 1977; Etaugh & Hughes, 1975; Minuchin & Shapiro, 1983), more positive feedback (Shepherd-Look, 1982), and more negative feedback (Etaugh & Harlow, 1971; Lippitt & Gold, 1959; Shepherd-Look, 1982) than girls. Teachers direct more disapproval and scolding to boys than to girls (Elkin & Handel, 1988). The criticism boys receive is more often concerning their nonintellectual characteristics such as misconduct or insufficient motivation (Brophy & Good, 1970; Digman, 1963; Meyer & Thompson, 1956; Stevenson, Hale, Klein, & Miller, 1968). Dweck, Davidson, Nelson, and Enna (1978) illustrated that the less frequent use of negative feedback for girls, and its relevance to intellectual inadequacies, makes it difficult for girls to discount its ability relevance. Roberts and Nolen-Hoeksema (1989) write that in achievement settings with no feedback, however, boys and girls “show different interpretive biases when self-evaluating their competence” (p. 726). Boys show higher expectations and judge their performance more favorably than the girls do. Girls expect to do less well and self-evaluate more

negatively, despite being equivalently competent. It is thought that this more negative evaluation is linked to one's view of self, and thus self-confidence.

Self-confidence is another individual characteristic that has been investigated to understand possible gender differences in depression. Previous research has demonstrated that individuals who are less confident in the ability of performing a certain task are more influenced by others' evaluations (Shrauger, 1975). If females have lower self-confidence in their abilities, could the gender difference in expectancies account for the difference in the extent to which they are influenced by others? Results from a study by Roberts and Nolen-Hoeksema (1994) suggest not. Women had higher expectations for their performance than men on a speech task. However, women tend to excel in verbal areas so this finding was not surprising. Even though their expectations were higher than men's, they were still more influenced by the evaluations of others. These results indicate that self-confidence differences alone cannot explain the gender difference in others' evaluations in achievement settings.

In a study of youth, Ohannessian, Lerner, Lerner, and von Eye (1999) found that self-competence (i.e., social, academic, athletic, and perceived physical attractiveness) is inversely related to depression and anxiety for both boys and girls during early adolescence. Analyses revealed that self-competence is partially responsible for the emergence of gender differences in depression and anxiety during early adolescence (Ohannessian et al., 1999). Roberts and Nolen-Hoeksema (1994) suggest that "different experiences that girls and boys have with evaluative feedback

may lead to gender differences in beliefs about the informational value of others' evaluations of our competence" (p. 221). Although further research with adolescents in this area is warranted, some findings indicate that children's experiences with evaluative information may lead to gender differences in their beliefs regarding self-competence. Just as there may be differences in the processing of evaluative information in girls and boys, it is believed that there may be differences in the development of their self-schema as well.

2.3.4. Differences in the Development of Self-Schema in Males and Females

Markus and Oyserman (1989) describe the self-concept as "a mediator and regulator of thoughts, feelings, and actions" (p.100). These authors suggest that the structure and function of the self-schema will change depending on the nature of the social environment. Their ideas stem from research that examines the different processes males and females experience in coming to know "the self" from "the other." They write, "...men and women will construct different types of structures about the self and as a consequence their thought processes may diverge both in content and in form" (p. 101). Several theorists (Chodorow, 1978; Gilligan, 1982) have posited the notion that women are more likely than men to have a "collectivist," "sociocentric," "communal," or "connected" schema of the self. In contrast, men are more likely to have an "individualist," "egocentric," "independent," or "autonomous" schema of the self. As infants begin to create representations of their experiences, it is

thought that the self/other distinction becomes a salient one, one that will influence information processing at the most basic level.

Markus and Oyserman's theory is derived from concepts in three areas of literature. The first is that men and women have differing views of the self due to differences in their earliest experiences with others, in particular their mothers. Secondly, they examine the ways in which culture influences how we conceive of and come to know ourselves. Lastly, the authors apply research from cognitive psychology to determine how the self may be processed differently in men and women.

Markus and Oyserman begin their explanation of the differences in these two self-schemas by considering our earliest experiences. Ahnlund and Frodi (1996) write, "The experience of early social relationships may be a powerful determinant of later psychological growth and personality formation" (p. 231). According to Chodorow (1978), a mother experiences a son as an "other" and thus encourages him to view himself as separate from her. This experience is mutual in that the son quickly comes to know, in some very basic way, that he is "different" from his mother. Chodorow believes that this may be the starting point of males developing a self-schema based in autonomy in contrast to females developing a self-schema rooted in connection to others. She suggests that mothers and daughters, unlike mothers and sons, experience a sense of connection and similarity with one another as a result of their shared gender. Consequently, girls learn to attend to and deeply value relationships, as they see their mothers doing, more so than do men. For girls, the

importance of others is essential in defining the self, whereas for boys relationships are a means of verifying or affirming the self (Markus & Oyserman, 1989). A daughter quickly learns, that like her mother, to know herself is to know others. She becomes aware that attention to others is extremely important and that others are a significant source of self-referent information (Markus & Oyserman, 1989). Girls discover that by listening to, being empathic with, and sharing with others, they gain an understanding of who they are. With practice, girls become “experts” in knowing what others are thinking and feeling and soon become comfortable utilizing this knowledge about themselves and others.

Women are concerned with seeking mutuality and understanding in their relationships to validate themselves and others (Kaplan, 1986). Females tend to show greater empathic skills in the emotional domain (Mehrabian, Young, & Sato, 1988), show higher accuracy in decoding nonverbal messages from others (Hall, 1984), and receive higher levels of self-disclosure from others than do males (Dindia & Allen, 1992). Women also display their strong interpersonal skills in that both men and women tend to seek out females for comfort during stress (Matlin, 1993). In contrast, a separateness self-schema will direct boys’ attention to their own attributes and talents in which others will be used as a point of comparison. Individuality is accomplished by defining boundaries and differences between oneself and others. This autonomous self learns by comparing himself to others rather than learning about the self in relationship to others (Markus & Oyserman, 1989). The authors

stress that neither pattern of self-schema development is qualitatively better than the other; rather, they are simply trying to understand the different processes at hand.

The development of this relationship with mother, and the subsequent resolution of the Oedipal (Electra) complex, may involve the development of gender specific relationship skills in boys and girls. For example, boys must abandon their heterosexual bond with their mother and suppress and deny their feelings for her while girls may merely create an additional relationship with their father (Basch-Fahre, 1990; Crafoord, 1988; Frithiof, 1985, as cited in Ahnlund & Frodi, 1996 for translation purposes). Chodorow (1978) points out that boys must endure a difficult “breakup” of a relationship and grieve while girls are permitted to maintain their close relationship and identification object. In this way, boys’ essential perception of self may become isolated from others, whereas for girls the web of interdependent “others” and desire for proximity becomes the core of the female self. Lastly, Miller (1984) suggests that children develop an internal representation of their caretaker who is “the relating self”, a self in active interaction with others. Notably the most important characteristic of this caretaker is his or her sensitivity to others’ feelings. Although both boys and girls experience this caretaker, this similarity is encouraged in girls and discouraged in boys. The self perception of girls becomes based on interrelationships with others, whereas for boys it ultimately becomes one of self-sufficiency and autonomy.

Cultural differences between Western and Eastern notions of identity seem to parallel those of self-schema in Western men and women. The distinction is clear as

one group displays egocentric, individual-centered values while the other demonstrates a more sociocentric, contextual way of being. In Japanese culture for example, the goal is not to function independently but rather interdependently. For the individualistic, Western self, relationships with others are significant in that they permit one to appreciate his or her own uniqueness. From this perspective, independence is the most valued trait (Marsella, De Vos, & Hsu, 1985). The authors' explanation of these differences serves to highlight the powerful influence of social environment on the development of notions of self and other.

Some authors have found that research in cognitive psychology may serve to better understand the development of different self-schemas in males and females. Markus and Oyserman (1989) suggest that these distinct self-schemas "differ in their content, their structure, and their function" (p. 110). In addressing possible structure differences, Block (1984) has proposed that women excel at assimilating information into existing frameworks, while men are better at accommodating the structures to fit the incoming data. Visualization and orientation are two aspects of spatial abilities that have been researched heavily with regard to gender differences. Men have consistently performed better on spatial tasks, and it is posited that having a sense of something that is separate or not interrelated with its context may facilitate this skill as it mimics that of male notions of self (Markus & Oyserman, 1989). Women, with their connectedness schemas, may have more difficulty isolating a smaller part of a whole and attending to it alone. Along these same lines, Ruddick (1980) points out that mothers must accept growth and change as they parent their children. A mother's

schema for herself and her child must be flexible enough to deal with the developmental journey of her child. Another possible difference in function might be found in the power differential between men and women in our society. Miller (1984) suggests that women must learn to be keenly attuned to others and relate well with them in order to survive in the male-dominated society. Miller writes:

Subordinates, then, know much more about the dominants than vice versa. They have to. They become highly attuned to the dominants, able to predict their reactions of pleasure and displeasure...If a large part of your fate depends on accommodating to and pleasing the dominants, you concentrate on them. (p. 10-11)

While the previous discussions center mostly on the development of self-schema in the early years, several studies speak to these hypothesized gender differences in self-schema in adults. In a 1996 study of depressed Scandinavian adults, Ahnlund and Frodi found that the eliciting factor in female depression was most commonly the “threat to social bonds” whereas in male depression it was the “threat to self-esteem or self respect.” Several studies have spoken to the possibility that men and women may feel angry equally often, but in response to varying eliciting factors. Van Goozen, Frijda, Kindt, and van de Poll (1994) found that women were more likely than men to report that they would be angry as a result of impolite treatment and frustrations, rather than as a result of their own incompetence. In addition, women were more likely than men to feel sad or ashamed (as opposed to

angry) when given negative performance feedback. Men were more likely to feel angry in response to situations in which their achievement was thwarted, whereas women felt angry in response to situations where they felt interpersonally slighted or frustrated (Stapley & Haviland, 1989).

Moretti, Rein, and Wiebe (1998) conducted an interesting investigation into gender differences in relational self-regulation. They found that women showed lower levels of discrepancy between their actual-self and the hopes and wishes they believed others had for them than with their own hopes and wishes for themselves. In contrast, men showed equal levels of discrepancy with their own and significant-other ideal standards. Furthermore, discrepancy with one's own ideal standards was associated with increased dysphoria in both men and women, but discrepancy with others' ideal standards was associated with elevated levels of dysphoria in women only. These findings indicate a double risk for women; that is, women are at a disadvantage if they are unable to accomplish their own goals, but they also suffer if they cannot live up to others' goals for them as well. Within a family context, increased discrepancy between one's own ideals and those of one's parents contributed to greater dysphoria in women than men.

All of these results are congruent with the writings of Jack (1991), Chodorow (1978), and Gilligan (1982), who emphasize the importance of the relational features of women's self-representation and well-being. Their findings are in harmony with Cross and Madison's (1997) proposition that women are oriented to an "interdependent" self-concept. Women may tailor themselves to the perceived

expectations of significant others (Jack, 1991) because relatedness and connectedness is their model of self-development (Jordan & Surrey, 1986). Women's sense of self is organized around interpersonal themes of mutuality, connectedness, and intimacy (Jack, 1999). In doing so, females may place themselves at great risk for depression.

During adolescence, boys and girls develop the ability to simultaneously represent and compare multiple perspectives of the self (Higgins, 1989, 1991; Higgins, Loeb, & Moretti, 1995). However, girls may become engrossed with the task of constructing the self to ensure connectedness with others, even to the point of developing symptomatology. It is pointed out that females may be more heavily influenced by societal expectations than of those of their significant others (Baumeister & Sommer, 1997), which may contribute to the gender differences in depression.

In a seminal study by Kenny and colleagues (1993), eighth graders in a school population completed measures of attachment (i.e., self-report questionnaires regarding perceived emotional support from parents and emotional qualities in the relationship), view of self (i.e., self-esteem measure based on global self-worth and competence), and depressive symptoms (i.e., a self-report symptom inventory). Using structural equation modeling, the investigators tested models of pathways from and between attachment, view of self, and depressive symptoms, seeking the one with the best fit. In doing so, gender differences in pathways to depression relating to self-view were reported. Results suggested, for males, pathways to self-view were centered on scholastic accomplishments, while for girls, pathways focused on social

factors. In both pathways, view of self was related to depressive symptoms, but the supplementary factors that contributed to self-view in the study were different for males and females, indicating varying risk factors for these two groups.

While this investigation made an important contribution to the literature regarding the integration of cognitive and interpersonal factors related to depression in adolescents, there are several limitations. The limitation of greatest significance to this study concerns the measurement of “view of self”, as an instrument traditionally used to measure self-esteem was utilized (Harter, 1988). While decreased self-esteem may be associated with depressive symptoms, core self-worth or negative self-schemas are not thought to be equivalent to low self-esteem, but to be deeper and more pervasive (J. Beck, 1995). Therefore, while the findings of Kenny et al. (1993) greatly enhance our understanding of the relationships between cognitive and interpersonal factors of depression, other methodologies, such as utilizing an assessment instrument with greater depth, would offer further contributions to the literature. With that in mind, a description of the commonly used methods of assessing self-schema is now appropriate.

2.3.5. Assessment of Self-Schema

The most commonly used tools for assessing self-schema are incidental recall tasks (Hedlund & Rude, 1995; Ingram, Partridge, Scott, & Bernet, 1994), self-report, timed decision-making tasks (McClain & Abramson, 1995), and variations of color-naming tasks (Hedlund & Rude, 1995). Incidental recall paradigms rely on the

assumption that individuals will process most thoroughly, and hence later recall, information that is consistent with their active self-referent cognitive structures or networks. Ingram et al. (1994) asked university students to rate all stimulus adjectives on a 7-point Likert scale according to whether or not the word described them. The task required them to listen to and rate a recorded list of adjectives. Participants in the automatic processing condition were not informed of the recall portion of the experiment, while participants in the effortful processing condition were told of the additional task. Self-report, timed decision-making tasks, such as the one conducted by McClain and Abramson (1995), involve the making of “me/not me” decisions on positively and negatively valenced adjectives. This type of task, called the Self-Referent Encoding Task (Dobson & Shaw, 1987), yields measures of performance of endorsement pattern, incidental recall, and decision time. It is believed that schema-based decisions are more efficient and thus made more quickly.

Although these methods have been widely used, some criticism has been issued. Segal (1988) presents two differing perspectives regarding the nature of self-schema. The representation of self-schema as a cognitive structure means that individual self constructs are organized with a high degree of interrelation. If this holds true, then activating one of the elements should increase the accessibility of related self-referent elements. An accessibility-based account of self-schema does not involve the same interconnectedness of constructs. Thus, activating one part of the self-schema may not activate the entire structure. Segal (1988) explains:

If content alone were important, then a model that stresses cognitive structure would not necessarily be superior to a mood-accessibility account because, once primed, the same pattern of construct activation would be expected to occur. Yet if content plus structure are the crucial factors, then a different pattern of findings would be predicted for both models. Because of the persistence of the interconnection among the individual elements, the schema could be activated in the absence of depressed mood. In this fashion, an individuals' negative self-schema could persist beyond the depressive episode itself and into the period of recovery. (p. 150)

Thus, Segal believes that many previous findings suggest the primacy of mood status as a better predictor of depressive symptomatology than participants' self-schema.

The utility of the Stroop color-word methodology is thought to rest on the notion that word meaning is automatically activated and will interfere with the participant's task of color naming. Hedlund and Rude (1995) examined whether a sample of formerly clinically depressed individuals continued to exhibit a negatively biased information-processing style in the absence of concurrent depressed mood. As predicted, the scores of formerly depressed individuals on two questionnaires tapping dysfunctional thinking did not differ from those of never depressed individuals. However, responses of formerly depressed individuals were negatively biased on two of three information-processing measures administered following a self-focus manipulation, designed to increase self-awareness of feelings. The authors concluded

that the differences among depressed, non-depressed, and remitted-depressed participants indicated that, when individuals are primed to concentrate on particular stimuli, such as the self, depressive cognitive vulnerabilities may be present in remitted-depressed individuals. These results seemed to support the notion of the persistence of latent depressive schemas in participants who had recovered from major depression. Segal (1988) advocates for this type of experimental manipulation because the dependent measure can reflect cognitive structure independent of an output goal.

Other researchers have used verbal transcript materials, such as projective measure responses (Hickey, 2001; Swearer, 1997; Vaughn, 2001) or Adult Attachment Interviews (Sander, 2001) to examine cognitive constructs. Swearer (1997) assessed the self-schema content from projective measures of adolescents diagnosed with conduct disorder and comorbid conduct disorder and depression. Swearer reported finding significant differences in the self-schema content, based on several of Young and Lindemann's (1992) domains, between the two diagnostic groups. Sander (2001) assessed depressive self-schema content using verbal transcript coding of the Adult Attachment Interview in order to examine the relationships between attachment classification and depressive symptoms. Self-schema content may be identifiable in documents created by depressed individuals, even if the purpose is more clinical rather than empirical, such as with the Thematic Apperception Test. For instance, Blackburn and Eunson (1989) reviewed personal records of depressed individuals to ascertain their dysfunctional thoughts. Similar

tasks could be applied to verbal transcript materials with the goal of evaluating self-schema. It is generally agreed that measures less susceptible to participants conscious processing, such as projective measures, are superior. Although the most common tools for assessing self-schema have been experimental manipulations, emerging research indicates that the use of verbal transcript materials may offer promising methods for the assessment of self-schema and other cognitive constructs.

2.3.6. Summary of Literature on Self-Schema

A. Beck's cognitive model of depression (A. Beck et al., 1979) contains three important constructs that explain the psychological foundation of depression: schemas, negative cognitive triad, and information processing errors. Of the three parts of the triad, the self-schema is thought to be of greatest significance in the development of a depressive disorder. It is believed that the development of depressive schemas begins at an early age and that they are maintained within interpersonal contexts of the family. A negative cognitive triad is supported and perpetuated by information processing errors, such as those regarding the processing of evaluative information. There is some evidence that indicates that family may be a more salient environment for girls' development and thus perpetuate a difference in the development of self-schema between boys and girls. For girls, the importance of others is essential in defining the self, whereas for boys relationships are a means of verifying or affirming the self (Markus & Oyserman, 1989). It is believed that, due to early varied social experiences, the development of self-schema may differ in boys

and girls. However, mixed findings permeate the literature, which begs for continued research, especially with young populations. Researchers utilize a variety of methodologies to assess self-schema, yet it is generally agreed that measures less susceptible to participants' conscious processing are superior. Because it is thought that self-schema develops within early relationships in life and is formed and maintained within interpersonal contexts (Joiner et al., 1999), it is necessary to consider a more recent concept to the scene, interpersonal schema.

2.4. Interpersonal Schema

2.4.1. Overview

While self-schema research has been plentiful throughout the last several decades, research concerning the notion of interpersonal schema has emerged onto the scene more recently. Writers in this area have discussed similar ideas using various terminology such as interpersonal schemas (e.g., Safran, 1990a), working models (e.g., Bowlby, 1969), relationship schemas (e.g., Baldwin, Carrell, & Lopez, 1990; Horowitz, 1989), relational models (e.g., Mitchell, 1988), and relational schemas (e.g., Miell, 1987; Planalp, 1985). For the sake of clarity, this study uses the term interpersonal schema to more broadly encompass these concepts. Based on the notion that the female sense of self is organized around interpersonal themes of connectedness and mutuality (Jack, 1999), examination of possible gender differences in interpersonal schema is warranted. It is surmised that possible differences in

interpersonal schema could be linked to the gender differences evident in adolescent depression.

2.4.2. Interpersonal Schema

Because the research on interpersonal schema has been enhanced by Bowlby's (1973) examination of attachment theory, it is perhaps fitting to begin with a brief description of attachment theory. Attachment theory was originally based on general observations of young children who were separated from their caregivers and placed in nursing care (Bowlby, 1973). Attachment theory addresses a set of behaviors designed to maintain a specific state of arousal, that is a state of comfort when a certain proximity to the caregiver is established (Cassidy, 1999). These behaviors are organized and maintained within an internal working model, a cognitive structure containing information about the self and the environment. According to Bowlby (1973), working models referred to internal mental representations that are derived from recurrent interactions with caregivers, and contain "expectations of accessibility and responsiveness of attachment figures" (p. 235) and a "complementary and mutually confirming view of self as worthy or unworthy of care" (p.238). Hammen (1999) describes, "In many ways, attachment theory is about the acquisitions of cognitions about the self and the world..." (p. 26). Bretherton (1990) maintained that a vital feature of working models involves interpersonal expectations for typical interactional patterns between the self and attachment figures (e.g., "When I hurt myself, my mommy always comes to comfort and help me," p. 247). Main, Kaplan,

and Cassidy (1985) suggested that working models function similarly to schemas in that they direct attention, memory, and the appraisal of an experience. These working models are brought over from previous social relationships and into new ones and thus provide a framework for interpreting these experiences. Like schemas, working models incorporate affective components as well as cognitive ones (Main et al., 1985). It is important to note, however, that the cognitive structure of interpersonal schema is subject to conscious and unconscious information processing errors, such as selective abstraction and biases in interpretation of events (Cassidy, 1999). Thus, individuals may not be consciously aware of the schemas they hold regarding their relationships with others, in particular, caretakers.

Early working models of attachment were “formed out of generalized event representations” that dealt with attachment-related goals such as gaining comfort and support (Main et al., 1985, p. 76-77). However, more recent researchers have expanded this notion to include that working models evolve into abstract images of the self as worthy or unworthy and the other as trustworthy or untrustworthy (Bartholomew & Horowitz, 1991). Some theorists would assert that these abstract images are called interpersonal schema.

It is proposed that interpersonal schema, like internal working models of attachment, refer to the expectations one has about others’ probable responses to the self (Shirk, 1998). These schemas symbolize the predictability of relational patterns that enable individuals to anticipate others’ responses to their own behavior, specifically maintaining relatedness to others (Baldwin, 1992; Safran, 1990b).

Cummings and Davies (1999) theorize that children's views of parental, familial, and personal relationships, in particular those with interrupted emotional security, accrue to fashion a schema with significant implications for long-term adjustment. These interpersonal schemas are similar in structure to those emotion schemas described by Leventhal (1984). Specifically, this type of schema would contain beliefs and expectations about other people (e.g., People are uncaring and rejecting), beliefs about the self (e.g., I am unlovable), and beliefs about the way one must be in order to maintain relatedness (e.g., I must be strong at all times). These beliefs and expectations, according to Safran, Segal, Hill and Whiffen (1990), are implicit rather than explicit and are, therefore, a type of procedural rather than declarative knowledge. Kihlstrom (1987) points out that procedural knowledge is not accessible to awareness, which has complex research and intervention implications. With respect to research, this strengthens the need to utilize methods of accessing interpersonal schema without conscious effort, such as through the use of projective measures.

In terms of intervention, becoming aware of negative interpersonal schemas, in order that they may be changed, can be the first important component of treatment. Young's (1994, 1999) early maladaptive schemas are thought to be self-schemas, but in reality many of them involve the self-in-relationship to others. For example, schemas such as Abandonment/Instability, Mistrust/Abuse, Emotional Deprivation, Social Isolation, Subjugation, Self-Sacrifice, and Approval-Seeking/Recognition-Seeking are inherently interpersonal in nature, as they speak to how the individual negotiates interpersonal relationships and interactions.

In Young's (1999) work with individuals with personality disorders and other psychopathology, he divides his schema-focused therapy into two stages, (1) assessment and case conceptualization, and (2) schema change. In the first phase of treatment, the following steps are completed: identification of symptoms, administration of schema-focused questionnaires, education regarding schemas, triggering of schemas and confronting schema avoidance, identification of schema-driven behavior, integration of this newly-found information into case conceptualization, and targeting schemas for changes. Young and colleagues have created forms and questionnaires to assist therapists in completing these steps (e.g., Schema Conceptualization Form, 1992; Schema Diary, 1992). The second phase of therapy includes the following tasks: critical examination of the evidence supporting the schemas as well as evidence contradicting it, illustration of how clients discount the contradictory evidence, active challenging of the schema in and out of session, and specific experiential, interpersonal, and behavioral techniques. With these steps in place, the goal is to provide the opportunity for clients to become aware of and change their maladaptive schemas.

Westen, another researcher in the area of interpersonal schema, hails from a slightly different perspective. Westen views interpersonal schema through the lens of object relations which refers to as "a congeries of cognitive and affective functions and structures, including ways of representing people and relationships, rules of inference for interpreting the causes of people's feelings, behaviors, interpersonal wishes, conflicts"...(Westen, Lohr, Silk, Gold, & Kerber, 1990, p. 355). In particular,

he and his colleagues have investigated the psychological processes underlying the interpersonal pathology of individuals with Borderline Personality Disorder (BPD). The efforts of these researchers are described in greater detail in following sections. Now that the construct of interpersonal schema has been described, it is logical to examine the empirical work that has been undertaken in attempts to elucidate the construct itself.

2.4.3. Empirical Findings Regarding Interpersonal Schema

2.4.3.1. Interpersonal Schema in Youth

In order to make the case that interpersonal schemas are significant targets for clinical intervention, empirical studies must demonstrate that differences in interpersonal schemas are associated with dysfunctional symptomatology and that interpersonal schemas are associated with functional processes contributing to social or emotional problems. Rudolph, Hammen, and Burge (1997) sought to evaluate a cognitive-interpersonal model of child depression that hypothesizes associations among cognitive representations of family and peers, peer rejection, and depressive symptoms. School-aged children completed scales assessing cognitive representations of social relationships and symptoms of depression and anxiety. In addition, their teachers provided ratings of peer rejection. Linking interpersonal schemas with depressive symptomatology, Rudolph and colleagues (Rudolph et al., 1997) found that children with higher levels of depressive symptoms reported more pessimistic expectations about the outcomes of interpersonal exchanges than children with lower

levels. Symptoms of anxiety did not make a unique contribution beyond depression to negative representations of family and peers; in contrast, symptom-specific profiles of self-representations were found. Structural equation modeling supported a model linking negative interpersonal representations, peer rejection, and depressive symptoms. Van Horn and Shirk (1995) found that level of depressive symptoms was associated with relatively negative expectations about others' responses to the self in a sample of dysphoric and non-dysphoric preadolescents. Specifically, these expectations were of low levels of emotional responsiveness and high levels of anticipated control.

As mentioned previously, negative interpersonal schemas may be associated not only with symptoms of distress but also represent a cognitive diathesis that contributes to the development of pathological symptoms (Shirk & Eason, 1996). Shirk (1998) poses three possible models: the preemptive processing model, the schema-triggered affect model, and the behavioral priming model.

In the first of Shirk's models, activated interpersonal schemas may undermine effective information processing. These schemas may "sensitize" children to negative aspects of social interactions, which intensifies their negative emotional reactions and dysfunctional behavioral responses. For example, Shirk, Burton, and Van Horn (1997) found that children with relatively negative interpersonal expectations selectively focus on negative aspects of complex events and endorse negative social information more rapidly than children with positive expectations. Similarly, Shirk, Van Horn, and Leber (1997) examined the processing of supportive interactions by

dysphoric and nondysphoric preteens and early adolescents. Through watching videotaped interactions between a distressed preadolescent and a maternal figure, participants evaluated the supportiveness and helpfulness of the interactions. The tape presentations varied in terms of the level of depicted maternal support and instructional condition (degree of self-reference). The results demonstrated that dysphoric children with relatively negative support schema evaluated depicted supportive interactions more negatively than their non-dysphoric peers, and construed positive supportive behaviors as less genuine. Interestingly, dysphoric youth reported lower levels of emotional support in prior relationships, and variation in prior support experienced accounted for group differences in the evaluation of the supportiveness of new interactions.

Rudolph et al. (1995) investigated the role of internalized cognitive representations in mediating the link between family and peer relationships in a series of studies with school-aged children. Participants completed questionnaires measuring relationships as well as two incidental recall tasks. One recall task required the children to make decisions regarding self-referent adjectives and subsequently tested recall. The second task involved reading a story about experiences between a hypothetical child and mother. After doing so, participants were asked to recall descriptions of the mother. Not surprisingly, results revealed an association between negative maternal expectation and selective recall of negative aspects of hypothetical mother-child interactions.

In the second of two investigations, Rudolph et al. (1995) asked children to participate in an experimental interaction task that was structured to create three decision points that had the potential for eliciting disagreement. Multiple raters observing the children's interactions scored variables such as conflict negotiation competence and affect regulation. In addition, teachers rated the participants regarding the extent to which they experience peer rejection. Peer rejection was significantly correlated with negative representations of self and others. Together, these findings suggest that interpersonal schemas may sensitize children to interpersonal stressors through biased attention, encoding, and recall of negative aspects of complex events, which in turn amplifies negative affect (Shirk, 1998).

In the second model, activated schemas may evoke associated emotions that are transferred from previous interactions. Results from a study by Shirk and Eason (1993) indicate that different patterns of representation or interpersonal schema may be associated with different kinds of emotional stress. These researchers found that adolescents with positive self-representations and negative other representations reported relatively high levels of hostility, whereas those individuals with the opposite pattern reported higher levels of sadness. These results could have implications to typical patterns of gendered psychopathology.

Lastly, in the third model, interpersonal schemas increase the chance that specific interpersonal or affective regulation strategies will be utilized. Some empirical evidence supports the associations between negative interpersonal expectations and both peer rejection (Rudolph et al., 1995) and decreased social

competence (Burton, 1996). A review of the literature by Crick and Dodge (1994) indicates that the relationship between interpersonal schema and social difficulties is partially mediated through social information-processing biases. For example, Dodge and Tomlin (1987) explored social-information processing mechanisms that might be responsible and hostile attribution biases among aggressive children. The investigators presented hypothetical stories in which the participants were asked to imagine being the object of an ambiguous provocation by a peer, with their task being to interpret the peer's intention. Although equal numbers of hostile and benign cues were included in the scenarios, aggressive children were more likely than nonaggressive children to base their interpretations on their schemas. Also, aggressive children were more likely to base their interpretations on social cues that occurred at the end of the interaction and were less likely to remember cues that came at the beginning of the interaction. Van Horn (1996) found an association between maternal schema (i.e., expectations regarding maternal responsiveness to distress) and affective coping strategies among adolescents. Those adolescents who demonstrated more negative schemas were less likely to report utilizing others for support when emotionally upset than those adolescents with more positive schemas. Thus, differences in interpersonal schemas may influence affect regulation strategies that may contribute to the quality of interpersonal relationships.

Studies on information processing of schemas have demonstrated an inclination to attend to information that is congruent with existing expectations (Cohen, 1981; Swann & Read, 1981). Similarly, schema-relevant information is

processed more quickly than nonrelevant information (Markus, 1977). Several researchers have found that dysphoric children hold relatively negative interpersonal schema (Rudolph et al., 1997; Shirk et al., 1997). Results from a series of studies by Shirk, Boergers, Eason, and Van Horn (1998) revealed that children with higher levels of depressive symptomatology possessed less positive interpersonal schema than children with fewer symptoms. In addition, those with more negative expectations anticipated more negative responses from others in new social situations than those holding more positive expectations. The researchers' hypothesis that negative interpersonal schemas "sensitize" youth to schema-consistent, negative information was supported. Consistent with previous findings regarding the efficiency of processing schema-consistent information, more negative expectations were associated with a faster endorsement of negative descriptors and a faster denial of positive ones. It was as if the children endorsed or denied social information in an almost automatic manner. Finally, those individuals with a more negative schema reported higher levels of stress during a stressful transition (from middle school to high school). Interestingly, the stressfulness of the transition was not uniformly experienced by all. Instead, it seemed to be in part a function of preexisting expectations. These results lend support for the stress-diathesis models of the etiology of depression, the diathesis being negative interpersonal schema.

In a study by Rudolph and colleagues (1997), children with higher levels of depressive symptomatology viewed their mother/family and peers as less trustworthy, less accepting and supportive, had more pessimistic expectations for outcomes of

interpersonal interactions, and perceived themselves as less competent and worthy in the context of peer relationships than did less symptomatic children. Taking into consideration the differences boys and girls have interpersonally, it is logical to examine possible differences in interpersonal schema.

2.4.3.2. Possible Gender Differences in Interpersonal Schema

Little and Garber (2000) found that connectedness, as defined by Rude and Burnham (1993) as “a valuing of relationships and a sensitivity to the effects of one’s actions on others” (p. 337), directly predicted depressive symptoms in girls, whereas for boys the interaction of connectedness and social stressors significantly increased the prediction of these symptoms. Although boys reported lower levels of connectedness than girls, those boys who endorsed high levels of connectedness were at an increased risk for depressive symptoms under high stress situations. This is an interesting finding as it implicates gender less so than a particular pattern of behavior. Also, children who scored high on connectedness showed lower levels of anger/aggression compared to children low in connectedness. It seems that the connected children highly value their relationships and are careful to protect them. Interestingly, Achievement, as defined by the belief that one can accomplish his or her goals in life, interacted with achievement stressors to predict anger/aggression in girls. This is an interesting finding as it highlights the possibility of flexible gender-typed ways of behavior. Perhaps it is becoming more socially acceptable than in previous generations for girls to be angry when their achievement goals are not met. However,

a fault of this study's methodology is that the researchers did not measure relational aggression, which is more characteristic of girls (Crick & Grotpeter, 1995).

Some contradictory evidence regarding gender differences, however, is presented by Kenny, Lomax, Brabeck, and Fife (1998). They investigated the relationships between adolescents' ratings of parental attachment and self-reported psychological well-being over a 1 year period, from 8th to 9th grade. For boys only, the findings indicated that maternal and paternal attachment contributed significantly to later psychological well-being. These findings oppose the notion that relationships are more important for girls than boys (Brown & Gilligan, 1982; Chodorow, 1978). However, these findings are consistent with Nolen-Hoeksema and Girgus's (1994) assertion that interpersonal factors may influence the psychological well-being of boys more than the well-being of girls. One possible distinction here may be the source of emotional support. Perhaps parental attachments are more important for boys whereas girls may use peer support more than boys (Miller, 1990; Ryan, Stiller, & Lynch, 1994). Another interesting finding was that psychological distress was negatively associated with perceived parental attachment for boys 1 year later. It is possible that when boys feel negatively about themselves, their interactions or perceived relationships with their fathers become more negative (Kenny et al., 1998). When considering that men have been found to be less tolerant of the expression of depressive or negative affect (Leadbeater et al., 1995), it is not incomprehensible to posit that fathers may be uncomfortable with their depressed or sad sons. Some previous research has indicated that social support may moderate the relationship

between negative life events encountered by the family and the development and maintenance of the youth's depression, more so for girls than boys (Friedrich, Reams, & Jacobs, 1988; Slavin & Rainer, 1990). However, the research by Little and Garber (2000) and Kenny et al. (1998) provide contradictory information to the relational theorists' perspective and begs that these constructs be further examined. If family and interpersonal concerns are indeed more salient for girls, then negative interpersonal schemas may be more implicated in the gender differences in adolescent depression.

2.4.3.3. Interpersonal Schema in College Students and Adults

Soygut and Savasir (2001) asked Turkish university students to complete a self-report questionnaire designed to assess their expectations of how significant others would respond to them, presenting a variety of kinds of interpersonal behavior. In addition, a measure of depressive symptomatology was administered. The investigators found that students with higher levels of depressive symptomatology expected less complementary responses from significant others in multiple situations. Participants in the high-depressive group rated their expected responses from others as more undesirable than did individuals in the low-depressive group. These findings are similar to those found by Rudolph et al. (1997) with a population of young children.

Although Westen, Lohr, et al. (1990) have studied adults rather than adolescents, it is important to the present investigation to consider their findings

because of their use of the TAT to measure interpersonal schema. In order to better understand the psychological processes underlying the interpersonal pathology of individuals with Borderline Personality Disorder (BPD), Westen et al. (1990) administered seven TAT cards to the participants. Standard administration procedures were utilized in that the participants were asked to tell a story, including what happened before and after. Information regarding what the characters were thinking and feeling was also solicited. The participants' responses were coded on the following scales created by the researchers: complexity of representation of people, affect-tone of relationship paradigms, capacity for emotional investment in relationships and moral standards, and understanding of social causality. There were four experimental groups in this study: major depressive disorder, BPD with major depressive disorder, BPD without major depressive disorder, and controls.

Westen et al.'s (1990) findings suggest that individuals with Borderline Personality Disorder "are distinguished by poorly differentiated, egocentric representations of people, [have] malevolent expectations of relationships, [have] difficulty investing in relationships and moral standards, and [possess] idiosyncratic and grossly illogical attributions" (p. 361). The BPD with and without depression data did not differ, yet the BPD groups were distinctly different from the depressed group. Those individuals with BPD and major depression present like borderlines, not like major depressives. In yet another study, Westen, Ludolph, Block, Wixom, and Wiss (1990) found significant relationships between early traumatic events, such as

maternal psychiatric illness, maternal alcohol abuse, excessive maternal separation, and neglect, and more pathological object relations in later adolescence.

This study contributed to the literature in several distinctive ways. First, clarifications regarding the relationship between interpersonal expectations of those with BPD and/or depression were made. Westen et al. (1990) appear to be focused on better grasping these underlying processes to assist those with BPD in treatment. The authors also point out that individuals with BPD do not experience interpersonal difficulties all of the time which begs the question, under which conditions do they manifest problematic interpersonal schema or object relations? Lastly, this study supports the use of projective tests in assessing dimensions of social cognition and interpersonal schema. Although individuals with BPD were not the focus of the present study, Westen and colleagues' research is important to this investigation's analyses of interpersonal schema, as both studies utilize methodologies involving the coding of TAT transcripts. However, the use of projective measures is not the only way in which investigators study interpersonal schema. Researchers in this area utilize a variety of creative assessment techniques.

2.4.4. Assessment of Interpersonal Schema

The most commonly used tools for assessing interpersonal schema are self-reports (Rudolph et al., 1995), analysis of narrative responses to projective measures (Westen, Lohr, et al., 1990; Westen, Ludolph, et al., 1990), narrative stem tasks (Buchsbaum & Emde, 1990), and reaction time techniques (Shirk, Van Horn, &

Leber, 1997). Rudolph and colleagues developed the Children's Expectations of Social Behavior Questionnaire (CESBQ), a self-report measure of interpersonal expectations that involves encoding interpersonal transactions and making predictions about likely outcomes. Hypothetical vignettes describing social interactions are presented. Response options, in the form of multiple choice questions, include supportive, indifferent, and hostile expectations. Results indicate that the questionnaire has good internal and retest reliability. Another self-report measure of interpersonal schema, the Generalized Other Scale (GOS), was created by Shirk and Eason (1993) to measure the affective quality (positive or negative) of expected responses to the self. In completing the questionnaire, participants are instructed to think about multiple sets of others. Expectations regarding emotional responsiveness and control are assessed with adequate internal and test-retest reliability.

As described previously, several researchers (Hickey, 2001; Swearer, 1997; Vaughn, 2001; Westen, Lohr, et al., 1990) have analyzed narrative responses to projective measures, such as the Thematic Apperception Test (TAT), for interpersonal expectancies. Narratives are independently coded for the extent to which they expect relationships and interactions to be hurtful and malevolent or nurturing and safe. High levels of inter-rater reliability (.94 - .97) have been reported by Westen, Lohr, et al. (1990). Similarly, Buchsbaum and Emde (1990) have presented children with interpersonally oriented narrative stems, which require that the children finish the story. In a sense, this is a type of "structured projective." The greatest strength of these projective approaches is that they move beyond the

assessment of consciously held generalizations about relationships that might be vulnerable to defensive bias. Second, by using evocative stimuli, these techniques have the potential to elicit schema that might not be activated by self-report measures.

Lastly, Shirk and colleagues (1998) explored the possibility of using reaction times to assess interpersonal schema in middle-school students. A quick speed of response might indicate the availability of relevant examples in memory, thus accessing interpersonal schema. Participants were asked to think about “other people” in general and make decisions as to whether certain adjectives described them. Reaction times were ascertained, and results have indicated that more negative expectations were associated with more rapid endorsement of negative adjectives and rapid denial of positive ones. The investigators believe that this pattern of response is consistent with the notion that interpersonal schema sensitize and automatize social information processing.

To summarize, individuals who study interpersonal schema utilize a variety of ingenious methodologies to do so, such as self-reports, analysis of narrative responses to projective measures, narrative stem tasks, and reaction time techniques. They are applying a bit of creativity in thinking about how best to tap into the notion of interpersonal schema.

2.4.5. An Integration of Self- and Interpersonal Schema: The Cognitive–Interpersonal Pathway to Depression

An emerging model of depression is integrating cognitive and interpersonal theories to explain a potential pathway to the development of a depressive disorder (Baldwin, 1992; Gotlib & Hammen, 1992; Rudolph et al., 1997; Shirk, 1998; Stark, Schmidt, & Joiner, 1996). An early behavioral/interpersonal model was presented by Coyne (1976, 1984), in which depressed individuals seek reassurance from others to assuage their doubts about their own self-worth. Although others may provide confirmation of love and assurance, it may be useless as the depressed individual doubts its uniqueness, deciding that it is simply a measure of the other's pity. The pattern continues, leaving the significant others frustrated and annoyed, increasing the possibility that actual rejection will occur. This rejection may then maintain the depressive symptoms. Over time, relationships will be lost and reassurance no longer possible. An example of this pattern with a child follows. The depressive family pattern may begin with the child's depression eliciting hostile and rejecting responses from his or her parents, who feel unable to provide support or respond to their child's demands. This parental hostility may then lead to the child's sense of rejection, thereby intensifying the child's depression. Children who are at an increased risk for depression (either genetically or biologically) may be more likely to manifest depressive symptoms if they do not feel securely attached to parents and do not perceive their families to be cohesive. These children may then be "biased by negative cognitive styles, such that they focus on evidence of rejecting and critical

parental attitudes and fail to attend to the positive and more nurturing qualities of their parents” (Kaslow, Deering, & Racusin, 1994, p. 52). Further complicating such a familial pattern is that maternal depression is most likely the strongest predictor of depression in children and adolescents (Hammen, 1991). Hammen (1999) suggests that impaired maternal functioning, chronic stressful family conditions, and mothers’ dysphoric mood highlight the contribution of interpersonal factors to the context within which depression frequently exists.

More recently, theorists have combined A. Beck’s cognitive theory (e.g., A. Beck, 1967) or Abramson’s learned hopelessness theory (e.g., Abramson, Metalsky, & Alloy, 1989) with interpersonal theories (e.g., attachment). Joiner and colleagues (1999) write, “The strongest implication of the interpersonal approach is that depression not only has interpersonal features and consequences but also is fundamentally interpersonal in nature” (p. 7-8).

A. Beck’s cognitive theory presents an empirically supported model for how cognitive disturbances develop in youth, while attachment theory offers a description of how cognitive disturbances may develop in a young child within the interpersonal context of his or her family. Both cognitive and attachment theories deal with the child’s developing sense of self. A. Beck proposed that the sense of self or self-schema is shaped within and by interpersonal contexts. Attachment theory, with its concept of the internal working model (or interpersonal schema), also suggests that a child’s sense of self is influenced by the caretaking relationship experienced early on in life and will affect future relationships. When integrated, it is believed that a more

complete understanding of the development of depression, in particular the development of negative self-and interpersonal schema, may occur.

2.4.6. Summary of Literature on Interpersonal Schema

Interpersonal schema refers to the expectations one has about others' probable responses to the self (Shirk, 1998). Researchers have asserted that, from interpersonal schemas, individuals come to view the self as worthy or unworthy of care and the other as trustworthy or untrustworthy (Bartholomew & Horowitz, 1991). Several studies have found relationships between negative interpersonal schema and depressive symptoms (Rudolph et al., 1997; Shirk et al., 1997; Shirk et al., 1998; Van Horn & Shirk, 1995). Children with higher levels of depressive symptoms reported more pessimistic expectations about the outcomes of interpersonal exchanges than children with lower levels (Rudolph et al., 1997). Shirk (1998) poses three possible models: the preemptive processing model, the schema-triggered affect model, and the behavioral priming model. In the first model, activated interpersonal schemas may undermine effective information processing. These schemas may "sensitize" children to negative aspects of social interactions, which intensifies their negative emotional reactions and dysfunctional behavioral responses. In the second model, activated schemas may evoke associated emotions that are transferred from previous interactions. Some evidence suggests that different patterns of representation or interpersonal schema may be associated with different kinds of emotional stress (Shirk & Eason, 1993). Lastly, in the third model, interpersonal schemas may

increase the chance that specific interpersonal or affective regulation strategies will be utilized.

Some previous research has indicated that there may be gender differences in the interpersonal schemas of boys and girls. Social support may moderate the relationship between negative life events encountered by the family and the development and maintenance of the youth's depression, more so for girls than boys (Friedrich et al., 1988; Slavin & Rainer, 1990). However, the research by Little and Garber (2000) and Kenny et al. (1998) provide contradictory information to the relational theorists' perspective that girls are more interpersonally oriented and will suffer more than boys from interpersonal problems. Further investigation is needed.

Similar results have been found in child and adult populations regarding interpersonal schema. University students with higher levels of depressive symptomatology expected less complementary responses from significant others in multiple situations. Individuals with Borderline Personality Disorder had malevolent expectations of relationships, had difficulty investing in relationships, and displayed idiosyncratic and grossly illogical attributions.

Researchers in this area have utilized a variety of creative assessment techniques, including self-reports, analysis of narrative responses to projective measures, narrative stem tasks, and reaction time techniques. Finally, a model of the cognitive-interpersonal pathway to depression was briefly discussed as it supports the notion of the role that negative self- and interpersonal schema may play in the

development of depression and specifically in gender differences in adolescent depression.

2.5. Statement of the Problem

Within A. Beck's cognitive model of depression, negative schemas, a depressive cognitive triad, and faulty information processing (A. Beck, 1967) are thought to be central to the development of depressive disorders. Although A. Beck recognizes the unique contributions of the cognitions about the self, world, and future, he and Hammen (1991) highlight the pivotal role the negative self-schema plays in the development and maintenance of depressive disorders. Young (1994, 1999) suggests that the development of negative schema may occur early in life, highlighting an interpersonal component to these cognitive constructs. Westen, Lohr, et al. (1990) assert that interpersonal schema may be important to consider in the development of psychopathology in general. While self-schema has enjoyed considerable attention in the last couple of decades, there is emerging interest in the understanding of interpersonal schema (Baldwin et al., 1990; Horowitz, 1989; Miell, 1987; Mitchell, 1988; Planalp, 1987; Safran, 1990a). However, many questions remain. Taking the strong gender differences in adolescent depression into consideration, it is unknown how negative self-schema and negative interpersonal schema may play a role in the development of these differences.

One study (Kenny et al., 1993) examined self-reported attachment cognitions (possibly akin to interpersonal schema), view of self (rated as global self-worth), and

depressive symptomatology in early adolescents. Although the study did find support for gender differences in a model of links among attachment cognitions, view of self, and depressive symptoms, there are several limitations to its methodology. The study utilized a self-report method for measuring attachment. Researchers, however, have suggested using methods that are less susceptible to conscious processing such as with self-report questionnaires (Kenny et al., 1993, 1998). In addition, this study considered view of self through a traditional self-esteem measure (Harter, 1988). Again, it is possible that adolescents' self-reports were susceptible to social desirability and current affective states (Lewinsohn & Rosenbaum, 1987). Methods of assessing view of self and others that are less susceptible to defensive bias would contribute to a better understanding of self- and interpersonal schema in adolescents.

2.6. Research Study

The primary purpose of this study was to examine the relationships among constructs of self-schema, interpersonal schema, and depressive symptomatology in adolescent boys and girls. In particular, the possibility of different relationships between negative self-schema and negative interpersonal schema in adolescent males and females was investigated. The present investigation also explored the possibility that self- and interpersonal schema are more highly correlated for girls than for boys. Participants were a group of adolescents from a residential treatment facility and a group of nonpsychiatric adolescents from local public schools, a sample-wide matched control group. The former group completed a semi-structured diagnostic

interview and the TAT. In addition, their primary caregivers also completed the diagnostic interview. The adolescents from the schools completed the diagnostic interview and the TAT. Depressive symptoms were assessed using a semi-structured diagnostic interview, and self-schema and interpersonal schema were assessed by verbal transcript coding designed for use with the TAT.

2.7. Hypotheses of the Investigation

Question 1: What is the relationship between depressive symptomatology, gender, and negative self-schema?

Hypothesis 1a: Clinically depressed adolescents will have higher self-schema scores, indicating greater content of negative self-schema, than nondepressed adolescents.

Hypothesis 1b: Girls will have higher self-schema scores, indicating greater content of negative self-schema, than boys.

Hypothesis 1c: Clinically depressed girls will have significantly higher self-schema scores, indicating greater content of negative self-schema, than depressed boys and nondepressed girls and boys.

Rationale: These hypotheses are based on the considerable empirical evidence documenting that more negative self-schemas are associated with higher levels of depressive symptomatology (Hammen et al., 1985; Ingram et al., 1994; Ingram, Fidaleo, Friedberg, Shenk, & Bernet, 1995; McClain & Abramson, 1995). In particular, numerous researchers have reported a relationship between a negative view of self and depression in children and adolescents (Allgood-Merten et al., 1990;

Kaslow et al., 1992; Kendall et al., 1990; Prieto et al., 1992; Sanders et al., 1992; Stark et al., 1993). Self-schema is often assessed with self-report measures, and this investigation seeks a method less susceptible to social desirability and defensive bias. These hypotheses will test the current coding system used to assess adolescents' depressive self-schema.

With regard to gender, the results of several studies suggest that adolescent girls report lower self-esteem or self-worth in comparison to adolescent males. For example, Simmons et al. (1979) found, in a large sample of early adolescents, that significantly more females scored low on a self-esteem measure than their male peers (41% and 24%, respectively). In a more recent investigation, Kenny et al. (1993) examined the view of self in a sample of eighth-graders using Harter's Self-Perception Profile for Adolescents. Results revealed significant gender differences in global self-worth; That is, girls reported a lower level of self-worth than their male classmates. Ohannessian et al. (1999) conducted a longitudinal study of 75 early adolescents. Using Harter's Self-Perception Profile for Children (1982), the researchers found that girls reported significantly lower levels of global self-worth, perceived physical appearance, and athletic competence. Taken together, it is hypothesized that clinically depressed girls will have significantly higher self-schema scores, indicating greater content of negative self-schema, than depressed boys and nondepressed girls and boys.

Question 2: What is the relationship between depressive symptomatology, gender, and negative interpersonal schema?

Hypothesis 2a: Clinically depressed adolescents will have higher interpersonal schema scores, indicating greater content of negative interpersonal schema, than nondepressed adolescents.

Hypothesis 2b: Girls will have higher interpersonal schema scores, indicating greater content of negative interpersonal schema, than boys.

Hypothesis 2c: Clinically depressed girls will have significantly higher interpersonal schema scores, indicating greater content of negative interpersonal schema, than depressed boys and nondepressed girls and boys.

Rationale: The second set of hypotheses is based on the evidence that links negative interpersonal schema content with depressive symptoms (Rudolph et al., 1997; Shirk et al., 1997; Shirk et al., 1998; Van Horn & Shirk, 1995). Children with higher levels of depressive symptoms reported more pessimistic expectations about the outcomes of interpersonal exchanges than children with lower levels (Rudolph et al., 1997). Similar results have been found in adult populations. University students with higher levels of depressive symptomatology expected less complementary responses from significant others in multiple situations (Soygut & Savasir, 2001). Individuals with Borderline Personality Disorder demonstrated malevolent expectations of relationships, difficulty investing in relationships, and idiosyncratic and grossly illogical attributions (Westen, Lohr, et al., 1990).

Hypotheses 2b and 2c are based on theoretical notions related to social psychology and gender differences. Females seem to be more interpersonally oriented while males are more task-focused or achievement-oriented (Brems, 1995; Chodorow 1974, 1978; Gilligan, 1982; Jones & Costin, 1995). Women display their strong interpersonal skills in that both men and women tend to seek out females for comfort during stress (Matlin, 1993). Jack's (1991) theoretical model, based upon the work of Chodorow (1974, 1978) and Gilligan (1982), purports that as women organize their experience around their relationships with others, their expression may be related to the value they place of establishing and maintaining close relationships (Gilligan, 1993; Jack, 1991). Jack and Dill (1992) assert that women "silence" themselves by deferring to the needs of others, censoring self-expression, repressing angry feelings, judging the self against a selfless ideal, and censoring experiences in order to maintain safe, close relationships. Influenced by cultural norms, women's schemas regarding appropriate female roles (i.e., silencing-the-self) may play a part in a vulnerability to depression.

There are some findings in the realm of school and academic pursuits that are relevant to this hypothesis as well. Gurian (1987) reviewed the literature and found that teachers reward girls more for proximity to the teacher and dependent behavior while boys are rewarded more for displaying action that produces results. It seems that girls receive the message, both from the larger society and at school, that relationships are to be the focal point in their lives, more so than for boys. If their

relationships are negative or fraught with conflict, this may be a greater risk factor for becoming depressed than for boys.

These hypotheses are also germane to the investigation regarding significant gender differences in the development of depression in adolescents, particularly in light of social and interpersonal consequences (Joiner et al., 1999) or stressors leading to depression (Clark et al., 1999). Kenny and researchers (1993) reported gender differences in pathways to depression relating to self-view. Results suggested, for males, pathways to self-view were centered on scholastic accomplishments, while for girls, pathways focused on social factors. For both pathways, view of self was related to depressive symptoms, but the supplementary factors that contributed to self-view in the study were different for males and females, indicating varying risk factors for these two groups. Ahnlund and Frodi (1996) found, using a sample of depressed Scandinavian adults, that the eliciting factor in female depression was most commonly the “threat to social bonds” whereas in male depression it was the “threat to self-esteem or self respect.” For these reasons, it is hypothesized that depressed girls will have greater content of negative interpersonal schemas than depressed boys.

Interpersonal schema is often assessed with self-report measures, and this investigation seeks a method less susceptible to social desirability and defensive bias. These hypotheses will test the current coding system used to assess adolescents’ depressive interpersonal schema.

Question 3: Are self-schema and interpersonal schema more highly correlated for girls than for boys?

Hypothesis 3: Self-schema and interpersonal schema will be more highly correlated for girls than boys.

Rationale: This hypothesis is based on theoretical postulations that there are differences in the relationship of self-schemas and interpersonal schemas of adolescent males and females; however, this has not been directly tested in empirical studies. Moretti and colleagues (1998), investigating gender differences in relational self-regulation, found that women showed lower levels of discrepancy between their actual-self and the hopes and wishes they believed others had for them than with their own hopes and wishes for themselves. In contrast, men showed equal levels of discrepancy with their own and significant-other ideals standards. Furthermore, discrepancy with one's own ideal standards was associated with increased dysphoria in both men and women, but discrepancy with others' ideal standards was associated with elevated levels of dysphoria in women only. These findings indicate a double risk for women; that is, women are at a disadvantage if they are unable to accomplish their own goals, but they also suffer if they cannot live up to others' goals for them as well. Interestingly, increased discrepancy between one's own ideals and those of one's parents contributed to greater dysphoria in women than men. Based on these findings, it is thought that perhaps there is a different relationship between the development of self-schema and interpersonal schema for boys and girls.

Miller (1984) suggests that children develop an internal representation of their caretaker who is “the relating self”, a self in active interaction with others. Notably, the most important characteristic of this caretaker is his or her sensitivity to others’ feelings. Although both boys and girls experience this caretaker, this similarity is encouraged in girls and discouraged in boys. The self perception of girls becomes based on interrelationships with others, whereas for boys it ultimately becomes one of self-sufficiency and autonomy.

For girls, the importance of others is essential in defining the self, whereas for boys, relationships are a means of verifying or affirming the self (Markus & Oyserman, 1989). Girls become aware that attention to others is extremely important and that others are a significant source of self-referent information (Markus & Oyserman, 1989). With practice, girls become “experts” in knowing what others are thinking and feeling and soon become comfortable utilizing this knowledge about themselves and others. Similarly, women are concerned with seeking mutuality and understanding in their relationships to validate themselves and others (Kaplan, 1986). In contrast, a separateness self-schema will direct boys’ attention to their own attributes and talents in which others will be used as a point of comparison. For boys, individuality is accomplished by defining boundaries and differences between oneself and others. This autonomous self learns by comparing himself to others rather than learning about the self in relationship to others (Markus & Oyserman, 1989). In this way, boys’ essential perception of self may become isolated from others, whereas for girls the web of interdependent “others” and desire for proximity becomes the core of

the female self. Because of this difference, it is thought that self-schema and interpersonal schema will be more highly correlated for girls than for boys.

During adolescence, boys and girls develop the ability to simultaneously represent and compare multiple perspectives of the self (Higgins, 1989, 1991; Higgins, Loeb, & Moretti, 1995; Moretti & Higgins, 1990). However, girls may become engrossed with the task of constructing the self to ensure connectedness with others, even to the point of developing symptomatology. Taken together, it is thought that the self- and interpersonal schema will be more highly correlated for girls than boys.

CHAPTER 3: METHOD

3.1. Participants

Participants were drawn from a larger, ongoing study investigating cognitive, behavioral, and family factors in the development of depressive and disruptive behavior disorders. Participants for this study were 59 adolescents from one of two settings (see Table 1). Thirty-five adolescents were recruited from a residential treatment facility near a metropolitan area in central Texas, while the remaining 24 adolescents were nonpsychiatric controls from a suburban area near the psychiatric facility. The latter group of adolescents was recruited from a local middle school, a 9th grade center, and a high school campus.

Table 1

Number of Participants by Gender in Each Diagnostic Group

Gender	Diagnostic Group	
	Depressed	Non-depressed
Male ($n = 35$)	20	15
Female ($n = 24$)	15	9

Priority for inclusion in the current investigation (for the psychiatric population) was determined by primary diagnosis of depression (Major Depression and/or Dysthymia). Some of the participants have only internalizing disorders while some have depression with comorbid externalizing disorders. Descriptive information

regarding participants' psychiatric diagnoses is provided in Appendix A. Participants who had disabilities which prevented them from completing the projective measure, the Thematic Apperception Test, or understanding the diagnostic interview questions were excluded from the study. In addition, participants who had psychotic features of a psychiatric disorder were also excluded because A. Beck (1967) states that this model does not apply to psychotic disorders with depressive symptoms. Five participants (3 depressed and 2 nondepressed) were dropped from the sample due to missing data.

Approximately 15 percent of the participants met diagnostic criteria for Substance Abuse Disorder. Appendix B contains a list of the possible substances used by these participants (derived from their responses on the drug abuse section of the K-SADS interview) as well as the half-lives of the substances (Hardman et al., 1996). Because the data for the present study were collected within one week of the participants' admission to the treatment center, it is important to note the potential effect the use of substances may have had on the participants' responses.

As displayed in Table 2, participants ranged in age from 11 to 18 years old ($M = 14.70$, $SD = 1.43$) and were in grades 6 to 12 ($M = 9.10$, $SD = 1.39$). While the majority of the participants were Caucasian (84.5%; $n = 49$), there were several Hispanic (6.9%; $n = 4$), African-American (1.7%; $n = 1$), Biracial-Caucasian and Hispanic (3.4%; $n = 2$), Biracial-Caucasian and African-American (1.7%; $n = 1$), and other ethnic background (1.7%; $n = 1$) participants.

Table 2

Age and Grade of Participants

	Depressed ($n = 35$)		Non-depressed ($n = 24$)		Total ($N = 59$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Age	14.9	1.24	14.4	1.64	14.7	1.43
Grade	9.1	1.33	9.0	1.49	9.1	1.39

Family demographic information was obtained for living arrangements of the participants (referring to before admission to the residential treatment center for the depressed group). Specifically, 42.4% ($n = 25$) of adolescents lived with their biological mother and father, 25.4% ($n = 15$) lived with their biological mother and stepfather, 16.9% ($n = 10$) lived with their biological mother only, 5.1% ($n = 3$) lived with their biological father and stepmother, 3.4% ($n = 2$) lived with their biological father only, 1.7% ($n = 1$) lived with adoptive parents, and no information was available for 5.1% ($n = 3$) participants (see Table 3).

Table 3

Participants' Family Living Arrangement

Family Living Arrangement	Group					
	Depressed		Non-depressed		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Bio. mother and father	8	22.8	17	70.8	25	42.4
Bio. mother and stepfather	11	31.4	4	16.7	15	25.4
Bio. mother	7	20.0	3	12.5	10	16.9
Bio. father and stepmother	3	8.6	0	0	3	5.1
Bio. father	2	5.7	0	0	2	3.4
Adoptive parents	1	2.9	0	0	1	1.7
No information available	3	8.6	0	0	3	5.1

A measure of socio-economic status was calculated for each of the participants using the Hollingshead Two-Factor Index of Social Position (Hollingshead & Redlich, 1965, as cited in Miller, 1983). The index score places a family into one of five social classes, based on parental occupation and parental level of education. The lower class numbers correspond to higher socio-economic status. Table 4 presents the socio-economic status data for this sample.

Table 4

Participants' Level of Socio-Economic Status

Social Class	Group					
	Depressed		Non-depressed		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Class I	3	8.6	5	20.8	8	13.6
Class II	2	5.7	11	45.8	13	22.0
Class III	4	11.4	4	16.7	8	13.6
Class IV	3	8.6	0	0	3	5.1
Class V	0	0	0	0	0	0
No SES information available	23	65.7	4	16.7	27	45.8

The next section describes the instrumentation and scoring guidelines for this study, followed by descriptions of the procedure in the residential treatment center and then in the public schools.

3.2. Instrumentation

3.2.1. Schedule for Affective Disorders and Schizophrenia for School-Age Children

The Schedule for Affective Disorders and Schizophrenia for School-Age Children - Epidemiological Version/Present Episode (K-SADS-EP, Orvaschel & Puig-Antich, 1987, 1994; Puig-Antich & Ryan, 1986) was used in the present investigation to confirm participants' admitting diagnoses and to determine level of

depressive symptomatology. The K-SADS-E is a semi-structured clinical interview that can be administered to children ages 6 to 17 and to their parents. The interview contains both structured and unstructured sections. The structured portion of the interview includes questions on approximately 200 specific symptoms or behaviors relevant to most Axis I *DSM-IV* diagnoses (Orvaschel & Puig-Antich, 1994). Each section of the interview addresses a different disorder and begins with screening questions. If the participant does not endorse the screening questions, then the interviewer proceeds to the next section of the interview.

The 1987 version of the K-SADS-E interview focuses only on the presence or absence of symptomatology and does not provide ratings for levels of symptom severity. The Present Episode version, however, is used to rate the severity of depressive symptoms in the current episode on a 0-5 or 0-7 scale. The ratings may be summed to compute a total severity score for the present episode. The total ratings can range from 37-285. As a result, even if an adolescent does not meet the clinical criteria for a depressive episode, the number and intensity of symptoms may be analyzed. Thus, for the purposes of the research team, the K-SADS-P (Present Episode, Puig-Antich & Ryan, 1986) depressive disorders section was integrated into the interview (creating the K-SADS-EP) in order to obtain a measure of symptom severity ratings. For the purposes of the present investigation, the Depressive Disorders section of the K-SADS-EP was utilized to confirm participants' admitting diagnoses and to determine level of depressive symptomatology.

The K-SADS-E interview has acceptable inter-rater reliability (Curry & Craighead, 1990). Specifically, Curry and Craighead (1990) reported high levels of inter-rater reliability for the K-SADS-E, current episode affective disorders (kappa from .63 to 1.00). Furthermore, comparison of clinician's diagnoses and K-SADS-E diagnoses of current episode affective disorders resulted in a kappa of .67 (Curry & Craighead, 1990). The K-SADS-P has demonstrated high inter-rater reliability for mood disorders (kappa = .83 for major depression, Last & Strauss, 1990). In addition, Orvaschel, Puig-Antich, Chambers, Tabrizi, and Johnson (1982) report high levels of diagnostic agreement between the K-SADS-P and K-SADS-E ($r = .86$). Lastly, the interview has demonstrated adequate internal consistency reliability (Ambrosini, Metz, Prabucki, & Lee, 1989) and test-retest reliability (Apter, Orvaschel, Laseg, Moses, & Tyano, 1989).

3.2.2. Thematic Apperception Test

The Thematic Apperception Test (TAT) (Murray, 1943) is a projective measure that is comprised of 31 picture cards. Murray intended that an examiner would administer a subset of ten to twelve cards during a single administration. This measure has been utilized with success as a tool for assessing self-schema (Hickey, 2001; Vaughn, 2001), attributional style (Peterson & Ulrey, 1994), depressive interpersonal style (Joiner & Barnett, 1994), interpersonal decentering in schizophrenic adolescents (Strober, 1979), object relations, and social cognition (Westen, Lohr, Silk, Gold, & Kerber, 1990). Research has suggested that the TAT is

an effective method for measuring the cognitive-affective processes that underlie interpersonal functioning (Westen, Lohr, et al., 1990). Westen (1991) writes:

The TAT is a particularly good test for assessing object relations because the stimulus is unambiguously social, and subjects are likely to provide enough detail in describing characters and relationship as to provide considerable access to cognitive and affective-motivational patterns related to interpersonal functioning in intimate relationships. (p. 56)

The use of story and testimony has been used to measure the self-schema in depressed children and adolescents (Hammen & Goodman-Brown, 1990). McClelland, Koestner, and Weinberger (1992) contend that an individual's story may offer a more descriptive flavor of their thoughts, feelings, motives, and schemas, whereas self-report measures tend to display more of what is thought to be socially acceptable in the larger society. Shirk (1998) supports the use of the TAT by stating:

...this approach...moves beyond the assessment of consciously held generalizations about relationships that may be susceptible to defensive bias; and second, by utilizing evocative stimuli, it has the potential for activating schemata that may not be elicited by typical self-report procedures (p. 10).

In this study, the following thirteen cards were used as a stimulus to elicit stories that were coded twice, once for self-schema content and once for interpersonal schema content: 1, 2, 3BM, 5, 6BM, 7GF, 8GF, 8BM, 9GF, 9BM, 13B, 14, and

17BM. The inclusion of 13 cards meets Smith's (1992) suggested minimum for assurance of reliability. Consultation regarding the selection of cards was sought from a professor who specializes in affective/personality assessment in children and adolescents. Obrzut and Boliek (1986) suggest the use of the following cards for 7- to 11-year-olds: Cards 1, 3BM, 7GF, 8BM, 13B, 14, and 17BM. Similarly, the authors recommend the following cards for use with adolescents: Cards 1, 2, 5, 7GF, 12M and 17. The professor consulted concurred that the aforementioned cards, as well as Cards 8GF and 9GF, were useful in her own clinical practice and experience. Card 6BM and 9BM were also included in order to pull for interpersonal and self-related cognitions. Goldstein, Gould, Alkire, Rodnick, and Judd (1970) noted that, in their research, they found that Cards 2, 6BM, and 7BM demonstrated a high probability of eliciting interpersonal content. It is important to note a limitation to the present study. Although two researchers in this study made the determination as to which cards would be utilized, it would perhaps have been more methodologically sound to have employed a panel of experts to do so. Thus, it should be recognized that this is a limitation to the study.

Several studies have found that different TAT cards pull for different types of stories as a function of the storyteller's sex. This stands in contrast to Murray's original idea that there should be separate male and female cards. Worchel, Aaron, and Yates (1990) found that "GF" (female cards) elicited more "general concern" themes from both men and women. General concerns included issues of: separation, effort, conflict, ambivalence, acceptance, fear, escape, verbal hostility, and sexuality.

Interestingly, themes of withdrawal and anxiety occurred as function of card and participant sex. Specifically, female cards elicited more withdrawal and anxiety themes from men and vice versa. Katz, Russ, and Overholser (1993) investigated the hypothesis that storytellers would identify more with stimulus characters of same sex as themselves (which was original rationale for having male and female cards). The researchers found no gender-based differences in amount of fantasy, affect, or length of stories for the two types of cards. Pollak and Gilligan (1982) administered two TAT-like stories that pulled for affiliation and two that pulled for achievement with a male college sample. Results indicated that the men provided more responses with more violent images to affiliation cards whereas women gave more violent images in response to achievement cards. Subsequent studies did not replicate these results (Benton et al., 1983; McAdams, Lester, Brand, & Lesky, 1988). Both male and female participants in the present study were administered both “GF” and “BM” cards. Since little to no research has been conducted in this area with children and adolescents, it is unknown whether this methodology is considered best practice. The mixed findings cited above indicate that there is much to learn regarding possible gender by card interactions.

As with any instrument, it is important to consider the TAT’s reliability and validity. Reliability refers to the degree of agreement between two individuals who are rating or scoring the same sample of behavior. It does not imply that the behaviors being studied must be absolutely consistent from moment to moment or story to story. Rather, it asks only that, regardless of whether the behavior is consistent or changing,

both raters agree on the kind of consistency or change that occurs. Interrater category agreement greater than 85%, or a rank-order correlation coefficient greater than .85 between two raters, is considered an adequate level of reliability for research purposes (Fleming, 1982; McAdams, 1982). However, some argue that any theory of measurement based on a premise of fixed rigidity of characteristic being measured is inappropriate for use with such a projective measure. Some argue that to measure test-retest reliability with an approach that does not allow for change in the disposition is a useless exercise. Items on the TAT are clearly not homogeneous. In fact, the measure was designed to elicit different “root fantasies” (Morgan & Murray, 1935). Clearly, the test was not designed or intended to produce a high reliability coefficient.

Another theoretical orientation that calls into question the appropriateness of traditional psychometrics is the “dynamics-of-action” approach of Atkinson and Birch (1970, 1978). This approach rests on the notion that the expression of a motive in imaginative thought is expected to be variable from moment to moment, although over longer periods of time the total amount of motive expression should be constant. Thus, the appropriate unit of measurement is not the story giver from card to card but the expression of the motive over the entire span of the test (i.e., the total set of cards together). This being the case, the psychometric assumptions of trait immutability and item homogeneity are not relevant for the TAT. In addition, it would be possible for a test to be valid without being reliable. This concept is further discussed in the following paragraphs.

Nonetheless, researchers have attempted to calculate TAT reliabilities using traditional psychometric approaches. In 1953, H. H. Morgan developed three alternate 12-picture forms and administered them 5 weeks apart to high school students. Interscorer reliability was found to be .89, and stability correlations of .56, .56., and .64 were obtained. Haber and Alpert (1958) used an objective procedure to select pictures and then administered two 6-picture forms 3 weeks apart. They obtained a correlation of .54 for participants tested on both occasion under a relaxed orientation, a correlation of .45 for participants tested first under a relaxed orientation and second under an achievement orientation.

Winter and Stewart (1977) administered the TAT to 70 college students. One week later, there were three experimental condition groups (same story, different story, and those given no instructions). The individuals asked to tell the same story and those given no specific instructions demonstrated relatively high test-retest reliability coefficients ($r = .61$ and $.58$, respectively). Those participants asked to tell a different story had a lower reliability coefficient ($r = .27$). Based on these results, the authors concluded that under ordinary circumstances, participants instruct themselves to give different stories during multiple administrations. Such findings indicate that, due to the nature of the measure, traditional calculations of test-retest reliability may be inappropriate. Similarly, Lundy (1985) conducted a similar experimental manipulation in which high school students were given no specific instructions during the second TAT administration. This study examined the transcripts for affiliation motivation and intimacy motivation. Test-retest reliabilities

over a 1-year interval were reasonably high (r 's = .48 for intimacy and .56 for affiliation). Lundy points out that these retest reliabilities are in same range as those obtained over similar time spans for three highly respected objective personality tests, the MMPI, CPI, and 16PF. However, these test-retest reliability coefficients were higher than internal consistency coefficients (which ranged from -.18 to .32), a situation which traditional psychometric theory dictates is impossible. These findings suggest that the assumptions of classical psychometrics are not met with the TAT, and therefore alpha is not an appropriate measure for this test.

Fleming (1982) presents three possible reasons that test-retest reliabilities may be lower. First, she argues that retest is a psychologically different experience. Once the test has been taken, it cannot be repeated. This idea has long been held by clinicians who go to great lengths to protect the security of test items. The second point noted concerns a "refractory phase" in which participants tend to show resistance to giving the same response again as discussed above. Lastly, the author suggests that a participant's memory for original response "contaminates" the test. She asserts that retest is a matter of recall, not reliability. However, Lundy's (1985) report demonstrates that this finding was disconfirmed in his research.

Some researchers have attempted to calculate split-half reliabilities and create equivalent forms. Unfortunately, the small number of items (pictures) hampers the split-half approach to reliability, and the development of equal forms is tedious, if not impossible, with the TAT, as the assumption of items being homogenous is not underlying the TAT. Entwisle's (1972) review highlights one study in which the

coefficient obtained from eight pictures (.19) was adjusted with Spearman-Brown formula for a hypothetical test with 20 pictures. In this case, the reliability increased to .54.

As mentioned previously, measures such as Cronbach's alpha and Kuder-Richardson formula are based on the assumption that the items of a test should be homogenous. However, this does not allow for a test strategy in which test items are to represent different areas of personality or the conception of personality in which the disposition being measured may vary in expression from picture to picture, due to card pull or to a "refractory phase." Thus, traditional measures of reliability are most likely not appropriate for use with the TAT.

Regarding validity, Tomkins (1947) asserts that the appropriate question is whether inferences based on the test are likely to be true. While statements about the validity of the TAT cannot really be made, it may be asked to what extent do scores from a particular TAT relate to other criteria in a predicted manner. There has been considerable evidence in contemporary research that TAT scores do correlate with independent measures of behavior in meaningful ways. For example, Richardson and Partridge (1982), using a database from the large-scale national studies of Gurin, Veroff, and Feld (1960) and Veroff, Douvan, and Kulka (1981), scored TAT stories for three "family" variables and two "peer" variables. These variables were then validated against external variables of demographic data.

Despite traditional psychometric opinions, there is support to indicate that a test can be valid without having internal reliability. Atkinson, Bongort, and Price

(1977) used a computer to generate cases in which there was considerable inter-item variability, but the total scores were successful in predicting a criterion variable. Similarly, Reuman (1982) had participants write stories to eight TAT cards under one of three instructional conditions designed to increase or decrease story variability. The overall results indicated that the validity coefficient was higher for participants who had greater story-to-story variability than for participants whose stories were less variable.

McClelland (1980) addresses the issues of validity from a slightly different standpoint, arguing that operant and respondent measures relate to different aspects of personality. Operant measures refer to measures in which the response is spontaneous and not under the control of the examiner (e.g., projectives). These measures assess implicit motives and values and are successful in predicting real-life behavior over time. In contrast, respondent measures refer to measures in which the stimulus is clearly specified, response alternatives are fixed, and participants are given a directing set (e.g., self-report questionnaires). These measures assess self-attributed motives rooted in self-conceptions and are successful in predicting performance involving immediate choices. A collection of McClelland studies provide empirical support for these theoretical notions (see McClelland, 1989). In one study, food related themes in TAT increased over course of 1 to 16 hours of food deprivation. Self-report ratings of hunger increased from 1 to 4 hours but did not increase further between 4 and 16 hours of deprivation. In a study of visual-evoked potentials in response to looking at power-related pictures, TAT-based measures of power

correlated with the evoked potential response, whereas self-reports on being energetic, vigorous, and lively did not correlate with the physiological response. In yet another study, participants watched a film on loving relationships and then completed a self-report adjective checklist. They also completed TAT stories that were scored for the affiliation motive. Only the TAT scores correlated with physiological variables after the film presentation.

More recent studies have yielded inconsistent results and must be reported as well. Emmons and McAdams (1991) found that TAT measures of achievement, intimacy, and power do correlate significantly with certain self-report measures (The Personality Research Form, PRF) and that results from both types of test were significantly related to a participant-generated list of personal strivings. In contrast to Emmons and McAdams (1991), King (1995) found no correlation between implicit and self-attributed motives. It is clear that more research is needed in this area, particularly regarding the use of the TAT with children and adolescents.

3.2.3. The Self-Schema Category Analysis System

The Self-Schema Category Analysis System and User's Manual (Appendix C) was developed based on Winter's (1992) recommendations for evaluating verbal material as outlined in *Motivation and Personality: Handbook of Thematic Content Analysis* (Smith, 1992) and a self-schema domain created by Young and Lindemann (1992). The self-schema manual provides guidelines for the evaluation of the presence or absence of a particular self-schema in each TAT story. The overarching

self-schema domain used in this study is that of Undesirability, one understandably connected to depressive schema and symptomatology (Young & Lindemann, 1992). Three self-schema categories comprise the Undesirability domain: (1) Defectiveness/Shame, (2) Social Undesirability/Alienation, and (3) Failure to Achieve. For the purposes of this study, only the Social Undesirability element of the Social Undesirability/Alienation category was coded. It is believed that the Social Alienation element of the category falls more within the realm of interpersonal schema rather than self-schema. Thus, in order to keep clean the concepts of self-schema and interpersonal schema, only the Social Undesirability component was coded.

The transcripts were coded for self-schema by the principal investigator and her committee chair. The transcripts were coded thematically, based on the presence or absence of each content category. Codes were given when the overall flavor of a story reflected a scorable content category. As Winter (1992) advises, a content category was scored only once per story. The total self-schema score for a story was the sum of categories present in that story (see Appendix C for scoring sheet). An individual story could receive a score from 0 (no category scored) to 3 (all three categories scored). The total self-schema score for a participant was calculated by summing the scores obtained for all of the stories. The percentage of agreement between the raters was calculated to be 92%.

3.2.4. *The Interpersonal Schema Coding System*

The Interpersonal Schema Coding System (ISCS) was designed by three doctoral students to assess interpersonal schema (see Appendix D). This system was also designed according to recommendations from the aforementioned *Handbook*, which provides examples of several content analysis systems for scoring the thematic apperception stories. The ISCS is based in content on several schemas/categories proposed by Young (1994, 1999), Westen, Lohr, et al. (1990), and the coding system authors.

The process of creating the coding system began with a search of the literature for theoretical and empirical work on interpersonal schema. In assembling the coding system, the authors culled information from Young, Westen, and their own questions. The schemas modeled from Young include: Abandonment/Neglect (AN), Emotional Deprivation (ED), Social Isolation (SI), and Entitlement (EN). The following category was adapted from the work of Westen and colleagues (1990): Quality of Relational Interaction (QR) (similar to their Affect-Tone of Relationship Paradigms). The remaining categories, assembled by the authors, include Aggression (AG) and Helplessness (HE). These variables were added as interpersonal factors evidenced to contribute to psychological distress and not subsumed by the existing categories. Every TAT card response was coded according to this system, and an individual story could receive multiple codes (see Appendix D for scoring sheet).

The authors sought to capture finer distinctions by creating four points for each category code, rather than merely rating presence versus absence. Definitions

and rules were gathered and created for each point on the code continuums. The coding system captures only what is considered the presence of maladaptive interpersonal schemas, leaving indications of positive or neutral interpersonal schemas uncoded, limiting variance to one side of the continuum. Next, examples from the existing TAT stories were selected and placed on the appropriate point of the category continuum. Finer distinctions began to emerge as the codes' four points were discussed. Further into the process of instrument development, redundant codes were collapsed, and unclear codes were refined or eliminated. After applying the coding system to a series of non-sample transcripts to test the definitional clarity and productivity of each variable, the number of variables was reduced to seven.

Six protocols, reflecting variety within the participants' genders, ages, and diagnoses, were coded to establish initial inter-rater reliability. An average was calculated across all cards for each rater for each variable in order to ascertain the agreement among raters for the total score for each variable. These inter-rater reliabilities are presented in Table 5.

Table 5

Interpersonal Schema Inter-rater Reliabilities

Interpersonal Schema Variables	Inter-rater Reliability
Abandonment/Neglect	.93
Emotional Deprivation	.88
Social Isolation	.86
Aggression	.99
Entitlement	.99
Helplessness	.94
Quality of Relational Interaction	.80

Note. The inter-rater reliabilities listed here are averages for each variable calculated across all cards for each rater for each variable in order to ascertain the agreement among raters for the total score for each variable.

3.3. Procedure

3.3.1. Administration of the Diagnostic Interview

The Schedule for Affective Disorders and Schizophrenia for School-Age Children - Epidemiological Version/Present Episode (K-SADS-EP, Orvaschel & Puig-Antich, 1987, 1994; Puig-Antich & Ryan, 1986) was administered to the adolescents by doctoral school psychology students, who were trained in the administration of the interview by the larger study's principal investigator or another previously trained graduate student. At the treatment center, the interviewers were blind to the participant's diagnoses obtained upon admission. Each interview was audiotaped for the purposes of establishing inter-rater reliability and training. Each

interviewer was required to demonstrate at least a 90% agreement on symptom ratings. An additional researcher listened to one-fourth of the interviews throughout the study in order to establish inter-rater reliability and prevent rater slip.

The primary caregiver of each participant was interviewed regarding their adolescent's functioning whenever possible, and this information was combined with that from the adolescent to derive the diagnoses. Upon completion of the diagnostic interview, the research coordinator shared the diagnostic information with the interviewer in order that he or she could seek a consensus diagnosis with the residential treatment center's admitting psychiatrist's evaluation. In cases in which a discrepancy arose, the interviewer and psychiatrist discussed the case and determined an appropriate consensus diagnosis for the adolescent.

3.3.2. Administration of the Thematic Apperception Test

The TAT was administered by doctoral students in the following standardized order: 1, 2, 3BM, 5, 6BM, 7GF, 8GF, 8BM, 9GF, 9BM, 13B, 14, and 17BM. For each card, the adolescent was asked to tell a story that included what was happening in the picture, what the characters are thinking and feeling, what happened before the picture, and what will happen next. These administrations were audiotaped and transcribed.

In the current study, the TAT responses were used to assess the participants' self-schema and interpersonal schema. The TATs were coded for self-schema by the principal investigator and her committee chair. The TATs were coded for

interpersonal schema by the three aforementioned graduate students who created the ISCS. Details regarding the scoring of these coding systems are provided in the “Instruments” section and Appendices of this document.

Guidelines for human research provided by the American Psychological Association and the University of Texas Institutional Review Board for the Protection of Human Subjects were followed. The consent form, assent form, and measures were approved by the Departmental Review Committee and the University Institutional Review Board. The adolescents were encouraged to speak to their therapist at the facility or counselor at their school if they experienced any distress as a result of the study.

3.3.3. Procedure in the Residential Treatment Center

Recruitment of participants occurred upon admission to the residential treatment facility by facility personnel. Participation in this study was strictly voluntary. Once parental consent (Appendix E1) was obtained, the measures were administered within approximately one week of admission by doctoral school psychology graduate students at the University of Texas at Austin. Participants were asked to sign an adolescent assent form (Appendix F1) during their initial meeting with a research assistant. Participants were informed about the nature of the study, its purpose, and specifically what participation would entail. They were informed that their decision to participate, not participate, or discontinue participation would not in any way impact their relationship with the treatment center or The University of Texas at Austin.

As part of the treatment center's admission procedure, each adolescent was given a mental status exam and diagnostic interview by an admitting psychiatrist. This diagnostic information was shared with the research coordinator of the larger research team who arranged for the graduate students to collect the data within approximately one week of the adolescent's admission. The interviewers and TAT administrators were always blind to the adolescents' diagnoses during data collection. In addition, the interviewer and TAT administrator for a particular participant were different graduate students.

Once chosen to participate in the study, the adolescents were assigned an identification number to protect confidentiality. Each adolescent completed the Schedule for Affective Disorders and Schizophrenia, Epidemiological Version/Present Episode (K-SADS-EP, Orvaschel & Puig-Antich, 1987, 1994; Puig-Antich & Ryan, 1986) interview and the Thematic Apperception Test (TAT; Murray, 1943). Both of these measures were administered individually by a trained graduate student.

3.3.4. Procedure in the Public Schools

Recruitment of matched controls occurred through visits to several classrooms at a local middle school, 9th grade center, and high school campus. The overall sample of control adolescents was matched as closely as possible to the psychiatric sample on age, gender, ethnicity, and family living arrangement. The study was explained to the students by the principal investigator, her committee chair, and other graduate

students on the research team. Consent (Appendix E2) and assent forms (Appendix F2) were distributed, and students willing to participate were asked to return the signed forms to their teachers. The signed forms were collected by the researchers within the week. It was made clear to the students that participation in this study was strictly voluntary. Once parental consent and adolescent assent were obtained, the measures were administered by doctoral school psychology graduate students. Participants were informed about the nature of the study, its purpose, and specifically what participation would entail. They were informed that their decision to participate, not participate, or discontinue participation would not in any way impact their relationship with their school or The University of Texas at Austin.

Once chosen to participate in the study, the adolescents were assigned an identification number to protect confidentiality. Each adolescent completed the Schedule for Affective Disorders and Schizophrenia, Epidemiological Version/Present Episode Version (K-SADS-EP, Orvaschel & Puig-Antich, 1987, 1994; Puig-Antich & Ryan, 1986) interview and the Thematic Apperception Test (TAT; Murray, 1943). Both of these measures were administered individually by a trained graduate student. The interviewer and TAT administrator for a particular participant were different graduate students. The participants completed the measures during one to two approved elective class periods. After completing the measures, the participants received \$20, provided to the principal investigator through a small grant.

CHAPTER 4: RESULTS

The data analyses included descriptive statistics for the participants' demographic information, such as means, standard deviations, and frequencies. The demographic information included gender, age, grade, ethnicity, family living arrangement, and socio-economic status. In addition, analyses of variance (ANOVA) were conducted to determine group differences between gender and diagnostic group for self- and interpersonal schema for Hypotheses 1 and 2. Pearson correlation coefficients were also calculated to determine if self- and interpersonal schema were more highly correlated for girls than for boys in Hypothesis 3. Results are reported by hypothesis.

4.1. Preliminary Analyses

The pure depressed and comorbid adolescents were compared to assure that they were members of the same population before being combined into one group for further analyses. Univariate analyses (ANOVA) revealed no significant differences between the comorbid and pure depressed adolescents when compared on self-schema ($p = .73$) and interpersonal schema ($p = .08$). Thus, they were combined into one group for the remaining analyses. In an effort to determine the extent to which the constructs of self- and interpersonal schema were related, a correlation was calculated. The correlation between self-schema and interpersonal schema indicated that the two constructs were not significantly related ($r = -.11, p = .40$).

It was possible that gender differences or differences in self-schema or interpersonal schema might have been related to the level of depressive symptomatology. Thus, several preliminary analyses were conducted regarding the level of depressive symptomatology. The total K-SADS depression score was evaluated for use as a covariate. However, the correlations between level of depressive symptomatology and self-schema and level of depressive symptomatology and interpersonal schema were too low to justify its use as a covariate ($r = .06$ and $r = .17$, respectively). A univariate analysis (ANOVA) revealed no significant differences between the boys' and girls' level of depressive symptomatology, as assessed by the total K-SADS depression score ($p = .20$). Similarly, univariate analyses (ANOVA) revealed no significant differences between the boys' and girls' level of depressive symptomatology within the depressed group ($p = .33$) and within the control sample ($p = .23$). As a result of these findings, it can be concluded that any possible differences in later analyses were due to true gender differences rather than the severity of depression.

Correlation coefficients were calculated in order to determine the relationships among the self-schema variables and among the interpersonal schema variables (Tables 6 and 7). The self-schema correlation coefficients indicated that the self-schema total scores were moderately correlated with each of the three self-schema codes. Likewise, there was a moderate correlation between the Defectiveness/Shame and Social Undesirability codes. However, the Failure to Achieve code was not

strongly correlated with the either the Defectiveness/Shame or the Social Undesirability code.

Table 6

Correlations Among Self-Schema Variables

Variables	1	2	3	4
1. Defectiveness/Shame	1.00	.49**	.13	.77**
2. Social Undesirability		1.00	.08	.71**
3. Failure to Achieve			1.00	.61**
4. Self-Schema Total				1.00

** $p < .01$.

The interpersonal schema correlation coefficients spanned a range ($r = .23$ to $r = .86$). Twenty-four of twenty-eight correlations were significant at the .05 level, while two correlations were significant at the .01 level. In particular, the interpersonal schema total score total scores were strongly correlated with each of interpersonal schema codes ($r = .58$ to $r = .86$). The internal consistency of the interpersonal schema scale was .92.

Table 7

Correlations Among Interpersonal Schema Variables

Variables	1	2	3	4	5	6	7	8
1. Abandon/Neglect	1.00	.72*	.67*	.27**	.47*	.65*	.49*	.80*
2. Emotional Deprivation		1.00	.71*	.28**	.45*	.69*	.72*	.86*
3. Social Isolation			1.00	.23	.41*	.77*	.35*	.79*
4. Aggression				1.00	.77*	.24	.62*	.58*
5. Entitlement					1.00	.43*	.61*	.73*
6. Helplessness						1.00	.50*	.83*
7. Quality of Rel. Interaction							1.00	.79*
8. Interpersonal Schema Total								1.00

* $p < .05$. ** $p < .01$.

Tables 8 and 9 provide the frequencies of self- and interpersonal codes by diagnostic group and gender.

Table 8

Frequencies of Self-Schema Codes by Diagnostic Group and Gender

Self-Schema	Group			
	Depressed Males	Depressed Females	Control Males	Control Females
Defectiveness/ Shame	36	39	26	6
Social Undesirability	19	32	28	6
Failure to Achieve	75	74	46	23

Table 9

Frequencies of Interpersonal Schema Codes by Diagnostic Group and Gender

Interpersonal Schema	Group			
	Depressed Males	Depressed Females	Control Males	Control Females
Abandonment/Neglect	45	127	49	58
Emotional Deprivation	34	73	27	51
Social Isolation	45	93	42	40
Aggression	73	113	53	25
Entitlement	62	122	45	42
Helplessness	137	188	98	86
Quality of Relational Interaction	144	171	100	75

4.2. Hypotheses and Results

Hypothesis 1a: Clinically depressed adolescents will have higher self-schema scores, indicating greater content of negative self-schema, than nondepressed adolescents.

Hypothesis 1b: Girls will have higher self-schema scores, indicating greater content of negative self-schema, than boys.

Hypothesis 1c: Clinically depressed girls will have significantly higher self-schema scores, indicating greater content of negative self-schema, than depressed boys and nondepressed girls and boys.

Data Analysis for Hypothesis 1: A two-way analysis of variance (ANOVA) was conducted in order to determine whether there were significant differences in self-schema between gender and diagnostic group.

Results: As predicted, there was a significant difference between the depressed and nondepressed groups ($F(1, 55) = 7.54, p = .008$). These results suggest that depressed adolescents have significantly more negative self-schema than nondepressed adolescents. Results indicated that there was no significant difference between genders for self-schema ($F(1, 55) = 1.02, p = .32$). These results suggest that there is no difference between the self-schema of the girls as compared to the boys. Results indicated no significant interaction between gender and diagnostic group for self-schema ($F(1, 55) = 3.53, p = .06$). While this analysis may be approaching significance, these results indicated that there is no true detectable statistically significant difference in the way gender affects self-schema based on diagnostic group. A lack of power may have contributed to the inability to detect a significant

difference. Table 10 lists the means and standard deviations of the total self-schema scores by diagnostic group and gender.

Table 10

Means and Standard Deviations of Total Self-Schema Score by Diagnostic Group and Gender

	Mean	Standard Deviation
Depressed Females	8.33	4.16
Depressed Males	7.50	4.26
Control Females	3.89	1.99
Control Males	6.67	2.57

Hypothesis 2a: Clinically depressed adolescents will have higher interpersonal schema scores, indicating greater content of negative interpersonal schema, than nondepressed adolescents.

Hypothesis 2b: Girls will have higher interpersonal schema scores, indicating greater content of negative interpersonal schema, than boys.

Hypothesis 2c: Clinically depressed girls will have significantly higher interpersonal schema scores, indicating greater content of negative interpersonal schema, than depressed boys and nondepressed girls and boys.

Data Analysis for Hypothesis 2: A two-way analysis of variance (ANOVA) was conducted in order to determine whether there were significant differences between gender and diagnostic group on interpersonal schema.

Results: There was no significant difference between the depressed and nondepressed groups ($F(1, 59) = 1.02, p = .32$). These results suggest that there was no difference in the interpersonal schema, as measured with this interpersonal schema coding system, of the depressed adolescents as compared to the nondepressed adolescents. Similarly, results indicated that there was no significant difference between genders for interpersonal schema ($F(1, 59) = 1.79, p = .19$). These results suggest that there was no difference between the interpersonal schema, as measured with this interpersonal schema coding system, of the girls as compared to the boys. Results indicated no significant interaction between gender and diagnostic group for interpersonal schema ($F(1, 59) = .68, p = .41$). These results indicate that there is no difference in the way gender affects interpersonal schema based on diagnostic group.

Hypothesis 3: Self-schema and interpersonal schema will be more highly correlated for girls than boys.

Data Analysis for Hypothesis 3: Separate Pearson correlations were calculated between self-schema and interpersonal schema for girls and boys. Using an *r-to-z* transformation, the correlation between the two variables for boys was compared to the correlation between the two variables for girls in order to determine if they were significantly different.

Results: For boys, self-schema and interpersonal schema were not significantly correlated ($r = -.21, p = .23$). For girls, self-schema and interpersonal schema were also not significantly correlated ($r = -.03, p = .88$). Results indicated that there was not a significant difference between the girls' and boys' correlations between self- and interpersonal schema ($z = .65, p > .05$).

4.3. Additional Analyses

Observed power was calculated based on the actual effect sizes found in this study (see Table 11). One contribution this study offers to the literature is the effect sizes found for the particular analyses. For the self-schema analyses, the effect sizes for gender and gender by diagnostic group were small ($\eta = .13$ and $.25$, respectively). The effect size for the diagnostic group was moderate ($\eta = .35$). Regarding the interpersonal schema analyses, the effect sizes for gender, diagnostic group, and gender by diagnostic group were small ($\eta = .18, .13$, and $.11$, respectively). Power for all analyses was significantly lower than expected thus leading to findings of no differences for most hypotheses.

Given the effect sizes, to find a significant result between genders in self-schema it would have been necessary to have 225 participants. Sixty-seven participants would have been needed to find a significant gender by diagnostic group interaction.

Table 11

Power Analyses

	Effect Size	Observed Power
Self-Schema		
Gender	.13	.17
Diagnostic Group	.35	.77
GenderXDiagnostic Group	.25	.45
Interpersonal Schema		
Gender	.18	.26
Diagnostic Group	.13	.17
GenderXDiagnostic Group	.11	.13

To find a significant result between genders in interpersonal schema, given the effect sizes, it would have been necessary to have 130 participants. For the diagnostic group analysis, 226 participants would have been needed to find significant differences. Lastly, 337 participants would have been needed to find a significant gender by diagnostic group interaction. Based on previous research findings, it was expected that the relationship between depression and interpersonal schema was stronger than evidenced by the effect sizes previously described. Thus, it was believed that significant results could be found within a sample of this size.

CHAPTER 5: DISCUSSION

The major purpose of this study was to examine the relationships among constructs of self-schema, interpersonal schema, and depressive symptomatology in adolescent boys and girls from a school and inpatient population. In particular, the possibility of different relationships between negative self-schema and negative interpersonal schema in adolescent males and females was investigated.

In this chapter, the results from the current study are summarized. Then, the findings are integrated with previous research in the area of self-schema, interpersonal schema, and adolescent depressive symptomatology. Finally, limitations regarding the present results are discussed, and implications for future research are suggested.

5.1. Discussion of Preliminary Analyses

Correlation coefficients were calculated in order to determine the relationships among the self-schema variables and among the interpersonal schema variables. The self-schema total scores are moderately correlated with each of the three self-schema codes. In addition, there is a moderate correlation between the Defectiveness/Shame and Social Undesirability codes. However, the Failure to Achieve code is not strongly correlated with either the Defectiveness/Shame or the Social Undesirability code. This indicates that further work is needed in clarifying the construct of the Failure to Achieve code in how it relates to overall self-schema or how it is measured. Overall, the self-schema variables are related to one another. These results fit with the way

self-schema theorists conceptualize schemas. Blatt (1991) describes cognitive schemas by stating, “[they] are long-term, enduring psychological structures, modes of processing and organizing information, including affects, that provide templates that guide and direct an individual’s interactions with the interpersonal and impersonal world” (p. 450). Schemas contain general knowledge about a particular domain, including details regarding the relationships among attributes of that domain, as well as examples of it (Taylor & Crocker, 1981). They are hierarchically organized and interrelated (Hollon & Kriss, 1984). This interconnectedness appears to be reflected in the that the variables coded for self-schema in this study seem to be related to one another and to the larger self-schema construct.

Regarding interpersonal schema, the results indicated that, with the exception of the Aggression code, the interpersonal schema codes used in this study are highly related to each other. Taken together, it appears that the constructs being measured by the interpersonal coding system are inter-related and there is consistency in what is being measured. Such results appear to fit with theorists’ notions about interpersonal schema. Researchers have asserted that working models evolve into abstract images of the self as worthy or unworthy and the other as trustworthy or untrustworthy (Bartholomew & Horowitz, 1991). Some theorists would assert that these abstract images are called interpersonal schema. It is proposed that interpersonal schema refer to the expectations one has about others’ probable responses to the self (Shirk, 1998). These schemas symbolize the predictability of relational patterns that enable individuals to anticipate others’ responses to their own behavior, specifically

maintaining relatedness to others (Baldwin, 1992; Safran, 1990b). It would then be expected that there are multiple aspects of interpersonal schema, as is believed to be the case with self-schema.

5.2. Discussion of Primary Hypotheses

5.2.1. *Depression, Gender, and Self-Schema*

Results of Hypothesis 1 indicate that there are significant differences between the depressed and nondepressed groups on self-schema. The depressed adolescents had significantly more negative self-schema than nondepressed adolescents. These results were predicted based upon previous findings in which more negative self-schemas are associated with higher levels of depressive symptomatology (Hammen et al., 1985).

There was no significant difference between genders for self-schema in this adolescent population, including youths from school and residential treatment facility settings. It was predicted that girls would have a more negative self-schema than boys, based on the results of previous studies. However, the effect size for this analysis was smaller than was expected based on previous research. Adolescent females have been found to report lower self-esteem or self-worth in comparison to adolescent males (Kenny et al., 1993; Ohannessian et al., 1999; Simmons et al., 1979). However, girls do not differ significantly from the boys on self-schema in this study. Results indicate no significant interaction between gender and diagnostic group

for self-schema. In other words, there is no difference in the way gender affects self-schema based on diagnostic group.

5.2.2. Depression, Gender, and Interpersonal Schema

Results of Hypothesis 2 indicate that there are no significant differences between the depressed and nondepressed groups on interpersonal schema, as measured with this interpersonal schema coding system. This was an unexpected finding in light of the evidence that links negative interpersonal schema content with depressive symptoms in children (Rudolph et al., 1997; Shirk et al., 1997; Shirk et al., 1998; Van Horn & Shirk, 1995). Such studies have generally included children between the ages of 7 and 14, indicating that interpersonal schema is formed by early adolescence. Since the mean age for this sample was 14 years ($M = 14.6$ for boys; $M = 14.9$ for girls), it was believed that differences in interpersonal schema would be found. Similar results also have been found in adult populations (Soygut & Savasir, 2001) and with individuals with other types of psychopathology, who have demonstrated malevolent expectations of relationships (Westen, Lohr, et al., 1990). In order to evaluate the similarity and differences of the methodologies used to measure interpersonal schema, Table 12 presents some of the various methodologies used in the abovementioned studies.

Table 12

Methods for Assessing Interpersonal Schema

Researcher	Description of Methodology
Rudolph et al. (1995)	Questionnaires, hypothetical relational interaction story tasks, incidental recall tasks; Experimental conflict negotiation interaction task, raters' observations and variable ratings
Rudolph et al. (1997)	Self-report scales of cognitive representations of social relationships, hypothetical relational interaction story tasks, incidental recall tasks, teacher ratings of peer rejection
Shirk et al. (1997)	Evaluate videotaped interactions between a preadolescent and maternal figure
Shirk et al. (1998)	Self-report questionnaires, hypothetical narrative completion task, speed of processing task
Soygut & Savasir (2001)	Self-report questionnaires assessing expectations regarding others' behavior
Westen, Lohr, et al. (1990)	Verbal transcript coding of TATs

Of the studies included in Table 12, the methodology used in the present study is most similar to that used in Westen et al. (1990). However, while both studies used verbal transcript coding, the coding systems were quite different from one another. It is possible that significant differences were not found between depressed and nondepressed adolescents in this study due to the manner in which interpersonal schema was measured.

There is no significant difference between genders for interpersonal schema in this adolescent population, including youths from school and residential treatment facility settings. This hypothesis was based on theoretical notions related to social psychology and gender differences. However, the effect size for this analysis was smaller than was expected based on previous research. Because females seem to be more interpersonally oriented (Brems, 1995; Chodorow, 1974, 1978; Gilligan, 1982; Jones & Costin, 1995) and organize their experience around their relationships with others (Gilligan, 1993; Jack, 1991), it was believed that gender differences would be found on interpersonal schema in this adolescent sample.

Similar to the first hypothesis regarding self-schema, results indicated no significant interaction between gender and diagnostic group for interpersonal schema. Therefore, there is no difference in the way gender affects interpersonal schema based on diagnostic group. This is also an unexpected finding in light of the significant gender differences in the development of depression in adolescents, particularly socially and interpersonally (Kenny et al., 1993). Several studies (Ahn Lund & Frodi, 1996; Kenny et al., 1993), using samples of adolescents and adults, have found that pathways to depression (via self-view) centered on scholastic accomplishments for males and on social factors for females.

5.2.3. Correlation Between Self- and Interpersonal Schema

Results of Hypothesis 3 indicate that self-schema and interpersonal schema are not significantly correlated for boys or for girls. In addition, there is not a

significant difference between the girls' and boys' correlations between self- and interpersonal schema. Because these appear to be unrelated constructs based on the low correlation, therefore there is no difference between the girls and the boys. Because the correlations were so low, it was not likely that a significant difference would be found between them. It is possible that if interpersonal schema were measured differently, a stronger correlation between self-schema and interpersonal schema would be found.

This hypothesis was based on theoretical postulations that there are differences in the relationship of self-schemas and interpersonal schemas of adolescent males and females (Higgins, 1989; 1991; Higgins et al., 1995; Markus & Oyserman, 1989; Miller, 1984; Moretti & Higgins, 1990; Moretti et al., 1998). However, to date, this had not been directly tested in empirical studies. Due to early life experiences (Chodorow, 1978) and cultural norms and gender roles (Cross & Madison, 1997; Jack, 1991; Jordan & Surrey, 1986), the self perception of girls becomes based on interrelationships with others, whereas for boys it ultimately becomes one of self-sufficiency and autonomy (Chodorow, 1978; Gilligan, 1982; Marsella et al., 1985). Thus, it was thought that self- and interpersonal schema would be more highly correlated for girls than boys.

5.3. Discussion of Additional Analyses

Due to the lack of significant results regarding interpersonal schema, post-hoc analyses of inter-rater reliability were conducted. An intraclass correlation was

calculated for each variable for each card using a non-sample subset of six protocols scored by the three raters (see Appendix G). The intraclass correlations for all the cards were then averaged to yield the mean inter-rater reliability for the cards (Table 5). The fact that the correlations across cards are lower than the reliabilities calculated for the whole scale suggests that the consistency in applying the rating system for each card was a source of error.

While the probable impact of measurement error is further addressed in the upcoming section on study limitations, such results beg the consideration of the “dynamics-of-action” approach of Atkinson and Birch (1970, 1978) previously described. This approach calls into question the appropriateness of traditional psychometrics when establishing reliability with the TAT. Resting on the notion that the expression of a motive in imaginative thought is expected to be variable from moment to moment, this approach asserts that over longer periods of time the total amount of motive expression should be constant. Thus, the appropriate unit of measurement is not the story giver from card to card but the expression of the motive over the entire span of the test (i.e., the total set of cards together). This being the case, the mean inter-rater reliabilities appear to be more relevant for use in the current study.

In conclusion, depressed adolescents have significantly more negative self-schema than nondepressed adolescents. However, gender differences were not found in adolescents’ self-schema. No gender or diagnostic group differences were found when examining interpersonal schema. Lastly, significant gender differences were not

found in the relationship between self- and interpersonal schema in depressed and nondepressed adolescents. An integration of these results with the relevant literature follows.

5.4. Integration of Results with Literature

The following discussion places the findings of the current investigation into the context of the research literature. The goal of the present study was to better understand the etiology and maintenance of depressive symptoms through examining the constructs of self- and interpersonal schema. All in all, results from this investigation leave many questions unanswered.

While other studies have reported measuring more negative self-schema in females (Kenny et al., 1993; Ohannessian et al., 1999; Simmons et al., 1979), this investigation did not replicate those findings. Because some literature indicates that girls are more severely depressed than boys at this age (Hankin et al., 1998; Hart & Thompson, 1996; Kenny et al., 1993; Petersen et al., 1991) and that negative self-schema is related to the severity of depression (Hammen & Goodman-Brown, 1990; Hammen et al., 1985; Ingram et al., 1995; Kenny et al., 1993; Kuiper & MacDonald, 1982; McClain & Abramson, 1995; Ohannessian et al., 1999), an analysis was conducted in order to examine the boys' and girls' level of depressive symptomatology, as measured by the mean K-SADS score. No significant differences were found in the depressed group or in the control sample.

As predicted, the present study did show consistencies with the literature that depressed adolescents have more negative self-schema compared to nondepressed adolescents. This finding is consistent with Beck's cognitive theory of depression and with the empirical investigations of Hammen et al. (1985), Kendall et al. (1990), Stark et al. (1993), and Stark et al. (1996). Similarly, depressed adults have been found to have more negative self-schema as compared to nondepressed adults (Ingram et al., 1994; Ingram et al., 1995; McClain & Abramson, 1995).

In the cognitive theory of depression, depressed individuals maintain negative self-schemas, the belief that the self is either unlovable or helpless, or both (J. Beck, 1995). A connection exists between the negative cognitions of a depressed individual and his or her affect, merely continuing the cycle of depressive thinking and feeling (A. Beck, 1967). When a depressogenic schema is active, it influences the information processing patterns of the individual by adding data to support the already negative view of the self (A. Beck et al., 1979; Clark et al., 1999). Systematic errors in depressive thinking reinforce the individual's negative schemas despite the presence of contradictory evidence (A. Beck, 1967). Maladaptive schemas and information processing errors, combined with negative cognitions about the self, world, and future, affect one's thoughts, emotions, and behavior. For example, negative cognitions about one's ability to perform a certain task may cause excessive worry. This heightened anxiety and arousal about the task may render the individual less capable of actually performing the task, thus reinforcing the person's negative

thoughts about him or herself. This confirmation may cause the individual to avoid the difficult task altogether. A vicious cycle begins and is maintained in this way.

The result of this interaction, among negative cognitions, feelings, and behavior, is the possibility of the development of a depressive disorder. As found in this study, depressed adolescents had significantly more negative self-schema than nondepressed adolescents. Repeated in the larger literature is the notion that negative thoughts about the self influence information processing, one's affect, and most likely, one's interactions with others.

Contemporary conceptualizations of childhood depression are increasingly shifting toward integrative models, which highlight the interplay between cognitive, interpersonal and affective functioning. Joiner et al. (1999) writes, "The strongest implication of the interpersonal approach is that depression not only has interpersonal features and consequences but also is fundamentally interpersonal in nature" (p. 7-8). Researchers working from this perspective suggest that an individual is embedded within an environment that influences, and is influenced by, the person. Bowlby's work (1969, 1980) hypothesizes a fundamental and universal need for relatedness. Hammen (1999) writes, "...in many ways, attachment theory is about acquisitions of cognitions about the self and the world..." (p. 26).

An early behavioral/interpersonal model, presented by Coyne (1976, 1984), provides an example of a depressive family pattern. Such a pattern may begin with the child's depression eliciting hostile and rejecting responses from his or her parents, who feel unable to provide support or respond to their child's demands. This parental

hostility may then lead to the child's sense of rejection, thereby intensifying the child's depression (and negative self-schema). Children who are at an increased risk for depression (either genetically or biologically) may be more likely to manifest depressive symptoms if they do not feel securely attached to parents and do not perceive their families to be cohesive. These children may then be "biased by negative cognitive styles, such that they focus on evidence of rejecting and critical parental attitudes and fail to attend to the positive and more nurturing qualities of their parents" (Kaslow, Deering, & Racusin, 1994, p. 52). These negative family interactions may lead to the development of negative self-schema as well as negative interpersonal schema. This focus on the reciprocity of interaction sets the backdrop for a study, such as the present one, that seeks to better understand the relationship between self- and interpersonal schema.

This study serves as an initial step to better understanding the relationship between self- and interpersonal schema in adolescent youth, particularly those suffering from depressive symptoms. However, the measurement tool used in this study to assess interpersonal schema is a newly developed one. Subsequently, the analyses of Hypotheses 2 were exploratory in nature. It should be considered that the lack of findings between gender, interpersonal schema, and depressive symptoms may be attributed to difficulties in measurement, rather than to errors in theoretical conceptualization. This issue of measurement is discussed further in the following section addressing limitations. However, the possibility exists that gender and depression do not have an effect on interpersonal schema, as measured through verbal

transcript coding. Perhaps such effects are found with self-schema, centering on the individual, but not interpersonal schema, which centers on the relational aspects of the self.

Lastly, the investigation into the possible correlation between self-schema and interpersonal schema had not been previously attempted. There was reason to believe that the constructs may overlap conceptually and thus be highly correlated. If so, it was believed that for females there would be an even greater correlation between self- and interpersonal schema than for males. However, this was not the case as the constructs were not significantly correlated, as measured in this study.

5.5. Limitations and Future Directions

While the current study provides some insight into the relationships between self-schema, interpersonal schema, and depressive symptomatology, several limitations must be addressed. First, the sample size of 59 ($n = 35$ depressed and $n = 24$ nondepressed) is relatively small and limits the power and generalizability of the results. Thus, the significant results should be interpreted cautiously and should be replicated with a larger sample in order to determine if the findings hold true. While the power analyses demonstrated adequate power for some analyses (see Table 11), others remained low. Consequently, future studies should seek to increase the power by increasing the sample size and refining the interpersonal schema coding system, thereby reducing measurement error.

The participants in this study were primarily Caucasian and from a 2-parent household. As a result, it is difficult to generalize any findings to a more diverse population with respect to ethnicity and family structure. Studies investigating ethnic, cultural, and socioeconomic effects of depressive symptoms in children have been mixed. While Kandel and Davies (1982) did not find differences in symptom levels across ethnicity, Garrison (1990) found that African-American 7th graders reported more depressive symptoms than did Caucasian youth. By the third wave of the study in 9th grade, scores of African-American males had declined to the same level as Caucasian students, whereas African-American females continued to report more depressive symptoms than Caucasian females. In a Siegel et al. (1998) study, Latino youth reported more symptoms of depressed mood when compared to Caucasian, African-American, and Asian-American students. It should be noted that this finding was independent of socioeconomic status.

Doi, Roberts, Takeuchi, and Suzuki (2001) investigated the relation of adolescent major depression to ethnicity with a sample of 2,046 adolescents (Anglo-Americans, African-Americans, Mexican-Americans, and Japanese). The significant association between adolescent major depression and ethnicity disappeared after sociodemographic adjustments. These findings imply that ethnicity does not have a significant impact on the risk of adolescent major depression after sociodemographic adjustments. As the findings in this area are mixed, future research on self- and interpersonal schema should seek to include a more ethnically, as well as socio-economically diverse sample.

With regard to family structure, the results are also varied. Aseltine (1996) found that parental divorce is linked with adolescent depression in two ways. First, the divorce is a source of numerous secondary problems and stressors that are causally related to depression. Secondly, the effects of the divorce appear to alter the youths' reactivity to these stressors, in some ways enhancing their depressive effects. However, analyses highlighted the pivotal role of economic hardship in linking family structure with depression. In a longitudinal study of Finnish youth, Palosaari, Aro, and Laippala (1996) assessed the mediating factors between the childhood experience of parental divorce and subsequent depression in young adulthood. Data were collected at 9th grade and again 6 years later. Depression was found to be more common among the offspring of divorced families. Among girls, the long-term impact of divorce was mediated via low self-esteem and lack of closeness with the father. When the relationship between the father and daughter was close, no excess risk of depression was found among girls from divorced families. In contrast to these studies, Gonzalez et al. (1995) found that adolescents from divorced families differed little from those of intact families. It is clear that further research is needed in order to better understand the possible effects of family structure on depressed youth, particularly regarding their self-schema and interpersonal schema.

Another limitation that must be considered is the assessment of self- and interpersonal schema. Verbal transcript coding has previously been used in research with success for assessing self-schema (Hickey, 2001; Vaughn, 2001), attributional style (Peterson & Ulrey, 1994), depressive interpersonal style (Joiner & Barnett,

1994), object relations, and social cognition (Westen, Lohr, et al., 1990). Because previous research has found the TAT to be an effective method for measuring the cognitive-affective processes that underlie interpersonal functioning (Westen, Lohr, et al., 1990), it was hoped that significant results would be found with regard to adolescents' interpersonal schema. The interpersonal schema coding system used in the present study was modeled, in part, on Westen's coding system.

Westen et al.'s (1990) study of adults contained four experimental groups: major depressive disorder, Borderline Personality Disorder (BPD) with major depressive disorder, BPD without major depressive disorder, and controls. It must be noted that the participants of Westen et al.'s study were considerably older (mean age = 30 years) than the participants of the present study. Their findings suggest that individuals with BPD "are distinguished by poorly differentiated, egocentric representations of people, [have] malevolent expectations of relationships, [have] difficulty investing in relationships and moral standards, and [possess] idiosyncratic and grossly illogical attributions" (p. 361). The BPD with and without depression data did not differ, yet the BPD groups were distinctly different from the depressed group. Those individuals with BPD and major depression presented like borderlines, not like major depressives.

There are several commonalities between Westen et al.'s coding system and the coding system used in this study. The variable, Quality of Relational Interaction (QR), is conceptually similar to Westen et al.'s Affect-Tone of Relationship Paradigms. Both variables seek to assess the affective quality of interpersonal

expectancies. Another similarity between the coding systems is the use of multiple levels of the variable rather than rating for presence or absence. The authors of the Interpersonal Schema Coding System sought to capture finer distinctions by creating four points for each category code, rather than merely rating presence versus absence. As Westen and colleagues' research served to clarify the relationship between interpersonal expectations of those with BPD and/or depression, the present study sought to continue research in that vein, albeit with a younger population.

Although the use of verbal coding is considered a strength to avoid social desirability in responses, compared to self-report instruments (Smith, 1992), this particular interpersonal schema coding system had not been used in prior studies. Therefore, it is unclear the extent to which this tool may capture interpersonal schema in a measurable way. Future studies may choose to use a different method of assessing of interpersonal schema, use the current measure in a concurrent validity study, or add an established measurement of interpersonal schema to the methodology. Regarding the self-schema coding system, it has been used several times before in previous studies. However, the extent of such usage has been limited. Thus, the above suggestions apply to the self-schema measurement system as well.

The short length of the stories and overall transcripts may have affected the results of this study, particularly with regard to interpersonal schema. While obtaining at least six stories is considered overall sufficient test length (Smith, 1992) (13 stories were coded for each participant in the present study), variations in the length of the stories may also be an important factor to consider in light of the nonsignificant

results. Clearly, there is greater opportunity for higher scores in a longer protocol. In the manual accompanying the TAT (Murray, 1943), it is suggested that a correction factor should be used to adjust scores whenever story lengths diverge much from 300 words. This problem of differing story lengths has been dealt with in several ways in prior investigations. Researchers have created adjustment tables, calculated percentage scores based on the incidence of the variable, utilized relative scores resulting in ratio scores, and used regression analyses to account for differences in story length (Cramer, 1996). A potential limitation of the present study is the relatively short length of some of the participants' stories, thus limiting the opportunity for codable content. There appeared to be some variance with regard to the quality of the administration of the TAT as well as the willingness of some of the psychiatric participants to tell stories of adequate length. Future investigations should consider the issue of story length in order to maximize results, particularly with respect to interpersonal schema.

Both the severity and number of disorders of the current population also may have impacted the results. Given the current state of mental health services in this United States, it is likely that only the most disturbed youth will be provided with intensive inpatient treatment. Thus, it is possible that the comorbidity of psychological disturbances experienced by this population may have affected the outcome of the study. Researchers should examine the self- and interpersonal schemas of adolescents with various disorders in attempts to discriminate by diagnostic group, as Westen et al. (1990) have done. Perhaps more can be learned

about possible differences between individuals with internalizing disorders and externalizing disorders? Future research should examine the impact of comorbidity on the cognitive functioning of youth as well as examine “purely” depressed adolescents. Similarly, it is possible that the severity of the psychopathology of the residential treatment center youths overwhelmed any possible gender differences that may exist. Perhaps with youths experiencing less severe cases of depression (e.g., subclinical levels of depression, dysthymia, etc.), gender differences may emerge. In order to investigate this, researchers may be required to expand their range of data collection sites to include outpatient facilities or schools. Not only would the opportunity for examining “pure” diagnostic groups be enhanced, but the inclusion of such groups could serve to diversify the studied sample and extend the potential generalizability of findings.

Participants of this study ranged in age from 11- to 18-years-old. Youths at this developmental stage were used for several reasons. Numerous researchers have reported a relationship between a negative view of self and depression in children and adolescents (Asarnow et al., 1987; Kaslow et al., 1992; Prieto, Cole, & Tageson, 1992; Sanders, Dadds, Johnston, & Cash, 1992; Stark et al., 1993). Specifically, Hammen and Zupan (1984) found that children as young as 7 or 8 years of age make definite judgments about their traits. Similarly, researchers have also linked negative interpersonal schemas (or relational expectations) with depressive symptomatology in children and adolescents (Rudolph et al., 1997; Shirk et al., 1997; Van Horn & Shirk, 1995). Some empirical evidence supports the associations between negative

interpersonal expectations and both peer rejection (Rudolph et al., 1995) and decreased social competence (Burton, 1996). Thus, it was believed that negative self- and interpersonal schema could be identified in adolescents of this age range.

Because gender differences in depression emerge by age 13 or 14 (Hankin et al., 1998; Nolen-Hoeksema et al., 1994; Petersen et al., 1991), it was expected that this sample would replicate previous findings regarding gender differences in adolescent depression. Much gender differences research has focused on the relationships between female gender roles and a lack of psychological well-being (Baron & Peixoto, 1991; Hart & Thompson, 1996; Jack, 1991; Lamke, 1982). Jack's (1991) theoretical model purports that as women organize their experience around their relationships with others, their expression may be related to the value they place of establishing and maintaining close relationships (Gilligan, 1993; Jack, 1991). Women may "silence-the-self," which consists of deferring to the needs of others, censoring self-expression, repressing angry feelings, judging the self against a selfless ideal, and censoring experiences to maintain safe, close relationships (Jack & Dill, 1992). Hart and Thompson (1996) assert that silencing-the-self is an extreme and unhealthy aspect of the feminine gender role as such characteristics are associated with decreased levels of well-being (Jack & Dill, 1992; Thompson, 1995). It has been hypothesized that, influenced by cultural norms, women's schemas regarding appropriate female roles may play a part in a vulnerability to depression. One possible explanation for the lack of results found in this study is that there may be generational/societal changes that are occurring. Perhaps as societal gender roles

become more flexible and greater opportunities are made available to females, the gender differences once noted may no longer hold true.

Researchers have been interested in the family environment because it is the “primary socializing agent for the child...and [that] children naturally develop essential intra- and interpersonal behaviors and cognitive processes within the family” (Stark et al., 1993, p. 878). A stable characteristic of depressive family environments appears to be a pervasive sense of negativity (Kaslow, Rehm, Pollack, & Siegel, 1990). Specifically, this negativity is demonstrated by lower rates of positive reinforcement (Cole & Rehm, 1986), withdrawal of affection (Messer & Gross, 1995), excessive criticism (Arieti & Bemporad, 1980), and conflictual interactions (Cole & McPherson, 1993). Since family variables were not explored in the current study, their relative contribution in explaining child and adolescent depression, particularly through self- and interpersonal schema, remains uncertain. Future studies employing a more complex research design, incorporating family factors and environmental stressors, would aid in the explanation of child and adolescent depression. A true test of a multiple-pathway development model of depression would require a longitudinal research design to examine their relative contributions over time to the onset and maintenance of child and adolescent depression. If the family is the primary socializing agent for children, it may be a worthwhile effort to examine the self- and interpersonal schema of parents of disturbed youth. Teaching parents and children to become more aware of their cognitions about themselves and their relationships with others may prove to be a useful intervention technique.

Depression has been found to leave children and adolescents impaired affectively, cognitively, educationally, motivationally, physiologically, and socially (Gotlib, 1992; Kovacs, 1989; Kovacs & Beck, 1977; Kovacs & Goldston, 1991; Stark, 1990). Clearly affecting every facet of one's life, a past episode of depression places an individual at a substantially increased risk for a recurrence in the future (Lewinsohn, Rohde, Seeley, & Hops, 1991). In light of the harmful effects of depression on adolescents, it appears that an effort to prevent the development of depression in adolescents is a worthwhile cause. The administration and analysis of a TAT is a relatively short process, with a potential to yield valuable information regarding an adolescent's self-schema. Perhaps useful information regarding possible negative self-schemas of adolescents could be utilized in order to prevent the development of depressive episodes. Relatively efficient screenings could be conducted in schools preventatively or once possible depression concerns arise.

By further understanding the pathways between self-schema and depressive symptomatology, many therapeutic advances in the treatment of depression become possible. For example, Young's (1999) schema-focused work with individuals with personality disorders and other psychopathology is divided into two stages, (1) assessment and case conceptualization, and (2) schema change. In the first phase of treatment, the following steps are completed: identification of symptoms, administration of schema-focused questionnaires, education regarding schemas, triggering of schemas and confronting schema avoidance, identification of schema-driven behavior, integration of this newly-found information into case

conceptualization, and targeting schemas for changes. The second phase of therapy includes the following tasks: critical examination of the evidence supporting the schemas as well as evidence contradicting it, illustration of how clients discount the contradictory evidence, active challenging of the schema in and out of session, and specific experiential, interpersonal, and behavioral techniques. With these steps in place, the goal is to provide the opportunity for clients to become aware of and change their maladaptive schemas. Assessment of self-schema through verbal transcript coding, together with tools provided by Young, may enhance intervention for depressed adolescents.

An examination of the client's interpersonal relationships may be better understood by the constructs of self-schema as well. With increased understanding of patterns of self-schema, particularly developed within a family context, treatment could be designed to address both the contributions and influences of parents to adolescents and vice versa. Therefore, it is hoped that this line of research will continue, in order to understand the complex risk factors leading to the development of adolescent depression and thereby inform current methods of prevention and treatment.

5.6. Conclusions

In summary, this study was considered a step in understanding the relationship between self-schema, interpersonal schema, and depressive symptomatology in an adolescent population from public schools and an inpatient residential treatment

facility. Although there are several limitations of this investigation, and there were generally inconclusive findings across hypotheses, there are a number of contributions made by this effort. As predicted, there was a significant difference found between the depressed and nondepressed groups, suggesting that depressed adolescents have significantly more negative self-schema than nondepressed adolescents. A coding system designed for use with verbal transcripts (such as the Thematic Apperception Test) to assess interpersonal schema was created and tested. In addition, effect sizes for the various analyses were presented. Lastly, it is hoped that this effort will attempt to connect the world of depression research to clinical practice. The identification of self-schema and interpersonal schema constructs, as measured through projective measures, may inform the prevention and treatment of adolescent depression.

Appendix A

Participants' Consensus Psychiatric Diagnoses (Residential Treatment Center)

ID #	Gender	Diagnoses
003	Female	MD, ODD
004	Male	MD
014	Male	MD, SA
015	Female	MD, ODD
021	Male	MD, CD, ADHD
023	Male	MD, CD, SA
024	Male	MD
027	Female	MD, ODD
030	Female	MD, CD, ADHD
033	Female	MD with Borderline Features
037	Male	MD, DD, ODD, ADHD
038	Male	MD, SA, ADHD, CD
039	Male	MD, CD, SA
040	Male	MD, PTSD, ADHD, Sexual Disorder NOS
046	Male	MD, ODD, SA
049	Male	MD, DD, ODD, SA, ADHD
050	Female	MD, CD, SA
052	Male	MD, PTSD, ADHD
054	Male	MD, CD, ADHD
064	Male	MD, CD, ADHD
071	Male	MD, ADHD, Sexual Abuse
079	Male	MD, CD, SA, ADHD
084	Male	MD, Intermittent Explosive Disorder
089	Female	MD, DD
091	Male	MD, ADHD
092	Female	MD
093	Male	MD, CD, ADHD
094	Female	MD, ADHD
095	Female	PTSD, MD
097	Female	MD
098	Female	MD, GAD, DD
106	Male	MD, DD, ADHD
116	Female	MD, SA, Eating Disorder NOS, Disruptive Behavior Disorder
118	Female	MD, PTSD, ADHD
119	Female	MD, CD

Note. MD = Major Depression; ODD = Oppositional Defiant Disorder; SA = Substance Abuse; CD = Conduct Disorder; ADHD = Attention-Deficit/Hyperactivity Disorder; DD = Dysthymic Disorder; PTSD = Post-Traumatic Stress Disorder; GAD = Generalized Anxiety Disorder

Appendix B

Substances Potentially Used By Participants Prior to Admission and Substance Half-Lives

Substance	Half-Life (hours)
Alcohol (Ethanol)	0.24 ± 0.08
Nicotine	2.00 ± 0.70
Cannabis	32.00 ± 12.00
Amphetamines	
Phenylpropanolamine	4.70 ± 0.40
Methylphenidate	1.00-3.00
Barbiturates	
Amobarbital	10.00-40.00
Aprobarbital	14.00-34.00
Butobarbital	35.00-50.00
Butalbital	35.00-88.00
Mephobarbital	10.00-70.00
Methohexital	3.00-5.00
Pentobarbital	15.00-50.00
Phenobarbital	80.00-120.00
Secobarbital	15.00-40.00
Thiopental	8.00-10.00
Cocaine	0.80 ± 0.20
Opiates	
Morphine	2.00
Heroin	0.50
Meperidine	3.00-4.00
Methadone	15.00-40.00
Fentanyl	3.00-4.00
Codeine	2.00-4.00
Hydrocodone	4.00
Hallucinogens	
Lysergic Acid Diethylamide (LSD)	4.00
Phencyclidine (PCP)	18.00
Methylenedioxymethamphetamine	6.00
Inhalants/Solvents	
Toluene	<1.00
Nitrous Oxide/Amyl Nitrate	<1.00

Note. From Goodman & Gilman's *The pharmacological basis of therapeutics* (9th ed.), by J. G. Hardman, L. E. Limbird, P. B. Molinoff, R. W. Ruddon, & A. Goodman Gilman (Eds.), 1996, New York: McGraw-Hill.

Appendix C

SELF-SCHEMA CATEGORY ANALYSIS MANUAL

(for use with the Thematic Apperception Test)

Contents of Manual

- I. General Instructions
- II. Contents of Coding System
 - a. Undesirability Self-Schema Domain
 - b. Content Categories and Examples
- III. TAT Administration Procedures
 - a. Instructions to Participants
 - b. Acceptable Probes
- IV. TAT Scoring Procedures
 - a. TAT Scoring Procedures
 - b. Special Considerations
- V. Sample Self-Schema Coding Record Sheet

I. General Instructions

This manual and corresponding scoring sheet are used in the scoring of Thematic Apperception Test (TAT; Murray, 1943) stories. It is based on suggestions for evaluating verbal material from *Motivation and Personality: Handbook of Thematic Content Analysis* (Smith, 1992) and modeled after the Self-Schema Category Analysis coding system (Hickey, 2001; Vaughn, 2001), and Young and Lindemann's (1992) Undesirability domain.

Each TAT story is considered as a separate unit and coded individually for its depressive self-schema content. Each story is thematically evaluated for the presence or absence of specific self-schema content categories. Young and Lindemann's (1992) Undesirability self-schema domain is comprised of three content categories: (1) Defectiveness/Shame, (2) Social Undesirability/Alienation, and (3) Failure to Achieve. The Social Alienation element of the Social Undesirability/Alienation category was not used in this study as it was considered to be part of interpersonal schema rather than self-schema. Thus, only the Social Undesirability element was scored. Each category is scored +1 if it is found to be present in the story, and as Winter (1992) suggests, a content category is scored only once per story.

Depending on the nature of the research, a rater may use the sum of the self-schema categories present in a story, thus yielding a score of 0-3; or more simply, score the story for the presence or absence of the self-schema undesirability domain, which results in a score of 0 or 1. This investigation employed the former method. The total self-schema score for a participant is the sum of the scores obtained for all

of the stories. Thirteen TAT stories were obtained and scored for each participant (TAT cards 1, 2, 3BM, 5, 6BM, 7GF, 8GF, 8BM, 9GF, 9BM, 13B, 14, and 17BM).

II. Contents of Coding System

a. Self-Schema Domain of Undesirability (adapted from Young & Lindemann, 1992)

UNDESIRABILITY: The expectation that one will not be desirable to – or is different from – other people, in terms of any of the following: physical attractiveness, social skills, inner worth, moral integrity, interesting personality, career accomplishment, values, interests, masculinity/femininity, socio-economic background, etc. Typical origin is criticalness or rejection from family or peer group.

b. Content Categories:

- 1) Defectiveness/Shame (DS) – the feeling that one is inwardly defective, flawed, or invalid; or that one would be fundamentally unlovable to significant others if exposed; or a sense of shame regarding one's personal inadequacies. The story is scored +1 if Defectiveness/Shame is present (+1 DS).

Examples:

Her name is Susan. She's very, very depressed because she's been abused all sort of ways, and she cannot talk. If she could talk, she'd get most of her anger out and all the feelings. She cries very much, but she hides her face behind her hair because she thinks she's ugly... (003, 3BM)

She is depressed 'cause...she's depressed. She cut herself. (017, 3BM)

Participant: He's like, talking to his mom and his mom's just staring out the window. She's like gloomy or something. He's upset that she won't talk to him and he'll try to talk to her again.

Examiner: And what is she thinking and feeling?

Participant: She's crazy. She don't feel nothing. (026, 6BM)

Participant: This boy was molested and he's having flashbacks of these 2 guys touching him. And he keeps getting these flashbacks.

Examiner: Ok. What will happen?

Participant: He's got to get help.

Examiner: What's he thinking and feeling?

Participant: Depressed. (017, 8BM)

The mother and daughter...the mother...the daughter's upset 'cause the mother and she got in a fight. So she's trying to sit down and talk to her, but the daughter's being very obnoxious, so whatever happens there, I don't know. (017, 7GF)

Participant: ...she's crying because she shot herself in the hand. She was trying to help her dad by cleaning the gun but that was stupid.

Examiner: What is the character thinking?

Participant: Um, she is thinking she is in a lot of pain and really messed up because she was dumb. (079, 3BM)

Looks like a bunch of lazy dead-beats. (021, 9BM)

...It's like a bad kid or something. (028, 8BM)

- 2) Social Undesirability (SU) – the belief that one is outwardly undesirable to others (e.g., ugly, sexually undesirable, low in status, poor in conversational skills, dull). Can involve insecurity in social situations. The story is scored +1 if Social Undesirability is present (+1 SU).

Examples:

This little boy, he is 4 (pause) his name is going to be...Mark. He lives all alone. Both his parents forgot about him and abandoned him. He lives in this tiny shack where he can barely support himself because he's only 4. He has been there for 2 days. He thinks people are going to look for him, but no one is looking because they don't know where he is. He's a poor child lost in a big world... (003, 13B)

There's a girl, and she's going to school. She's walking by some people that she doesn't know, and she just has this feeling that they're looking at her strange or something. She just tries to ignore them, and she just goes to school. (028, 2)

Participant: ...his friends are playing football, and they used the last person, but there aren't enough men, they used like the uneven person. So he's mad, and he's sittin' down at his porch, whining.

Examiner: What are the characters thinking?

Participant: That he's a wimp and that he cries at everything. That he's a whiner. He's thinking that they're all punks 'cause they won't let him play. (046, 13B)

This little boy seems to have had a hard life. He probably lives out in the dust bowl in ah, Oklahoma. He looks, he seems, the feeling of being poor and everything shows on his face. (040, 13B)

Participant: She's ah, pregnant...um, I think he might have said something to her.

Examiner: What are the characters thinking and feeling?

Participant: She ah, is sad, and they don't really care.

Examiner: How do you think it turns out?

Participant: I think, she'll um, they'll give her the silent treatment...(049, 2)

...She was a single mother, which in the South is very rare. She was looked down on by everybody, and she was poor and homeless. This was very rare and unheard of. She was a vagrant as far as Susan was concerned, as far as Mary was concerned. She didn't want anything to do with it. She hated her. She had a 6-month-old baby with her, and Mary was very mean to her. She threw rocks at her, cussed at her, you just don't do that. They were vagrants....(064, 7GF)

...Matthew has been through, been in foster homes ever since he can remember. People kept sending him back once they figured out he wasn't the cute, charming, sweet boy they thought he was...(064, 5)

Participant: There's a girl running, and it looks like maybe her mom is looking down at her watching her.

Examiner: What are the characters thinking?

Participant: Um...probably someone's chasing after her or something.

Examiner: What are the characters feeling?

Participant: Um...I think that the girl running is probably scared or she wouldn't be running in high heels.

Examiner: What happened before this?

Participant: Maybe her boyfriend broke up with her or something. (095, 9GF)

- 3) Failure to Achieve (FA) – the belief that one has failed, or is fundamentally inadequate relative to one's peers in areas of achievement such as school, work, and sports. It often involves the belief that one is stupid, untalented, incompetent, or ignorant. The story is scored +1 if Failure to Achieve is present (+1 FA).

Examples:

...he got in trouble in music class 'cause he didn't know how to play it. So now he's sitting down looking at it and thinking to himself, "Stupid, stupid violin. I can't play it." (046, 1)

Participant: This is a little boy sittin' on there thinking about how old that cabin is. He grows up, and he gets the cabin. His family gave it to him.

Examiner: What is he feeling?

Participant: He's thinking real hard.

Examiner: What is he feeling?

Participant: Frustrated.

Examiner: How come?

Participant: I don't know. He can't figure out who built the cabin and when it was built. (021, 13B)

...she's trying to commit suicide but has failed...because she did not pull the trigger. Now she's laying, she's sitting on the floor thinking about what she tried to do, and she tried to do it again until she makes it. (003, 3BM)

This boy just moved here from Kansas or New York or something. And he moved into the house, this really old, messed-up house from like the 1700's or whatever. He's just bored out of his mind 'cause he can't move on... (026, 13B)

...she came home drunk, and she fell asleep on the floor, the couch, and she feels sad. And then she wakes up and goes to work and gets fired 'cause she has a drinking problem... (046, 3BM)

Participant: He, ah, couldn't do his lesson and ah, he's angry at himself so he's um, I guess he's kinda beating himself up about it.

Examiner: Ok, so, what is he thinking and feeling...so he's angry?

Participant: He's kind of depressed.

Examiner: Ok, and how does it turn out?

Participant: I think he, ah gives it away and quits. (049, 1)

...She's going to try to get even with her, and she's going to fail and be locked up in jail forever. (091, 9GF)

...she probably got told she couldn't do what she wanted to do or that she didn't do so good on a test or something...(092,2)

III. TAT Administration Procedures

a. Instructions to Participants (modified from Peterson & Ulrey, 1994):

"You will be shown some pictures, one at a time. Your task will be to make up a story for each picture and tell it to me. Your story will be tape-recorded and used to research purposes only. No one (at the treatment facility or school) will hear your stories. In fact, no one will know these stories are yours. For each story, please include the following: 1) What is happening in the picture?, 2) What has led up to the picture?, 3) What are the characters thinking?, 4) What are the characters feeling?, and 5) What will happen next? There are no right or wrong stories. Tell your thoughts as they come to mind. There is no time limit."

b. Acceptable Probes:

Probing is acceptable when the participant does not tell a detailed story or address each of the five questions. Acceptable probes include:

“What is happening in the picture?”
“What are the characters thinking?”
“What will happen next?”
“You can make up anything.”

“What happened before this?”
“What are the characters feeling?”
“Tell me more.”
“Anything else?”

IV. TAT Scoring Procedures

a. TAT Scoring Procedures

- 1) Scorable categories may not be present in all stories. Score only what the story says about its characters.
- 2) Protocols are to have identification numbers so that the participant’s identity, age, gender, and other characteristics are not available to scorers.
- 3) Score each story individually for each participant. Score all Card 1 stories, then all Card 2 stories, etc.
- 4) Each self-schema category is scored only once per story. An individual story may receive a score from 0 (no category scored) to 3 (all three categories scored).
- 5) Separate scoring sheets for each participant will be used to record codes.

b. Special Considerations

- 1) A theme of suicide receives an Undesirability code. If there is a co-occurring theme that one is inadequate or defective, then Defectiveness/Shame (DS) is coded. If the co-occurring theme is one of failure, or no clear theme is evident, then Failure to Achieve (FA) is coded.

Examples:

Participant: A man’s looking out the window missing his wife who had died of cancer 3 years before.

Examiner: What is the character thinking?

Participant: He’s thinking, “When I die, we will meet again.”

Examiner: What is he feeling?

Participant: Depressed, sad.

Examiner: What happened before this?

Participant: He was over here crying in the dark, and he went over and opened the window and looked up at the sky.

Examiner: What’s going to happen next?

Participant: He’s going to shoot himself in the head, going to kill himself so that he can be with his girlfriend. (091, 14) (coded as DS)

...Joe dead committed suicide by eating thousands of pills so they’re trying to find out how many pills he took, but they don’t know cause they found him dead...(003, 8BM) (coded as FA)

- 2) Failure to achieve in life in general as a result of incarceration or death is coded for Failure to Achieve (FA). Failures in relationships are also coded as FA.

Examples:

It's like this kid killed somebody and right now they're operating on the guy he shot. Right now, the doctors know the guy's dead so they're doing an autopsy on him to get the bullet out to see who it belongs to. And this kid is just like thinking about this stupid-ass moment, thinking he shouldn't have shot the guy. Later on he's caught and sent to jail or something for manslaughter. (026, 8BM)

This kid was riding his bike, and a car hit him, and it knocked him over. He started internally bleeding, and these guys had to do an emergency operation on him. Well, once they got him under, the kid can start seeing the people operating on him. He sees the bright light and starts floating upwards. And after the kid ends up dying and what he had seen was an out-of-body experience. (004, 8BM)

- 3) If the theme of Undesirability is present but the story still has a positive or "happy" ending, the code is still given.

Examples:

She is depressed 'cause...she's depressed. She cut herself. Her mom dies, and she gets put in residential, and everything gets better. (017, 3BM)

Participant: Looks like they went to war and a guy got shot or something, and 2 guys are trying to get a bullet or something out of him. Looks like the little boy's father. He's leaving the room – don't want to watch. Looks like he's sad that his father might die or something.

Examiner: What led up to the event in the picture?

Participant: He lost his job.

Examiner: What happens next?

Participant: He decides not to jump, and he got a new job, and he's just having a good life. (046, 14)

Participant: This guy's confused and mad. He's in his house. He's about to commit suicide. He's starting to think about why should he. Life's kinda too short. So he's just thinking.

Examiner: What will happen?

Participant: His father lives happily ever after. (021, 8BM)

- 4) If during the administration of the TAT, the participant makes a self-statement that is codeable for Undesirability, it is coded and counted in the scoring.

Examples:

Participant: It's a woman, and she looks calm. And she's, looks like she's posing for a picture. A painting. And what happens next is she finishes posing for the picture. That's all...

Examiner: Ok.

Participant: I can't say much about these stories, I feel stupid! (033, 8GF)

Examiner: 8GF.

Participant: I'm not very good at this.

Examiner: No, these are great stories!...(participant proceeds to tell story)...(040, 8GF)

V. Sample Self-Schema Coding Record Sheet (see following page)

TAT Self-Schema Coding Sheet

ID #: _____

Card #	Defectiveness/ Shame (DS)	Social Undesirability (SU)	Failure to Achieve (FA)	UNDESIRABILITY TOTAL PER CARD
1				
2				
3BM				
5				
6BM				
7GF				
8GF				
8BM				
9GF				
9BM				
13B				
14				
17BM				

Undesirability Total for Participant:

Appendix D

INTERPERSONAL SCHEMA CODING SYSTEM MANUAL

(for use with the Thematic Apperception Test)

Contents of Manual

- I. General Instructions
- II. Contents of Coding System
 - a. Content Categories and Examples
- III. TAT Administration Procedures
 - a. Instructions to Participants
 - b. Acceptable Probes
- IV. TAT Scoring Procedures
 - a. TAT Scoring Procedures
 - b. Special Considerations
- V. Sample Interpersonal Schema Coding Record Sheet

I. General Instructions

This manual and corresponding scoring sheet are used in the scoring of Thematic Apperception Test (TAT; Murray, 1943) stories. It is based on suggestions for evaluating verbal material from *Motivation and Personality: Handbook of Thematic Content Analysis* (Smith, 1992) and modeled after ideas of Jeffrey Young (1994, 1999), Drew Westen and colleagues (1990), and the authors of the coding system (Melanie Ballatore, Michelle Natinsky, & Mary Yancy, 2002).

Each TAT story is considered as a separate unit and coded individually for its interpersonal content. Each story is evaluated for the extent to which specific interpersonal schema content categories are present. The seven domains include: Abandonment/Neglect (AN), Emotional Deprivation (ED), Social Isolation (SI), Aggression (AG), Entitlement (EN), Helplessness (HE), and Quality of Relational Interaction (QR). Each category found present in the story is scored on a scale of 0-3. As Winter (1992) suggests, a content category is scored only once per story.

The total interpersonal schema score for a participant is the sum of the scores obtained for all the stories. Thirteen TAT stories were obtained and scored for each participant (TAT cards 1, 2, 3BM, 5, 6BM, 7GF, 8GF, 8BM, 9GF, 9BM, 13B, 14, and 17BM).

II. Contents of Coding System

The content categories are based on three sources: the work of Jeffrey Young (1994, 1999), Drew Westen and colleagues (1990), and the authors of the coding system (Melanie Ballatore, Michelle Natinsky, & Mary Yancy, 2002).

a. Content Categories and Examples:

Abandonment/Neglect (AN)

0	1	2	3
No abandonment or neglect	Mild abandonment/neglect with regret	Moderate abandonment/neglect or perception thereof, more pervasive	Complete abandonment/neglect which causes great harm

Involves the sense that significant others (those who would reasonably be expected to provide support) will not be able to continue providing support, connection, strength, or practical protection because they are unpredictable, unreliable, or erratically present; through impending illness or death; or because they will leave or abandon the individual.

- Note – AN includes abandonment such as the death of any emotionally significant other. The death of a parent/caregiver is typically coded as Level 3
- Note – When a character references “the world” or makes global references in this light, it may be coded as AN.
- Note – AN must occur within the context of a relationship to be coded, such as romantic relationships, parent/child or other caregiver/dependent relationships, relatives, or friendships. AN can occur parent to child or child to parent, as with Emotional Deprivation (e.g., a child running away from adaptive home environment).

Examples:

Level 0 – The mom’s thinking, you know, “Why don’t you face them and come back? Let’s face them; together we can face them.” (118, 9GF)

Level 1 – Maybe somebody died and so she’s crying about it. She’s thinking “How could it happen?” She’ll probably get over it. (502, 3BM)

She looks like she had a little trouble with her boyfriend, I guess. And she’s ah, she’s crying, she’s sad about what happened. She didn’t want to break up, or she didn’t want to have troubles. But then, she didn’t want to have trouble with her relationship.

So, either she gathers her thoughts here while she's crying or maybe she'll go back and talk with him. (053, 3BM)

This one was, um, this girl in the picture is looking at her daughter in her room. Her daughter is trying to commit suicide, and um, her mom opens the door and sees her daughter trying to do this. And the mom is feeling like, you know – is feeling like, she's kinda confused. She's like, "Why are you doing this?" And she feels really confused and depressed. And like she wants to help her daughter. And she thinks, like, "What should I do?" She's really confused because she don't know what to do. And the daughter is just feeling depressed and doesn't know what to do either. (118, 5)

Level 2 – There was this boy, and he had this violin. And his dad, he like – this boy tried to play his violin for his dad, and his dad, like, never listened to him, you know? He's never there, and the boy is thinking, "Why doesn't my dad ever listen to me? Why doesn't he understand?" And he felt really down and depressed and confused. And hurt. Because his dad didn't listen. And, um, the ending of this is he just quit playing the violin and stayed depressed because his dad never listened. So he just quit playing. (118, 1)

This is a girl, a little girl, who kind of pushes everybody away. Just the fact that a lot of things have happened to her. Bad things have happened to her, where she just don't trust anybody anymore. Not even her mother. She feels just like...like she can never love people again. Like she never could trust anybody again. So she pushes everybody away. In this picture, her mom is trying to talk to her, and it's just the fact that, she just doesn't want to listen. Because she feels like pushing everybody away. And um, the mom is thinking, you know, "Why? What can I do? What can I do to make her talk to me?" And she feels like there's no hope, but she feels like she has to get her child better. And um, it all ends with, her daughter ends up in rehab and trying to get better. (118, 7GF)

Level 3 – This is a little boy, and he is hiding from his dad. Because his dad beats him all the time...This little boy feels like, "Why does my daddy have to do this to me?" He feels like...he feels like, "Why do they take it out on me?" And um, he thinks that - he feels like, that he wants to be out of there. And he thinks that, maybe if he does something good, his dad wouldn't beat him, but every time he does something good, it happens anyway. The end of it, I guess, is that he just ends up hiding from his dad. (118, 13B)

This is a kid...his parents just abandoned him because they couldn't afford him and they didn't want him anyway...they're putting him there, and they're going to let other parents come up and bid for him. (012, 13B)

He wakes up, goes outside and sits down, and waits for his dad to come home. But his dad never comes home. [He's feeling] scared and worried. (037, 13BM)

Emotional Deprivation (ED)

0	1	2	3
No deprivation	Mild situational inattention or lack of support	Moderate deprivation or instability, which results in unmet needs	Complete emotional deprivation. Response is negative or non-existent when need is great.

There must be an emotional need present that is not being met. Involves the expectation that one's desire for a normal degree of emotional support will not be adequately met by others *who would reasonably be expected to provide emotional support*. May be deprivation of nurturance, empathy, or protection.

- Note – The death of a character is not coded ED.
- Note – ED is always coded in the context of a relationship as defined in Abandonment/Neglect (romantic relationships, parent/child or other caregiver/ dependent relationships, relatives, or friendships). ED may be coded parent to child or child to parent (e.g., parent's sense that child is letting him or her down or not meeting his or her needs).
- Note – ED must indicate that the need is not being met.
- Note – ED may be coded globally, implying a larger "they" as somehow unsupportive or malevolent.

Examples:

Level 0 – That little girl's older sis had a baby, and that's her mother looking over her shoulder at it. And her sister let her hold the baby. They're looking at the baby... [They're feeling] happy. [They're going to] take it out to buy it clothes, I don't know. (002, 7GF)

Level 1 – It's a girl and her Mom, and she's sad, and her mom is reading her a book, and she doesn't care...she's thinking about being somewhere else. Her Mom is done reading to her.

Examiner: And what is the Mom thinking or feeling?

Participant: She doesn't know, she's just reading her book, she doesn't know what is going on.

Examiner: So the little girl is?

Participant: She feels alone. (NS3, 5)

This lady has just come from a hard day at work. Rough. Her boss chewed her out thousands of times for the smallest mistakes. She's come home, and she's feeling extremely suicidal. That's what the knife is for. She's just cut her wrists because she wants to die so bad... (024, 3 BM)

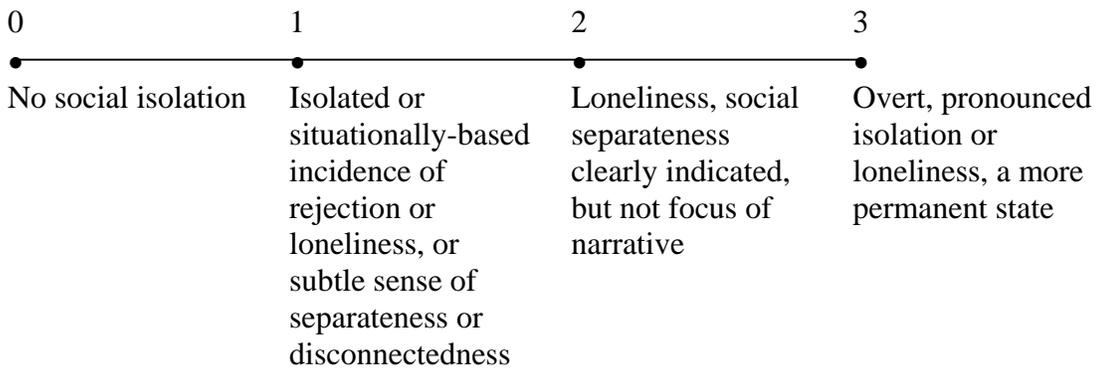
Level 2 – The guy's trying to tell his mom something about...he's gay, and his mom doesn't understand that, so she's disappointed, and he's sad 'cause he has to tell her now. (050, 6BM)

This guy had just come back from like, a business trip and went to visit his mother. He's like, talking to his mom, and his mom's just staring out the window. She's like gloomy or something. He's upset that she won't talk to him, and he'll try to talk to her again...She's crazy. She don't feel nothing. (026, 6BM)

Level 3 – She finally got away from her alcoholic parents. They didn't abuse her or anything, but they were just so mean, the bad situations she was in, you know the fact that everyone wouldn't accept the fact that she had quit drugs and wasn't a slut anymore, you know, it was just horrible, and no other family members would help her out. No one would really help her out. (NS4, 7)

There was this boy, and he had this violin. And his dad, he like – this boy tried to play his violin for his dad, and his dad, like, never listened to him, you know? He's never there, and the boy is thinking, "Why doesn't my dad ever listen to me? Why doesn't he understand?" And he felt really down and depressed and confused. And hurt. Because his dad didn't listen. And, um, the ending of this is he just quit playing the violin and stayed depressed because his dad never listened. So he just quit playing. (118, 1)

Social Isolation (SI)



The feeling that one is isolated from the rest of the world and/or not a part of any group or community. Can also include a sense of separateness, disconnection, or "differentness."

- Note – SI must convey the experience of isolation or differentness, not simply the state of being alone.
- Note – Physical or emotional isolation (e.g., child being sent to room, prisoner in cell, loss of a loved one), without loneliness implied, is not coded SI.
- Note – Teasing could be coded as SI 1 or 2 depending on the circumstances and severity.

Examples:

Level 0 – This boy just received some good news. His birthday is tomorrow, but he didn't really know it 'cause he's a retarded young man. He gets a harmonica, above all the most glorious gift 'cause it came from his father. So he discards the other gifts....sits and starts to play in pure bliss, thinking "my father must really love me to give me what I always wanted." (024, 13B)

Level 1 – There's a girl, and she's going to school. She's walking by some people that she doesn't know, and she just has this feeling that they're looking at her strange or something. She just tries to ignore them, and she just goes to school. (028, 02)

Level 2 – This boy starts this clubhouse in a shack on his land. Everybody joins, but he's bossy. He won't let them do anything unless it's his idea. One day everybody wants to collect frogs from the creek, and he decided they weren't allowed to collect frogs on his land. They all quit the club that day. He took his bucket of frogs back to the clubhouse. It was real still, there wasn't anybody around. He sat on the doorstep and wished and wished that his friends were back. Of course, he'd just run them off. So, he's sitting there and realizes that even if you have everything that you want, it's nothing without someone to share it with. He feels real lonely. (064, 13B)

Level 3 –This story is about an adopted child. You know what jerks they are. Matthew has been through, been in foster homes ever since he can remember. People kept sending him back once they figured out he wasn't the cute, charming, sweet boy they thought he was....This is the last night in her (foster mother's) house. He really doesn't care, he didn't like her anyway. (064, 5)

He wakes up, goes outside and sits down, waits for his dad to come home. But his dad never comes home. He's scared and worried. (037, 13BM)

This girl really stayed to herself, too. She's in her room, and that's usually where she goes to get away from people. And there's something beside her, which is a knife. And, um, she's thinking about committing suicide with the knife. But she doesn't know what to do. She feels like – she feels like the world's coming down on her, and everybody's, like, treating her wrong. She feels like the world just don't want her there. And she thinks...she thinks that, too. Um, but, the whole thing, how it ends – she doesn't commit suicide. She just lives in this world of anger and depression, and she just doesn't know what to do. (118, 3BM)

Aggression (AG)

0	1	2	3
No aggression	Mild aggression, often with regret. May include verbal aggression.	Moderate, reactive aggression or rejection	Complete, proactive aggression, motivated by a desire to inflict serious harm

Any expression or indication of verbal or physical aggression/hostility towards others. Description of violent unintentional incident may be coded (e.g., car accident, gory story on T.V., etc.)

- Note – Murder (not natural death) is always coded Level 3.
- Note – Teasing may be coded as verbal aggression.
- Note – Aggression against self (i.e., self-injurious or suicidal behavior) is not coded.

Examples:

Level 0 – He doesn't know if he should have it (violin) out or not. And he, his dad catches him and asks him why he has it out and says he was in a (?) with his violin, and he wishes he could play, and his father says, um, the next time you want to look at it for him to ask permission to get it out and that it's OK as long as he asks permission to look at it. (054, 1)

Level 1 – It's a boy, he's lost, ran away from home. He was getting angry at home, and he and his friend ran away to see what it was like. Now he's sad, gets up, and tries to find his way home. (066, 13B)

He feels that, I don't know he's just upset. He wanted his family...he wants to tell his parents that he doesn't like it, but he can't like do anything about it. He can't like tell 'em because he's afraid, cause you don't, he knows what they'll do cause they're, you know, like proper people that get all upset and defense and say 'how dare you say that' and probably wash his mouth out with soap just because his family is a bunch of psychopaths. (NS4,1)

Examiner: What's happening in this picture?

Participant: They...that looks...it looks like a mother and son, and they're in a fight.

Examiner: What are the characters thinking?

Participant: She's mad at him for doing something, and he...maybe the son is thinking that she is totally overreacting and being foolish.

Examiner: What are the characters feeling?

Participant: They're both mad at each other.

Examiner: What happened before this?

Participant: He did something...I don't know...maybe he got in a fight with his stepfather, and she's mad at each other.

Examiner: What's going to happen next?

Participant: She's going to pout and make him feel guilty, and he'll probably apologize even though he doesn't want to. (81, 6BM)

Level 2 – They're living on the island 'cause they couldn't handle the city anymore because the town thinks they are witches. The truth is that they are not. 'Cause they always wear black, they keep to themselves, they're shy, and they never come out of their house. That's why they think they're witches. The town barely knows them but still hates them. So they went to this island so they could get away from this town and now the town has found them. (003, 9GF)

Participant: Somebody is sliding down a rope, and I guess they're just trying to leave somewhere and uh...

Examiner: What is the character thinking?

Participant: He's thinking he's happy to leave wherever he was.

Examiner: What is he feeling?

Participant: He's feeling determined but afraid of getting caught.

Examiner: What happened before this? What led up to this?

Participant: Umm...I don't know.

Examiner: What is going to happen next?

Participant: A person will see the rope, and they'll cut the rope, and he'll fall. Just short of killin' someone... (071, 17BM)

Level 3 – He asked if he could go live with his mother and his...and his guardian people wouldn't let him...he's gonna go back and live with his guardian, and then one day he's gonna call his friend, and they're gonna go somewhere far away, and they're gonna hire a hitman to kill his guardian. (097, 14)

Participant: There is a girl, and she's running away and from her evil stepmom and that's all.

Examiner: What happened before?

Participant: The stepmom tried to kill her.

Examiner: What is going to happen next?

Participant: The stepmom is going to get her and kill her.

Examiner: What is the stepmom thinking and feeling?

Participant: The devil, she is just evil.

Examiner: And the girl?

Participant: She is trying to get away, she's scared. (NS3. 8)

then the mom came and tried to calm her down, but every single time she tried to cheer her up, she just, the girl would get even madder. So the lady was feeling kind of, like, worried 'cause like she didn't know what's gonna happen next if there was a problem. So what happened after that, the girl grabbed the baby and threw it into the trashcan, and then she saved her own money and bought the doll she wanted. (062, 7GF)

This lady has just come from a hard day at work. Rough. Her boss chewed her out thousands of times for the smallest mistakes. She's come home and she's feeling extremely suicidal. That's what the knife is for. She's just cut her wrists because she wants to die so bad... (024, 3 BM)

Ok, this is a long time ago. Ok, these people are out working the farm, and the girl just now got back from school, and the lady's taking a rest, and she's about to have to go start working again, and she thinks she ought to be doing something else instead of just working over here. And later on, she just ditches the work and starts doing all that other stuff she wants to... (004, 2)

Level 2 – There's a picture of some men, and they're going to their hideout cause they're bank robbers. And they're taking their loot and their horses into this hideout which is a cave under a waterfall, which before they just robbed a bank, and they're trying to hide from the police. They're thinking pretty scared, they're thinking once they get out, they'll make it. They're thinking once they get out with the money they'll be rich. They don't want to be caught. (NS1,11)

It's water. Maybe somebody's out there drowning or having trouble with the water, and maybe she's up to it or something in the deep end and just decided to hide because she couldn't figure out what to do about it. And this lady here runs around the corner, and she's just looking at her, and she's feeling kind of, looks like she's feeling a little guilty about it, about what she did, and I imagine she'll come through it, and she'll ah, confess to what she did. Later on after maybe afterwards they'll talk after awhile. (053, 9GF)

Level 3 – Ok, there's two girls. One of the girls don't like the other girl. But the girl tries to be her friend. And this girl keeps on stalking her, and now she's hiding behind a tree watching the girl run, which the girl thought she was being chased after, but really, the girl's just behind the tree watching her, studying her every moves so she can tackle her or something like that. And like the girl that's stalking her is like, feeling, I hate this girl, I want to kill her or something like that. And like, the other girl's like, oh my gosh, she wants to kill me, ah, I'd better run. And what happens is ah, she ah, she turns out to be like a nice person, she didn't really want to kill her after all, and they became friends. (062, 9GF)

That he's some sort of horrible lead gang guy and they like catch him. They're rivals, so this rival guy you know they're just really pissed off at the other gang cause like a guy took some other guys' girlfriend and the guy that took the other guy's girlfriend from him, so they have him in there, and they're like really pissed off and they're gonna like kill him, but first they want him to talk this is how creepy they are. Ok the guy that's like getting cut he's like not have a good day, he's really scared and upset, and I guess everything else that goes through a person's mind when they're about to die. (NS4, 8)

This guy is a killer and a cannibal and now he's in a mental facility wishing he never was who he was, and he's about to hang himself. (012, 3BM)

Helplessness (HE)

0	1	2	3
●──────────────────●──────────────────●──────────────────●			
No helplessness	Minor helplessness. Does not need to reflect cognitive distortion (e.g., authoritative parenting).	Moderate helplessness, such as perceived unfair situation or powerful, external forces.	Total character helplessness within situation. Complete lack of strategy or efficacy.

The lack of control over negative, external forces, or an emotional or situational dearth of power or initiative. Sense of control as environmental or outside of self. Helplessness (HE) describes situations in which main characters are ineffectual or primarily acted upon rather than being proactive or influential.

- Note – HE does not have to occur in interpersonal context. Random acts of violence, powerful outside forces, etc. are considered as metaphors for general expectations of powerlessness.
- Note – If the narrative contains elements of both powerful external and internal influences demonstrated, with external forces outweighing the internal, the highest HE code that may be given is Level 1.

Examples:

Level 0 – This boy is in gym, they're having a contest on who can get up the rope the highest, and he's over half way. One person is just a head taller than him and is almost about to win, but he sets his mind to going way up and back down real fast even though he's afraid of heights. And he makes it. (032, 17BM)

Level 1 – A farm setting, everyone just woke up. The girl's going to school, a man's working the farm, the wife is looking at the sunrise getting ready to get started. The girl is off to school just like she does every day, I guess. The lady leaning on the tree,

she's looking at how nice, gonna be a nice, hot day, and the guy is like "Oh, here comes another day of hard work." (032, 2)

Examiner: What's happening in this picture?

Participant: They...that looks...it looks like a mother and son, and they're in a fight.

Examiner: What are the characters thinking?

Participant: She's mad at him for doing something, and he...maybe the son is thinking that she is totally overreacting and being foolish.

Examiner: What are the characters feeling?

Participant: They're both mad at each other.

Examiner: What happened before this?

Participant: He did something...I don't know...maybe he got in a fight with his stepfather, and she's mad at each other.

Examiner: What's going to happen next?

Participant: She's going to pout and make him feel guilty, and he'll probably apologize even though he doesn't want to. (81, 6BM)

Participant: This girl, is ah, a modern 30's girl. She's walking home from school one day. She's thinking about what life in the Midwest must be, away from the city and away from all the mundane noise and everything. So she pictures a farmer plowing his fields and a wife who is pregnant with his baby and wondering, "Will I ever wind up like that?"

Examiner: Ok, so what happens?

Participant: Turns out that her imagination ends when she goes home her parents tell her, "Pack your things. Your father's just been fired so we're going to move to another state."

Examiner: Ok, and what is she thinking and feeling?

Participant: She's thinking it would be wonderful if I could get out of this city. (024, 2)

Level 2 – A guy climbing down a rope trying to escape a building on fire. Looks like he's scared and confused thinking about what he left behind in the building. He's escaped the fire and everything. He's going to have to start all over, everything has been burned. (094, 17BM)

This is a man, who has been in war, and he was a medic but he's been injured or shot. This nurse is trying to help him, but then she falls in love with him, and she doesn't want him to die when he goes out to help others cause he's a medic. At the end, he dies, and she becomes very sad. Before this he was in the battlefield. He's sad because he doesn't want to go back out. He's thinking of why he joined to be a medic. That'd be cool to be a medic. You wouldn't have to fight. That's what I'd do. She's very sad. She doesn't want him to go. (NS1, 4)

Participant: Um, it's a little boy that he looks like he's been practicing the violin, kinda frustrated with it, 'cause he's kind of going like that (imitated boy's body expression), he don't want to practice anymore.

Examiner: What is he thinking?

Participant: That he's tried of practicing.

Examiner: What is he feeling?

Participant: He's feeling that he'd rather go outside and play rather than sit inside and have to practice violin.

Examiner: What happened before this?

Participant: He was practicing a lot.

Examiner: What is going to happen next?

Participant: His mother's going to come into the room and tell him to start practicing again before he can go outside and play. (82, 1)

This looks kind of like a scene from Alice in Wonderland. Ok, the maid is reading the book to the girl, and the girl and the other girl is not really paying attention to it...she's just dreaming of other stuff besides this loony tune...what the maid has...what the story's about because the maid's always supposed to read her at least 1 story a day. The girl doesn't really like listening to the stories, but her mother says she has to.

Examiner: What are the characters thinking?

Participant: The maid's thinking that...that the girl is being kind of rude because the maid's trying to do her best to help her mother, and the girl...she's just daydreaming so I'm not really sure what she's thinking...she's just dreaming about stuff.

Examiner: What are the characters feeling?

Participant: The girl's feeling dazed, and she really doesn't care, and the maid's feeling that she hates the girl.

Examiner: What happened before this? What led up to this?

Participant: Um, the maid was calling...looking for her, and the little girl told her that she didn't like listening to the stories and hated having to do it, but the maid told her that she had to because she does.

Examiner: What is going to happen next?

Participant: The girl will get up and run off someplace. (71, 7GF)

Participant: It looks like a guy is looking out a window.

Examiner: What is the character thinking?

Participant: Maybe he's trying to decide to jump or not.

Examiner: What is the character feeling?

Participant: I don't know...pretty bad.

Examiner: What happened before this picture?

Participant: Maybe he lost his job or something.

Examiner: What's going to happen next?

Participant: He um...he almost jumps but then chickens out...I don't know. (079, 14)

Level 3 – Mm...she's sad. She's been crying. She's scared...Because of her family and stuff...Um...her parents probably beat her. (013, 3BM)

Participant: A little boy's sitting in the doorway. Waiting for someone, probably...He looks like a young one, and, I guess he doesn't have any brothers or sisters...

Examiner: What will happen?

Participant: Mm...he won't have any fun playing by himself. (013, 5)

A person's been closed up in a dark room for a long time. He finally gets to open his window and sees light ahead. He's feeling really anxious to get out, but his window is too high for him to jump out. So he's trying to figure out another way to get out of the room. And he never can find his way out. (032, 14)

The person in the picture I guess the chick is all upset cause she just like killed somebody, and she didn't like wanna kill him cause she's like a good natured person, but then again she's like crazy so she did it anyway. She's got like multiple personalities and like she's got like this sweet personality so she's all upset when she realizes what she's done, and the other personality is like very violent so she's like two people in one... Right now she is thinking how the hell could I have done this, I really need to get help for my problem, but you know whenever that happens the other personality takes over it's like, you know, I wanna kill somebody. (NS4, 3)

This girl really stayed to herself, too. She's in her room, and that's usually where she goes to get away from people. And there's something beside her, which is a knife. And, um, she's thinking about committing suicide with the knife. But she doesn't know what to do. She feels like – she feels like the world's coming down on her, and everybody's, like, treating her wrong. She feels like the world just don't want her there. And she thinks...she thinks that, too. Um, but, the whole thing, how it ends – she doesn't commit suicide. She just lives in this world of anger and depression, and she just doesn't know what to do. (118, 3BM)

Quality of Relational Interaction (QR)

0	1	2	3
•	•	•	•
No relational interaction OR positive, supportive interactions.	Empty disconnect- edness or mild situational rejection	Relations are clearly hurtful, antagonistic, or neglectful	Malevolent, highly aggressive or rejecting

Westen calls it “Affect-Tone of Relationship Paradigms” and states that it can be conceptualized as “the affective coloring of the object world.” The overall explanatory tone of social interaction, the affective representation of relationships or relational attributions.

- Note – Relationships are defined as any social interaction or occurrence between two entities (e.g., a random or accidental shooting in which characters are strangers). Closeness of the relationship is not a factor. Thus, QR may be coded between animals, enemies, or the larger world.
- Note – If a global relational interaction exists, it must be strongly implied (e.g., “they” are all out to get him, or “everybody’s” just so mean...).
- Note – References made to negative interpersonal expectations are coded as QR.

Examples:

Level 0 – She’s checking in on someone who should be in the room. Just making sure everything’s alright. She will probably run into the room and help whoever it is. She looks like she would provide a lot of comfort. (092, 5)

Level 1 – The boy was being bad, so the mom said, you can’t come out of the house. So the boy’s looking at some of his friends having fun and thinking, “Boy I wish I wouldn’t have gotten into trouble because if I wouldn’t have gotten into trouble, I would have been out there playing with my friends.” So after that, he goes and tells his mom that he’s sorry and that he’ll never do it again. And he’s feeling like mad, I can’t stand my mom, why is she always getting me into trouble? Even though it was him that was doing it, she could have at least been a little bit easier on him, that’s what he’s thinking. After that, he’s says sorry to his mom he says he’ll never do it again and his mom says, “OK, you can go out and play now.” (062, 13B)

This looks like a girl, and it’s very sad. About maybe some family problems or her friends don’t like her anymore. She’s feeling very sad, and thinking what to do, but in the end it all works out. She was all fine, walking in the halls, and her friends made fun of her for something that she did, and she was already having a bad day because she got in a fight with her parents in the morning before she got to school. (NS 1, 3BM)

Level 2 – Somebody just woke up and they’re, she comes into the room and it’s a mess. She’s thinking that her kid’s got a hold of a lot of things. She’s ready to kill him for it! And afterwards she finds out it was the cat. (032, 5)

The little boy is looking at his instrument, and he hates violin, or whatever instrument. He hates violin, his parents makes him violin, but he didn’t want to play violin, he wanted to play guitar, but since he comes from like one of those families that...what's the word well, since he comes from a family that’s very cultured they want him to be cultured in the arts, and they believe that guitar music for the most part is not very cultured just it’s not a good kind of music. So he’s looking at it and just thinking “god this just really sucks, how do I get out of this, why does my family have to force me to play this stupid instrument”...He feels that, I don’t know he’s just upset, he wanted his family...he wants to tell his parents that he doesn't like it, but he

can't like do anything about it. He can't like tell 'em because he's afraid, cause you don't, he knows what they'll do cause their you know like proper people that get all upset and defense and say 'how dare you say that' and probably wash his mouth out with soap just because his family is a bunch of psychopaths. (NS4, 1)

Level 3 – She's in a place like Meridell. She finally got away from her alcoholic parents. They didn't abuse her, but they were just so mean....It was just so terrible, and no other family members would help her out. (117, 8GF)

Once upon a time, there was a happy family. One day, the daddy come, and he was doing bad...he never smoke and drugs, but when he came to the house he was smoking and having drugs. And then he was having a gun in his pocket. He killed himself, and the mom and the kids were crying...and they never stopped crying...so she didn't have nothing to eat or to give to the kids...the only thing to do was kill herself and her kids. And she started to cry, "Oh my kids, oh my kids!" by the river...they were all sad. (NS2, 3BM)

III. TAT Administration Procedures

a. Instructions to Participants (modified from Peterson & Ulrey, 1994):

"You will be shown some pictures, one at a time. Your task will be to make up a story for each picture and tell it to me. Your story will be tape-recorded and used to research purposes only. No one (at the treatment facility or school) will hear your stories. In fact, no one will know these stories are yours. For each story, please include the following: 1) What is happening in the picture?, 2) What has led up to the picture?, 3) What are the characters thinking?, 4) What are the characters feeling?, and 5) What will happen next? There are no right or wrong stories. Tell your thoughts as they come to mind. There is no time limit.

b. Acceptable Probes:

Probing is acceptable when the participant does not tell a detailed story or address each of the five questions. Acceptable probes include:

"What is happening in the picture?"

"What happened before this?"

"What are the characters thinking?"

"What are the characters feeling?"

"What will happen next?"

"Tell me more."

"You can make up anything."

"Anything else?"

IV. TAT Scoring Procedures

a. TAT Scoring Procedures

- 1) Each story will be scored according to every content category, receiving a score of 0 to 3. Score only what the story says about its characters.

- 2) Protocols are to have identification numbers so that the participant's identity, age, gender, and other characteristics are not available to scorers.
- 3) Score each story individually for each participant. Score all Card 1 stories, then all Card 2 stories, etc.
- 4) Each interpersonal schema category is scored only once per story. An individual story may receive a score from 0 (least negative interpersonal schema content) to 21 (greatest negative interpersonal schema content).
- 5) Separate scoring sheets for each participant will be used to record codes.

b. Special Considerations

- 1) References to animals as characters in the story should be coded as humans are coded. It is thought that the animals are metaphors for individuals.
- 2) Coders should take into consideration developmental norms, such as those of adolescents and code accordingly.
- 3) If stories contain two stories within a story, always code accordingly to the most severe elements provided.
- 4) Do not attend to unrealistic, magically resolved endings of stories. Do not let these endings nullify other codes.

V. Sample Interpersonal Schema Coding Record Sheet (see following page)

Interpersonal Schema Coding Sheet

ID #: _____

	1	2	3BM	5
Abandonment/Neglect (AN)				
Emotional Deprivation (ED)				
Social Isolation (SI)				
Aggression (AG)				
Entitlement (EN)				
Helplessness (HE)				
Quality of Relational Interaction (QR)				

	6BM	7GF	8GF	8BM
Abandonment/Neglect (AN)				
Emotional Deprivation (ED)				
Social Isolation (SI)				
Aggression (AG)				
Entitlement (EN)				
Helplessness (HE)				
Quality of Relational Interaction (QR)				

	9GF	9BM	13B	14
Abandonment/Neglect (AN)				
Emotional Deprivation (ED)				
Social Isolation (SI)				
Aggression (AG)				
Entitlement (EN)				
Helplessness (HE)				
Quality of Relational Interaction (QR)				

	17BM
Abandonment/Neglect (AN)	
Emotional Deprivation (ED)	
Social Isolation (SI)	
Aggression (AG)	
Entitlement (EN)	
Helplessness (HE)	
Quality of Relational Interaction (QR)	

Total Sum of Interpersonal Schema = _____

Appendix E1

PARENT CONSENT FORM – RESIDENTIAL TREATMENT FACILITY

PARENT CONSENT FORM

Your child is invited to participate in a study of the impact of emotional and behavioral disturbances on the thoughts, social behavior, and family functioning of children and adolescents. The purpose of this study is to learn more about the contribution of life events, disturbances in thinking, social behavior, and family interactions to the development of depressive disorders and disruptive behavior disorders during childhood. Your child has been selected as a possible participant for this study because he or she is experiencing a depressive disorder, a behavioral disorder, or both which have led to his or her admission. It is believed that your participation in this project may lead to a better understanding of the issues that led to your child's hospitalization. This study will be conducted under the supervision of Kevin D. Stark, Ph.D., Director of School Psychology Program at the University of Texas at Austin and will be coordinated by staff at Meridell Achievement Center.

If you decide to allow your child to participate, he or she will be invited to complete an interview about his or her emotional functioning. The interview is designed to broadly assess how the child has been feeling lately and about his or her behavior. Typically, the interview is completed in one hour. In addition to the interview, your child will be asked to complete a storytelling exercise, the Thematic Apperception Test. This exercise typically lasts 30-45 minutes.

For research purposes, we would like your permission to audiotape the interview and storytelling exercise. Each interview and all questionnaires will be coded numerically so that identifying information about your child is removed. At the conclusion of the study, all audiotapes are erased. All information gained through completion of the study will remain strictly confidential. However, you do have the option to request that this information be shared with your child's treatment team. The interview and storytelling exercise have been completed by thousands of youngsters and pose no known risk to psychological well-being.

Your decision regarding the participation of your child will not affect your family's relationship with Meridell Achievement Center or The University of Texas

at Austin. If you allow your child to participate, you may discontinue his or her participation at any point in time with no consequences. If you grant your permission, your child will also be given the opportunity to decide whether or not to participate.

If you have any questions, please feel free contact Michelle Natinsky, graduate student and study coordinator, or Dr. Kevin Stark at 512.471.4407, or in writing: SZB 504, University of Texas at Austin, Austin, TX, 78712. You may keep a copy of this form for your records.

You are making a decision whether or not to participate. Your signature indicates that you have read the information provided or that it has been explained to you. You may withdraw at any time after signing this form should you choose to discontinue participation in the study.

____ **Yes**, I give my permission for my child to participate in this study.

____ **No**, I do not wish to give my permission for my child to participate in this study.

____ **Yes**, I would like the information gained from these measures to be shared with my child's treatment team.

____ **No**, I do not want the information gained from these measures to be shared with my child's treatment team.

____ **Yes**, I agree to allow my child's interviews to be audiotaped.

____ **No**, I do not want my child's interviews to be audiotaped.

Child's Name

Printed Parent/Guardian Name

Signature of Parent (or Legal Guardian)

Date

Signature of Researcher

Date

Appendix E2

PARENT CONSENT FORM – PUBLIC SCHOOL SETTING

PARENT CONSENT FORM

Your child is invited to participate in a study of the impact of emotional and behavioral disturbances on the thoughts, social behavior, and family functioning of children and adolescents. The purpose of this study is to learn more about the contribution of life events, disturbances in thinking, social behavior, and family interactions to the development of depressive disorders and disruptive behavior disorders during childhood. Your child has been selected as a possible participant for this study as part of the group of well-functioning children. To qualify for this group, the child cannot be diagnosed with a psychological disorder (i.e., depression, anxiety, etc.). This study will be conducted under the supervision of Kevin D. Stark, Ph.D., Professor in the School Psychology Program at the University of Texas at Austin.

If you decide to allow your child to participate, he or she will be invited to complete an interview about his or her emotional functioning. The interview is designed to broadly assess how the child has been feeling lately and about his or her behavior. Typically, the interview is completed in one hour. In addition to the interview, your child will be asked to complete a storytelling exercise, the Thematic Apperception Test. This exercise typically lasts 30-45 minutes.

For research purposes, we would like your permission to audiotape the interview and storytelling exercise. Each interview and all questionnaires will be coded numerically so that identifying information about your child is removed. At the conclusion of the study, all audiotapes will be erased. All information gained through completion of the study will remain strictly confidential. The interview and storytelling exercise have been completed by thousands of youngsters and pose no known risk to psychological well-being.

Your decision regarding the participation of your child will not affect your family's relationship with your child's school or The University of Texas at Austin. If you allow your child to participate, you may discontinue his or her participation at any point in time with no consequences. If you grant your permission, your child will

also be given the opportunity to decide whether or not to participate. At the conclusion of your child's participation, your child will be paid \$20 for their time.

If you have any questions, please feel free contact Michelle Natinsky, graduate student and study coordinator, or Dr. Kevin Stark at 512.471.4407, or in writing: SZB 504, University of Texas at Austin, Austin, TX, 78712. You may keep a copy of this form for your records.

You are making a decision whether or not to participate. Your signature indicates that you have read the information provided or that it has been explained to you. You may withdraw at any time after signing this form should you choose to discontinue participation in the study.

____ **Yes**, I give my permission for my child to participate in this study.

____ **No**, I do not wish to give my permission for my child to participate in this study.

____ **Yes**, I agree to allow my child's interviews to be audiotaped.

____ **No**, I do not want my child's interviews to be audiotaped.

Child's Name

Printed Parent/Guardian Name

Signature of Parent (or Legal Guardian)

Date

Signature of Researcher

Date

Appendix F1

ADOLESCENT ASSENT FORM – RESIDENTIAL TREATMENT FACILITY

ADOLESCENT ASSENT FORM

I agree to participate in a study that is interested in evaluating the relationship between thoughts, feelings, and behaviors in children and adolescents. I understand that this study has been explained to my parent or guardian and that he or she has given permission for me to participate. I understand that I may decide at any time that I do not wish to continue this study and that it will be stopped if I say so. Information about what I say and do will not be given to anyone else unless I say so. However, I do understand that if I say so, some of the information I provide will be given to the people directly involved with my treatment here at Meridell, such as my case supervisor, individual therapist, and/or family therapist.

I understand that I will be asked to complete an interview about my current feelings, behaviors, and thoughts as well as a number of questionnaires about myself and my family. I understand that by signing this form I am giving permission for the interview to be audiotaped for research purposes and that these tapes will be erased as soon as the study is completed.

I understand that nothing bad will happen to me if I decide to stop participation at any time. When I sign my name to this page, I am indicating that this page was read to me and that I am agreeing to participate in this study. I am indicating that I understand what will be required of me and that I may stop my participation at any time.

Signature of Adolescent (YES, I will participate)

Date

Signature of Researcher

Date

Please check one:

_____ **Yes**, I would like information I give to be shared with the people responsible for my treatment at Meridell.

_____ **No**, I DO NOT want the information I give to be shared with the people responsible for my treatment at Meridell.

Appendix F2

ADOLESCENT ASSENT FORM – PUBLIC SCHOOL SETTING

ADOLESCENT ASSENT FORM

I agree to participate in a study that is interested in evaluating the relationship between thoughts, feelings, and behaviors in children and adolescents. I am being invited to participate as a normal control participant. I understand that this study has been explained to my parent or guardian and that he or she has given permission for me to participate. I understand that I may decide at any time that I do not wish to continue this study and that it will be stopped if I say so. Information about what I say and do will not be given to anyone else unless I say so. I understand that when my participation is complete, I will be paid \$20 for my time.

I understand that I will be asked to complete an interview about my current feelings, behaviors, and thoughts as well as a number of questionnaires about myself and my family. I understand that by signing this form I am giving permission for the interview to be audiotaped for research purposes and that these tapes will be erased as soon as the study is completed.

I understand that nothing bad will happen to me if I decide to stop participation at any time. When I sign my name to this page, I am indicating that this page was read to me and that I am agreeing to participate in this study. I am indicating that I understand what will be required of me and that I may stop my participation at any time.

Please circle your choice:

Yes, I agree to participate.

No, I do not want to participate.

Signature of Adolescent (YES, I will participate)

Date

Print Student Name

Date

Signature of Researcher

Date

Appendix G

Mean Inter-rater Reliabilities for Interpersonal Schema Variables Across Cards

Variable	Inter-rater Reliability
Abandonment/Neglect	.81
Emotional Deprivation	.74
Social Isolation	.67
Aggression	.96
Entitlement	.95
Helplessness	.78
Quality of Relational Interaction	.62

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