DISCUSSION

The World Health Organization’s study into the Global Burden of Disease (Murray & Lopez, 1996) demonstrates clearly that depression is the most prevalent disability and this disability plays a central role in determining the overall health status of a population. Depression covers an extremely wide spectrum of experience, from the almost universal experiences such as grief and bereavement, to apparently inexplicable despondence and melancholy. Depression as a psychological disorder is replete with symptom characteristics that are internal to the individual. These features include symptoms of cognitive, emotional, behavioral, and physiological impairment or dysfunction.

According to the first US Surgeon General’s report on mental health and mental illness, childhood is characterized by periods of transition and reorganization, making it critical to assess the mental health of children and adolescents in the context of familial, social, and cultural expectations about age-appropriate thoughts, emotions, and behavior. Approximately one in five children and adolescents experiences the signs and symptoms of a DSM-IV disorder during the course of a year (David Satcher, 2000). Historically, many researchers and clinicians have described adolescence as a tumultuous developmental period, a time of physical and emotional upheaval, and various authors have indicated that mental disorders and deviant behaviors appear more frequently during this time than in any other period of life (Rabichow and Slansky, 1980; Erikson, 1968; Blos, 1962; Freud, 1958). The view that all adolescents experience turmoil led to the view that normal adolescents display frequent changes in mood and these moods are more extreme than those experienced by children and adults. Pubertal hormones frequently have been portrayed as the impetus for adolescent turmoil, and relatedly, moodiness and emotionality (Hall, 1904). Although much has been examined about the biological aspects of puberty, few research studies have explored the psychological effects of puberty.

Adolescence is a period of potential stress and a proportion of teenagers will react with the development of emotional symptoms. There are considerable physical,
psychosexual and social changes that occur in adolescents and they are usually accompanied by some emotional turmoil. Differing views about the inevitability, extent and effects of turmoil and distress during this age period led to empirical investigations of psychological disturbance in adolescents (Schonert-Reichl & Offer, 1992). During this period, adolescents experience a dilemma known as “Role confusion” or “overlapping roles”. This is a stage when adolescent searches for self definition (Identity) i.e., defining oneself distinct from others.

During the past decade, interest in the scientific study of adolescence has increased dramatically (Dornbusch et al., 1991; Lerner et al., 1991). Indeed, a flurry of new research has emerged as a result of the identification of the adolescent age as an interesting and worthy area of investigation. The reasons for why researchers have suddenly become cognizant of adolescents, include that they have come to the conclusion that the early years of life are no longer considered to be the most important ones (Brim & Kagan, 1980) and in light of rapidly changing social circumstances, many more adolescents today than in previous generations are confronted with stressors that put them at risk for adverse outcomes (Elliot & Feldman, 1990). Therefore, there is growing need to more fully understand the problems that today’s adolescents face to devise effective preventive and interventional efforts that will be successful in facilitating the healthy development of youth. The need to study adolescents separately and understand the problems unique to this stage in India has been repeatedly emphasized (Kapur, 1992; Sitholey & Chakrabarti, 1992).

Contemporary interest in the study of depression in children and adolescents began in the late 1970s and early 1980s. Prior to this, the predominant perspectives were that depression in children were nonexistent, masked, or expressed in symptoms that were significantly different from those found in depressed adults (Reynolds, 1985). According to Cicchetti and Toth (1998), the overall prevalence of depressive symptoms increases appreciably for both the sexes at some point in early-to-middle adolescence, with girls manifesting significantly higher rates of symptoms. The lifetime prevalence rate of Major Depression in adolescents has been estimated to range from 15% to 20%, which is comparable to the adult lifetime rates (Birmaher et al., 1996). Nair et al. (2004) reported a prevalence rate of severe and extreme
depression in Indian adolescents as 9.5% and 1.7% among school dropout girls, 2.6% and 0.2% among school going girls and 1.4% and 0.2% among school going boys. Among both children and adolescents, depressive disorders confer an increased risk for illness and interpersonal and psychosocial difficulties that persist long after the depressive episode is resolved; in adolescents there is also an increased risk for substance abuse and suicidal behavior (Purper-Ouakil et al., 2002; Weissman et al., 1999). Emotional disturbances are no longer considered to be transient and self-remitting and if untreated, demonstrate considerable continuity from adolescence into adulthood (Kovacs & Devlin, 1998). This is particularly problematic and in some cases leads to death or physically disabling outcomes. Although some youngsters who demonstrate suicidal thoughts and behaviors do not manifest clinical levels of depression, the majority of suicidal youngsters who are depressed view suicide as a way of ending their intense psychological distress. Children and adolescents with internalizing disorders are often under-identified as needing assistance by adults (Reynolds, 1990), and are underserved by school and community based mental health services (Cuffe, Waller, Cuccaro, Pumariega & Garrison, 1994).

Depression in children and adolescents may be considered as significant perturbation of mood. A depressed youngster may experience a range of symptoms, some of which may be overt, such as irritability or distinctly sad appearance, and others may be covert, as illustrated by feelings of low self-worth, hopelessness, suicidal thoughts, and guilt. In young people, depression represents a negative psychological state that may be characterized as one of intense, subjective misery, despondency, and in some youngsters, irritability. In young children, this affective state may be characterized as being moody or distant from others and slow to respond to social interactions with peers and family. Depression in children and adolescents can cause significant impairment in daily functioning and personal and social involvement (Puig-Antich et al., 1985). Although this may characterize a great many adolescents, the depth and quality of these characteristics in depressed adolescents, and in particular, their lack of positive response to previously reinforcing events or activities generally distinguishes depression in adolescents from more normative trials and tribulations associated with the normative course of adolescence. Some children and adolescents who are depressed also manifest suicidal thoughts and behaviors and
show an increased risk for substance abuse (Weissman et al., 1999). This is particularly problematic and in some cases leads to death or physically disabling outcomes. Epidemiological data suggests that suicidal behaviors are a serious problem among children and adolescents (Reynolds & Mazza, 1994). Although some youngsters who demonstrate suicidal thoughts and behaviors do not manifest clinical levels of depression, the majority of suicidal youngsters are depressed, with many who view suicide as a way of ending their intense psychological distress. Depressive disorders represent serious forms of psychopathology of childhood and adolescence, given that some depressive episodes may lead to potentially life-threatening or negative outcomes. Based on diagnostic and epidemiological surveys of children and adolescents it is evident that depression is a significant problem among youngsters (Reynolds & Johnston, 1994). These data, and the general undertreatment of depression in children and adolescents (Keller, Lavori, Beardslee, Wunder, & Ryan, 1991) point to the critical need for study, identification, and treatment of depression in young people.

According to Bhatia and Bhatia (2007), major depression affects 3 to 5 percent of children and adolescents. Depression negatively impacts growth and development, school performance, and peer or family relationships and may lead to suicide. Biomedical and psychosocial risk factors include a family history of depression, female sex, childhood abuse or neglect, stressful life events, and chronic illness. Diagnostic criteria for depression in children and adolescents are essentially the same as those for adults; however, symptom expression may vary with developmental stage, and some children and adolescents may have difficulty identifying and describing internal mood states. Safe and effective treatment requires accurate diagnosis, suicide risk assessment, and use of evidence-based therapies. Current literature supports use of cognitive behavior therapy for mild to moderate childhood depression. If cognitive behavior therapy is unavailable, an antidepressant may be considered. Antidepressants, preferably in conjunction with cognitive behavior therapy, may be considered for severe depression. Tricyclic antidepressants generally are ineffective and may have serious adverse effects. Evidence for the effectiveness of selective serotonin reuptake inhibitors is limited. Fluoxetine is approved for the treatment of depression in children eight to 17 years of age. All
antidepressants have a black box warning because of the risk of suicidal behavior. If an antidepressant is warranted, the risk/benefit ratio should be evaluated, the parent or guardian should be educated about the risks, and the patient should be monitored closely (i.e., weekly for the first month and every other week during the second month) for treatment-emergent suicidality. Before an antidepressant is initiated, a safety plan should be in place. This includes an agreement with the patient and the family that the patient will be kept safe and will contact a responsible adult if suicidal urges are too strong, and assurance of the availability of the treating physician or proxy 24 hours a day to manage emergencies.

In general clinical practice and in a multitude of research applications, the assessment of depression in children and adolescents is typically accomplished using self-report severity measures or clinical interviews, the latter including diagnostic measures and severity measures. There are several characteristics of depression that support the use of self-report assessment procedures, given linguistic and metacognitive competence in the child. Depression as an internalizing disorder includes primary symptoms that are internal to the youngster and are not easily observable. Cognitive symptoms of guilt, self-deprecation, suicidal ideation, hopelessness, and feelings of worthlessness are depressive symptoms that are subjective to the child. Some vegetative symptoms such as insomnia, appetite loss, and other problems are sometimes difficult for others to observe and may go undetected by parents and significant others (Reynolds, 1998). Self-report severity measures typically evaluate a range of depressive symptoms with the assessment format specific to the depth of symptom expression (e.g., frequency of occurrence, severity, etc.). In this manner, many severity measures of depression allow for the evaluation of a clinical level of depressive symptomatology, assuming an adequate coverage of the symptom domain (Reynolds, 1994). Thus, self-report scales are not designed as diagnostic measures.

During adolescence, individuals gain increasing ability to conceal distress and put on external façade (Broughton, 1981). A recent study pointed out the girls aged 11-16 years are more at risk of having problems that others fail to recognize (Bilenberg, 1999). Prevalence rates may vary depending on whether they are based on parent, teacher or self-report. Research showed that the prevalence of the less
observable emotional disorders increased when adolescent self-report was taken into account and that the reliability of the parents’ report decreased sharply with the age of the child (Michael & Merrell, 1998; Rutter, Graham, Chadwick & Yule, 1976). Parents, teachers and mental health professionals may have difficulty estimating the degree of stress that the adolescent is experiencing. This is clearly illustrated in an Indian epidemiological study that used teachers to identify psychological disturbance in adolescents (Rozario, 1988). The prevalence rate of 1.47% in adolescent girls markedly discrepant from the reported rates in other epidemiological research that used self-reports. It is developmentally more appropriate to use self-report measures to identify emotional disturbance in adolescents.

The main aim of the present investigation was to study the influence of negative cognition, stress and gender on depression at different levels of social support in a non-clinical sample of 400 high school adolescents (200 male and 200 female adolescents) in the age range of 15 – 17 years (period of mid-adolescence). It was a cross-sectional and factorial design and the main objectives were to examine the main effects and interaction effects of negative cognition, stress and gender at different levels of social support on the criterion variable of depression. To investigate the group differences for all the independent variables i.e., social support (satisfaction with available support: qualitative) and social support (perceived availability of number of supportive persons: quantitative), gender and dependent variable i.e., depression. To accomplish this purpose, the subjects were assessed on various self-report instruments i.e., Zung’s Self-Rating Depression Scale yielding a measure of depression, Automatic Thought Questionnaire providing a measure of negative cognition, Social Support Questionnaire pertaining to a measure of perceived social support and the Perceived Stress Scale pertaining to a measure of perceived stress. After the administration, the scoring was done in accordance with the guidelines provided by the respective manuals of the psychological scales applied. The data was analyzed using appropriate descriptive, parametric and non-parametric statistics.

In accordance with the focal theme of the present investigation, the predictor variables i.e., negative cognition, stress and gender and their influence on the dependent variable i.e., depression was examined at two levels of social support i.e., high and low social support. $P_{50}$ was used for classifying subjects into two groups and
the median value was employed for the purpose of segregating the independent variable i.e., social support as derived from the Social Support Questionnaire (SSQ) developed by Sarason, Levine, Basham, & Sarason (1983) utilizing the SSQ-S (Satisfaction with available support) and SSQ-N (Perceived availability of number of supportive persons) scores. The analysis of data has been accomplished in order to test various hypotheses as formulated. The data has been analyzed through the statistical techniques of Two-way (2x2) and Three-way (2x2x2) analysis of variance along with t-ratios and chi-square wherever necessary. Descriptive statistics, such as measures of variability/ homogeneity were employed so as to ensure that the sets of the obtained data satisfy certain basic assumptions underlying ANOVA.

The following hypotheses were generated in keeping with the review of literature:

I. Adolescents high on negative cognition would score higher on depression than adolescents low on negative cognition.

II. Adolescents higher on stress would score higher on depression than adolescents lower on stress.

III. Female adolescents would score higher on depression than male adolescents.

IV. Depression would be high in case of adolescents with high negative cognition and high stress.

V. Relatively strong social support will moderate the role of negative cognition, gender and stress in depression.

The prominent results of the present study will be discussed under the following headings:

1. Role of Negative Cognition in adolescent depression
2. Role of Stress in adolescent depression
3. Role of Gender in adolescent depression
4. Interaction between Negative Cognition and Stress in predisposing adolescents towards depression
5. Interaction between Stress and Gender in predisposing adolescents towards depression

6. Role of social support in moderating the influence of negative cognition, gender and stress in adolescent depression

1. ROLE OF NEGATIVE COGNITION IN ADOLESCENT DEPRESSION

The psychological phenomenon of depression is complex and irreducible to any one psychological dimension (Sedeka & Kofta, 1990). Intrigued by its complexity, scientists have been conducting extensive research about this topic. One particular aspect of depression that has been studied frequently and the subject of many debates is the association of cognition in depression. The idea that men can control their emotional reactions by the process of thought is ancient, being, for example, a central tenet of stoic philosophy (Bebbington, 1985). In recent years, these ideas have entered the empirical realm of psychopathology. The review of research lays emphasis on the importance of cognitions in the development and maintenance of disorders characterized by depressed mood. In particular, many depression theorists have disagreed about the role of accuracy and distortion in depressive and non-depressive cognition (Albright & Henderson, 1995). The cognitive theory of depression suggests that depressed people distort reality due to their negative perception of the world. The theory of depressive realism asserts that non-depressed people are the ones who have a distorted view of the world while depressed people are not depressed at all; their pessimistic perception is the accurate view of the world.

Theorists have developed and put forth a number of formulations with the central postulate being in many, if not all, instances certain depressive cognitions precede and lead to depressed mood. They also propose that these cognitions, in turn, arise from the particular circumstances and history of the subject. Beck (1967, 1976, 1983) gave a conceptualization of depression, derived from clinical experience and based on the centrality of thoughts. He states that the major factor in the development of his cognitive model of depression was systematic clinical observation and experimental setting. The cognitive model views the other signs and symptoms of depressive syndrome as a consequence of the activation of the negative cognitive
patterns. For instance, if the patient incorrectly thinks he is being rejected, he will react with the same negative affect that occurs with actual rejection (Beck et al., 1979, p.11). The Beck model has two main aspects – Cognitive Structures and Cognitive Processes. The Cognitive Structures consist of schemas and dysfunctional assumptions and the Cognitive Processes comprise of Negative Automatic Thoughts (habitual, rapid, involuntary, unhelpful thoughts) and Systematic Logical Errors (Reasoning biases). Beck proposes that the negative automatic thoughts in depression focus on the theme of Loss. The first limb of the cognitive triad is the depressive’s negative view of himself, that he is defective, inadequate, diseased or deprived. He is therefore, worthless, he criticizes himself, and sees himself as lacking the wherewithal to achieve happiness. The depressive also has a negative view of current experience: the world is making exorbitant demands upon him and places insuperable obstacles in his way. All his dealings lead to defeat or deprivation. Finally, the depressive has a negative view of the future. His expectations are of continuing difficulties and suffering, of unremitting hardship, a litany of failure. A close examination of the cognitive triad reveals that its elements are not equivalent. The view of the future obviously describes the interaction of the self and its world, that is, of the first two elements. It comprises their extension in time.

Beck postulates that people have relatively stable styles of cognition which he terms “schemas”. They form the structural organization of depressive thinking and Beck locates their origins in early, usually childhood experience. They underlie the selective attention and abstraction which result in a particular interpretation of circumstances. Beck emphasizes the reciprocity of thought and circumstance. He goes on to argue that in depression, there are ‘prepotent dysfunctional schemas’ which are evoked by a wide range of inappropriate stimuli and ‘the patient loses much of his voluntary control over his thinking processes’ (Beck et al., 1980, p.13). The final limb of Beck’s cognitive model describes the mechanism behind this in terms of faulty information processing, typified by one stimulus set and five types of response sets. The stimulus set is the process of ‘selective abstraction’ whereby a negative circumstance is removed from its context. The response sets include: ‘arbitrary inference’ i.e., drawing a specific conclusion in the absence of evidence or when the evidence is contrary to the prediction and jumping to conclusions;
'overgeneralization' i.e., drawing a general conclusion on the basis of one or more isolated incidents and applying across the board to related and unrelated situations; ‘magnification/ catastrophizing’ is exaggerating the significance or importance of an event in a negative direction; ‘personalization’ is inappropriately relating external events to oneself and ‘dichotomous thinking’ is judging events as either good or bad, black and white thinking. The dysfunctional assumptions are highly individualized, conditional and generalized rules, e.g., If I am nice to everyone, I will be liked. They are rigid, overgeneralized, absolute and extreme. They are dysfunctional in preventing goal attainment and often are culturally reinforced. The common themes tend to be achievement, acceptance or control. They are not conscious and need a considerable amount of introspection to articulate and their violation tends to be associated with extreme excessive emotions (anger, sadness or fear). They are activated in situations relating to individuals specific vulnerability. Beck sees the thinking of the depressive as primitive, whereas mature thinking involves a view of self in the world which is moderate and multidimensional. In this model, depressive cognitions are also characterized by attributions of self-blame and by persistence in time and across situations.

Accounts derived from Bower’s (1981) associative network theory of mood and memory suggest that depressed patients think more negatively because their depressed mood selectively increases the activation, or accessibility, of all negative interpretative constructs and memories, previously associated with depressed mood. On this view, experiences are interpreted negatively because depression lowers the threshold for use of negative interpretative constructs such as ‘failure’, ‘no good’, or ‘hopeless’. It is as if such negative constructs are ‘put on a hair trigger’ by the depressed state, and so are more likely to be used to interpret experience. As mood recovers, activation to the construct from the depressed state will reduce and so endorsement of the dysfunctional attitude is less likely.

Brown and Harris (1978) developed a cognitive model of depression and argued that loss events produce hopelessness, and that vulnerability factors impair self-esteem. Low self-esteem increases the intensity of the response to loss through generalization of the hopelessness triggered by it. The pain of this enhanced response to loss leads to denial, and denial is the mechanism by which the normal response to
loss is converted into depression. They emphasize the importance of loss because they see it as the most likely cause of hopelessness. Hopelessness results from the inconceivability of restoring a particular source of value, or having it restored. Events are particularly powerful when they reactivate some previous ‘unresolved’ event. This leads to generalization of hopelessness and this is seen as crucial in the development of depression.

Under the reformulated model of helplessness, Abramson and her colleagues (1978) stated that when people perceive that they have failed to control an outcome, they immediately ask themselves this is so and the answers determine the generality and chronicity of effect and the effect on the subject’s self-esteem. In order to specify the determinants of the pervasiveness and chronicity of helplessness, the authors adduced the attributional dimensions of globality and stability. Stable factors are those which the subject sees as being unlikely to change with time, and global factors are those which are likely to apply across a variety of situations. The model predicts that when people experience an outcome there are eight possible attributions they may choose from to account for it and these attributions will determine in what situations they are likely to display helplessness in the future. Also, it is possible for a subject to make internal attributions which are controllable or otherwise, for example, lack of effort as oppose to inherent stupidity. The authors postulate that a further cognitive theme seen in depressives is guilt, that arises from attributions of controllability and these feelings are a subset of the phenomenon of low self-esteem.

Self-regulatory models of depression (e.g., Teasdale & Barnard, 1993, ch.14; Pyszczynski & Greenberg, 1987) suggest that cycles of cognitive processing motivated to achieve such goals may actually underpin the maintenance of depression and of patterns of ruminative thought (Teasdale & Barnard, 1993; Nolen-Hoeksema, 1991). Unfortunately, the cognitive strategies employed in these attempts often seem to involve extended pondering over irremediable personal inadequacies and deficiencies. Such pondering not only fails to achieve the intended goals, but also maintains discrepancies between present and desired self-states as the topic of processing cycles, so perpetuating, rather than reducing depression.
Sheppard and Teasdale (1996) support the view that mood-dependent depressive thinking reflects changes at a level of cognitive representation concerned with inter-relationships between constructs, or patterns of constructs. The authors suggested that in depressed patients, models concerned with the relationship between personal worth and social approval or achievement change with affective state. The models active in depression imply a close relationship between worth and approval or achievement, so that criticism or failure is interpreted 'catastrophically' in terms of general personal inadequacy. By contrast, the models active in normal mood imply a less close dependence between worth and approval/achievement, so that negative experiences in these domains will be less likely to be interpreted in terms of characterological inadequacy.

These theories have the common characteristic of relying on cognitive features to account for the development and maintenance of depressed mood. They do not, in general, address themselves to quite the same issues and where they do, the account is very sketchy. Each is an immature synthesis and for this reason, it is neither easy nor appropriate to attempt to set up crucial tests between them.

Hypothesis I takes cognizance of the role of negative cognition in mid-adolescent depression. It is evident from the results of the present study that negative cognitions alone may also predict increases in negative affect and depressive symptoms among mid-adolescents and thus lend support to Hypothesis I. It was found that adolescents higher on negative cognition scored higher on depression in comparison to adolescents lower on negative cognition. The cognitions of depressed adolescents are marked by distortions in attributions, self-evaluations, and information processing. Depressed youths are more likely to interpret positive events as occurring in response to external factors of which they have no control, and interpret negative events as entirely their own fault. The depressed adolescent's thoughts are dominated by a negative view of self as worthless, the world as bleak, and the future as hopeless (the cognitive triad). Through this negative view of the world, they distort experiences and display information processing errors such as overgeneralizing predictions of negative outcomes, catastrophizing the consequences of negative events, and selectively attending to the negative features of the events.
Because adolescents are somewhat prone to errors in logical thinking due to inexperience and undeveloped abstract reasoning, depressed teenagers may be unaware that their thought processes are faulty. They fail to recognize their ability to impact the environment positively, resulting in a passive or helpless attitude. Their self-perceptions and self-evaluations reflect these information-processing distortions, and as a result, they display some deficiencies in problem solving. Depressed youths set more stringent standards for their performance, evaluate themselves more negatively, and tend to self-reinforce positively less than their nondepressed peers. The “depressogenic” thought patterns postulated in the cognitive theory of depression are thought to be relatively stable in the depressed individual.

This finding is different from what has been reported elsewhere in literature (Barnett & Gotlib, 1988b; Lewinsohn, Steinmetz, Larson & Franklin, 1981) as the cognitive diathesis-stress models of depression (Abramson et al., 1978; 1989; Beck 1967) have argued that cognitive vulnerability increases the likelihood of depression after a stressor occurs and in the absence of stressors will not necessarily predict depression. The present study supports the proposition that in mid-adolescence, i.e., negative cognitions appeared to increase their vulnerability to depression independently irrespective of high perceived stress.

The symptom model holds that maladaptive cognitions are merely symptom-related (i.e., they reflect changes in the clinical state of depression rather than pre-existing vulnerability, and do not act synergistically with stressful events). Our findings corroborate with this model, providing empirical evidence that our measure of cognitive style revealed more maladaptive attitudes among the depressed mid-adolescents than the non-depressed, regardless of the presence or absence of an event. This is an interesting finding and deserves replication in a cross-cultural perspective since it has important implications for a clinician/researcher making use of self-report instruments of negative cognition as well as depression. Further, the possibility that negative cognitive style is independent provoking factor rather than being event-related (stressful life events) must prompt a re-examination of its role. Perhaps measures of negative cognitive style reflect some other aspects of self perception which is not closely tied to stressful life events as measured in this study. Though there is scanty research that explains the main effect model of negative cognition in
the development of depression among adolescents, the number of explanations that have been put forward over the years to explain this finding are put forth in the following paragraphs.

The latent and negative cognitions place adolescents on a negative trajectory towards depression is provided by the mood-state dependency model of cognitive vulnerability to depression (Miranda & Persons, 1988). The model is based on associative network theory (Bower, 1981) and describes how sad affect can activate latent, negative cognitions. Bower (1981) proposed that clusters of related thoughts are linked together and are also linked to affective nodes representing the active affect at the time of encoding. When an affective node becomes activated, the activation spreads across the links to associated cognitive nodes. The intensity of affect at the time of encoding or recall affects the number of associated nodes activated in the network. More intense affect leads to more associated cognitions being activated. This association between the intensity of affect and the number of cognitions activated has been described as “cognitive reactivity in response to a mood challenge” (Segal, Gemar, & Williams, 1999, p. 7). Individuals who demonstrate cognitive reactivity (i.e., an increase in negative cognitions as negative mood increases) are proposed to be vulnerable to depression (Taylor & Ingram, 2000; Segal et al., 1999).

It is important to note that during critical maturation periods, cognitive structures are not the only neural networks that are undergoing development and maturation; affective structures (LeDoux, 1996) are also in the process of becoming more differentiated and developing associations to other structures (Jordan & Cole, 1996). As these affective and cognitive structures collateral develop, connections between them may also develop in such a way that negative cognitive self-structures should become closely linked to negative affective structures; negative affect may therefore become associated with unfavorable conceptions of the self. Hence, depressive self-schemas do not only represent negative views of the self, but may also be connected to negative affective structures.

From the Interacting Cognitive Subsystems (ICS) perspective (Teasdale, 1993; Teasdale & Barnard, 1993), suggest that mood-related biases in cognitive processing reflect changes in the schematic mental models used to interpret
experience. The ICS analysis suggests that schematic models created in depression encode more globally negative views of self than models in the non-depressed state. It suggests that the shift in endorsement of the dysfunctional attitude with the transition from one mood state to another reflects a shift in the prevailing higher order mental models of self and the world dominating information processing. The focus of such schematic models is the inter-relationships between constellations of constructs, rather than simply the level of activation of individual constructs. According to this account, the depressed to the non-depressed state reflect the shift from dysfunctional to a functional model, with the associated changes in the consequences and implications anticipated from a given state of affairs.

The 'dysfunctional depression-related model' suggested by the ICS analysis, implies a close dependence of personal worth on social approval/disapproval, or success/failure, than the more functional models associated with the non-depressed state. These dysfunctional models lead depressed patients to be more likely than non-depressed individuals to interpret failure, criticism and the like, more negatively; in terms, for example, of widespread personal deficiencies and inadequacies. However, there is also a more counter-intuitive aspect to the closer dependence between worth and social or achievement outcomes implied by depression-related models. This is that, although they may be considered unlikely, if success or approval should occur, they would carry more important positive implications for personal worth and acceptability when interpreted through the models prevailing in depression, than when interpreted through the models characterized of the non-depressed state. The paradigm created by Teasdale et al. (1995) exploited this feature. Such results suggest that negative thinking in depression is explained more satisfactorily by accounts focusing on changes at a generic, schematic level (reflecting inter-relationships between constructs or patterns of constructs) than by accounts that focus on the accessibility, or activation, of individual constructs (Sheppard and Teasdale, 1996).

The cognitive theory's proposal of the distortion of reality in depressed people prompted many scholars to conduct further research into this area. Pacini et al. (1998) found that depressive people utilize selective negative cognition such as dwelling on and over-generalizing negative events but not positive ones. The results
from this finding support the theory of selective memory in depressive people. Another study conducted by Gotlib (1983) showed that patients diagnosed with depression recalled feedback they had received on an interaction as significantly more negative than it had been. This finding suggests a distortion not only on perception of reality, but also a distortion of people's memory. Haaga et al. (1991) performed a study on depressed patients and found that they are more likely to draw strong negative conclusions when going beyond the information given in hypothetical situations.

Rulcovius and Reinhard (1990) reviewed the cognitive theories of depression and how it would aid in formulating implications for the investigation of emotional disturbances in childhood and adolescence. In all important cognitive theories of depression negative patterns of thought or thought processes are seen as being involved in the development and/or signs and symptoms of depressions. Thus, Beck (1967, 1976) proceeds on the assumption that individuals with a predisposition to depressive illnesses have, because of earlier experiences, arrived at negative attitudes which, in connections with stress factors, bring about, determine and/or strengthen negative thought processes and depressive signs and symptoms. According to Rehm (1977), depressive people are characterized by a specific, unfavorable self-control style, which, amongst others, goes along with an increased consideration of negative aspects within one's own behaviour and/or within one's self. The attributional models of depression of Abramson, Seligman and Teasdale (1978) and Miller and Norman (1979) that came into being with the further development of Seligman's model of learned helplessness, proceed from the existence of a "depressive attribution style" that is characterized by internal, stable and global attributions for negative events and external, variable and specific attributions for positive events. In the hopelessness theory of depression (a revision of the reformulated helplessness theory by Abramson, Seligman and Teasdale (1978), Abramson, Metalsky and Alloy (1989) assume a (hopelessness) sub-type of depression for which they see the experience of hopelessness (in the sense of their definition) as almost sufficient cause for a coming into being and an unfavorable attribution style simply as a susceptibility factor.
Needles & Abramson (1990) proposed a recovery model of depression suggesting that depressed individuals who exhibited an enhancing attributional style for positive events (i.e., make stable, global attributions) will be more likely to regain hopefulness and, thereby, recover from depression when positive events occur. While only a few studies have directly tested this model among clinical and nonclinical adult samples, none have tested a clinical sample of children and adolescents. Furthermore, prior studies testing this model have failed to examine the interactive role of an ‘enhancing attributional style’ for positive events with a ‘depressogenic attributional style’ for negative events, as prescribed by the hopelessness theory of depression (Abramson, Metalsky, & Alloy, 1989).

Mood inductions are used to identify cognitive reactivity. Although most research on cognitive vulnerability to depression using a mood induction has been conducted with adults (Segal et al., 1999; Miranda, Gross, Persons, & Hahn, 1998; Teasdale & Dent, 1987), some recent research has been conducted with children and adolescents (Taylor & Ingram, 2000; Kelvin, Goodyer, Teasdale, & Brechin, 1999). Kelvin et al. (1999) assessed cognitive vulnerability using a mood induction in adolescents with a temperamental style of high emotionality and found that the highly emotional group endorsed a more negative self-description after a negative mood induction than did the group of adolescents who were not highly emotional. Consequently, there is some evidence for the use of a mood induction to identify latent, negative cognitions associated with vulnerability to depression in adolescents.

Another line of evidence comes from a study by Terns et al. (1993) who examined children and adolescents before and after receiving cognitive therapy and revealed that the subjects reported more severe depressive symptoms, more cognitive errors, and had lower self-esteem than the control group before the treatment. After receiving inpatient treatment, however, the depressive symptoms decreased and the patients’s self-esteem increased significantly, and more importantly, their cognitive errors decreased. Moreover, the most significant and unexpected finding in this study was that these patients reported fewer negative life events when their depression was in remission after the therapy. These results correspond with the theory that the depressed people have a more negative view of the world while non-depressed have a better view.
Investigations of cognitive theories of depression among adolescents have now yielded substantial evidence to suggest that individual's attributional style can contribute significantly to the development of depressive symptoms (Hankin & Abramson, 2001; Abramson, Metalsky, & Alloy, 1989). Specifically, studies have revealed that the tendency to attribute negative life events to internal, global, and stable causes, and positive events to external, specific, and unstable causes (i.e., a depressogenic attributional style) is significantly associated with adolescents' depression (Gladstone & Kaslow, 1995; Joiner & Wagner, 1995) and can predispose individuals to future depressive symptoms in the event of stressful circumstances (e.g., Prinstein & Aikins, 2004; Abela, 2001; Hankin, Abramson, & Siler, 2001; Panak & Garber, 1992). Thus, recent research has emphasized a need to identify possible antecedents of a depressogenic attributional style that might be targeted in preventive intervention efforts (Stevens & Prinstein, 2005).

In addition to attributional style, self-esteem deficits are also thought to play a role in vulnerability to depression (Roberts & Monroe, 1994, 1999; Brown & Harris, 1978). Several studies have found that among clinically depressed adults relatively low self-esteem predicts a poor course of depression (Roberts, Shapiro, & Gamble, 1999; Dent & Teasdale, 1988), whereas high self-esteem prospectively predicts improvement and full remission (Brown, Bifulco, & Andrews, 1990b). Many studies have found that low self-esteem or self-concept is correlated with childhood depression (e.g., Prieto, Cole, & Tageson, 1992; Strauss, Forehand, Frame, & Smith, 1985; Kaslow, Rehm, & Siegel, 1984), but as with attributional style, few studies have investigated the role of self-esteem in prospectively predicting depression. Work by Hammen (1988) and Hammen & Goodman-Brown (1990) in the area of self-schemas has found some support for the hypothesis that a negative view of oneself can moderate the impact of life stress on depression onset. However, overall the evidence that self-esteem moderates the impact of life stress in prospectively predicting depressive symptoms among children and adolescents is limited and inconclusive.

In this vein, Metalsky, Joiner, Hardin, and Abramson (1993) proposed an integrated model in which cognitive vulnerability involved the combination of a negative attributional style and low self-esteem. They suggested that high self-esteem
might serve as a buffer that protects against the depressogenic effects of a negative attributional style when faced with stress. Likewise, Robinson, Garber, and Hilsman (1995) found that the three-way interaction of attributional style, self-esteem, and life stress (events and daily hassles) predicted follow-up depression among children (ages 11–12). Specifically, children with a negative attributional style and low self-esteem experienced the greatest increase in depressive symptoms in response to life stress. Although there has been a failure to replicate these findings, these studies suggest that the combination of a negative attributional style and low self-esteem makes individuals particularly sensitive to the effects of stressful life events and, consequently, vulnerable to depressive symptoms. Several recent studies have explored how the impact of psychosocial risk factors such as life stress, self-esteem, and other negative cognitions can vary as a function of participants' initial symptomatology. Voelz et al. (2003) presented data demonstrating that depressogenic and enhancing attributional styles interact to predict differential decreases in hopelessness.

Few prior studies have examined antecedents of adolescents' depressogenic attributional style. To date, only three sets of predictors have been explored. Consistent with hopelessness theories of depression, one of these antecedents is depressed affect itself. Garber, Keiley, and Martin (2002) revealed that initial levels of youths' depressed affect are prospectively associated with increasing trajectories of youths' depressogenic attributional style over a 6-year period (Nolen-Hoeksema, Girgus, & Seligman, 1992).

A second area of research has suggested that negative life events or adverse circumstances in childhood may contribute to the development of depressogenic attributional style in adolescence. For example, evidence from both retrospective and prospective studies has revealed that a history of physical/emotional/sexual maltreatment, emotionally manipulative parenting, or major life stressors is associated with a depressogenic attributional style in adolescence and young adulthood (Gibb, Abramson, & Alloy, 2004; Gibb, Alloy, Abramson, & Marx, 2003; Crossfield, Alloy, Gibb, & Abramson, 2002; Gibb et al., 2001; Garber & Flynn, 2001; Rose & Abramson, 1992).
A third area of research examining antecedents of a depressogenic attributional style has explored the transmission of depressive cognitions (or symptoms) within significant interpersonal relationships. Studies examining this contagion hypothesis propose that individuals may be particularly likely to develop a depressogenic attributional style or depressive symptoms through interactions with significant others who exhibit high levels of depressive cognitions or symptoms. For instance, past work has provided evidence for synchrony in the timing of mothers' and children's depressive episodes (Hammen, Burge, & Adrian, 1991) as well as support for mother's depressive symptoms and attributional styles (Garber & Flynn, 2001; Hammen & Brennan, 2001; Downey & Coyne, 1990). Theory and research suggest that significant increases in depressive symptoms and cognitive vulnerability that occur at the transition to adolescence are likely related, in part, to substantial interpersonal transitions also occurring at this developmental stage, particularly among girls (Hankin & Abramson, 2001; Cyranowski, Frank, Young, & Shear, 2000; Rudolph & Hammen, 1999). As compared to children, adolescents establish friendships that are characterized by high levels of intimacy and emotional disclosure, particularly among girls (Furman & Buhrmester, 1992). Adolescents also are especially likely to rely on peers as sources of social support during times of stress (Harter, Stocker, & Robinson, 1996), and thus opportunities to discuss life stressors and relevant attributions are numerous (Rose, 2002). Research also suggests that susceptibility to peer influence increases at this developmental period as many adolescents crave conformity and acceptance within the peer group and use peer interactions as a basis for reflected appraisal of their own self-worth (Brown, 1990).

In the context of interpersonal relations, if disruptions in attachment are brief and secure attachment is not compromised, or if it is re-established, negative cognitive representations are likely to be limited and more weakly associated with negative affective networks. On the other hand, if the attachment process is more problematic, then connections between negative self representations and negative affect should become more extensive. Thus, if negative emotion producing events related to the self are numerous, or particularly traumatic, they should have a correspondingly profound effect on the development of, and connections between, representations of the self and others. They should also have a profound effect on the experience of negative emotions and maladjustment.
affective states. The vulnerable person thus develops a schema of the self as unlikable and unlovable that is strongly tied to the experience of negative affect, and may substantially influence how others tend to be viewed (Ingram, 2003).

A focus on potential gender differences in the examination of antecedents of attributional style is especially important given girls’ greater cognitive vulnerability to depression in adolescence (Hankin & Abramson, 2001) and the dramatic increases in depressive symptoms that emerge among girls during this developmental period (Hankin et al., 1998). Research demonstrates associations between self-rated physical attractiveness and self esteem for girls (e.g., Block & Robins, 1993; Pierce & Wardle, 1993). Further, this supports the finding of Marsh (1989) that physical appearance competence is the domain of self-concept that is most problematic for girls in mid adolescence especially as compared to boys. This result relates to the finding that decreases in perceived physical appearance for adolescent girls coincide with decreases in girls’, relative to boys’ self esteem (Harter, 1993).

Results of the present study have lent support to the previous findings and there is sufficient literature depicting the influence of negative cognition on adolescent depression such as studies by Blumberg and Izard (1985), Asarnow and Bates (1988), Kashani et al. (1989), Thurber et al. (1990), Sanders et al. (1992), Pinto and Francis (1993), Garber et al. (1993), Stark et al. (1996), Hankin et al. (1997), Schwartz et al. (2000), Muris et al. (2001), Mc Grath and Repetti (2002), Pomerantz and Rudolph (2003) and Papadakis et al. (2006), who all concluded that when compared with nondepressed controls, depressed children reported significantly more hopelessness, more negative self-perceptions, and negative self-perceptions across a wider variety of domains, and they displayed more dysfunctional attributional styles. Adolescents who reported depression also reported significantly more internal attributions for negative events and less internal attributions for positive events, evidenced a more external locus of control, and described themselves as significantly more hopeless than did the nondepressed adolescents.

On similar lines, Deal and Williamson (1988) found that measures of cognitive distortions were better predictors of depressive tendencies than measures of life stress. It was also seen that cognitive distortions affected the perceived
stressfulness of life events. In addition, the three measures of cognitive distortion were correlated and that the measure of immediate negative thinking was a better predictor of depressive tendencies than the measures of dysfunctional attitudes and irrational beliefs.

Another line of evidence comes from a study by Gladstone and Kaslow (1995) found that in consistency with the reformulated learned helplessness model of depression, for negative outcomes, attributions along the internal, stable, and global dimensions were associated positively with depression. Conversely, higher levels of depressive symptoms were related to more external, unstable, and specific attributions for positive events.

Similarly, Gladstone et al. (1997) found that for females and males, higher levels of depressive symptoms correlated with a more depressive attributional style. Among females and males who met diagnostic criteria for a current depressive disorder evidenced more depressogenic attributions than psychiatric controls, and never had past depressed adolescents. The relation between attributions and current self-reported depressive symptoms was stronger for females than males.

Further, Epkins (2000) examined the cognitive features in Beck’s (1967) model of depression and his cognitive content-specificity hypothesis (Beck et al., 1987) in a community and clinic sample. Both the internalizing only and comorbid groups reported significantly more cognitive disturbances (negative cognitive triad, cognitive processing distortions, and “depressive” and “anxious” thought content) than both of the externalizing only and control groups in both the community and clinic samples.

Williams et al. (2001) provides support for the existence of processes associated with cognitive reactivity and the assumptions associated with the mood-state dependency model of cognitive vulnerability in adolescence, i.e., the activation of a negative affective node triggers latent, negative cognitions. They showed that certain differences existed in the cognitive processes between adults and adolescents.

In a cross-cultural investigation of cognitions and depressive symptoms in adolescents, Stewart et al. (2004) found that cognitions were associated with concurrent depressive symptoms and predicted depressive symptoms 6 months later in
both cultures. The "reverse" model was also supported with more variance predicted by depressive symptoms to later cognitions than from cognitions to depressive symptoms. There was some support for the hypothesis that self-efficacy is less salient in collective compared with individualistic cultures.

On similar lines, Ietsugu et al. (2004) found reciprocal relations between depressogenic schemata and depression. It was possible that depressogenic schemata influences depression and depression also had some effects on depressogenic schemata.

Gibb et al. (2004) examined whether the underlying structure of cognitive vulnerability to depression is best conceptualized as dimensional or categorical. Taxometric analyses provided consistent support for the dimensional nature of negative cognitive styles. It appears, therefore, that cognitive vulnerability to depression is best conceptualized as a dimensional construct, present to a greater or lesser extent in all individuals. Despite this, the strength of the relationship between negative cognitive styles and depressive symptoms does appear to vary as a function of where along the cognitive style continuum one falls.

Hankin et al. (2005) found that daily cognitions about stressors exhibited moderate stability across time. A traitlike model, rather than a contextual one, explained this pattern of stability best. Also, individuals' dispositional depressogenic cognitive style, neuroticism, and their daily negative cognitions about stressors predicted fluctuations in daily depressive symptoms. Dispositional neuroticism and negative cognitive style interacted with daily negative cognitions in different ways to predict daily depressive symptoms.

Alloy et al. (2006) found that High Risk participants had 3.5-6.8 times greater odds than the Low Risk individuals of major, minor, and hopelessness depression. Negative cognitive styles were similarly predictive of first onsets and recurrences of major depression and hopelessness depression but predicted first onsets of minor depression more strongly than recurrences.

Kennard et al. (2006) found that self-efficacy, cognitive errors, and hopelessness were associated with concurrent depressive symptoms at baseline among African American, Caucasian, and Hispanic adolescents. In addition, cognitive errors
at baseline, controlling for baseline depressive symptoms and the occurrence of stressful events, predicted depressive symptoms at follow-up. The findings demonstrate support for the cognitive model of depression across ethnic groups.

Another strong line of evidence comes from a study by Alloy et al. (2006) suggested that on negative cognitive styles high risk participants had 3.5-6.8 times greater odds than the low risk individuals of major, minor, and hopelessness depression. Negative cognitive styles were similarly predictive of first onsets and recurrences of major depression and hopelessness depression but predicted first onsets of minor depression more strongly than recurrences.

According to Charoensuk (2007), negative thinking was the best predictor of depressive symptoms in Thai adolescents. Negative thinking also mediated the effects of parental bonding, everyday stressors, and self-esteem on depressive symptoms.

2. ROLE OF STRESS IN ADOLESCENT DEPRESSION

Life events affect human development in both positive and negative ways, facilitating positive growth and adaptation as well as contributing to illness and disturbance (Compas, 1987). Numerous factors such as the quality of early relationships, resources for coping both within the individual and within the family, age, temperament, frequency of stress and social supports all affect the impact of the event. Past research has shown a significant relationship between negative life events and emotional problems in adolescents. Stressful events of both minor and major magnitude (e.g., move to a new school, loss of loved ones, disasters, and family violence) have been found to be predictive of subsequent internalizing and externalizing problems in adolescents.

Studies have even shown that stressful events are predictive of increases in symptomatology after controlling for initial levels of maladjustment. However, the amount of variance in maladjustment explained by stressful events has been relatively small (Compas et al., 1993; de Wilde, 1992). This means that not all adolescents who are exposed to stressful life experiences develop emotional problems. Knowledge and understanding of the reasons why some children are not damaged by the disadvantage and deprivation that prevent so many of their peers from reaching
their optimal social and emotional level of functioning would certainly provide much
needed information from which to derive strategies for preventive programming.

In contrast to adult research, there is paucity of evidence on the impact of
stressful life events on psychiatric disorders in childhood (Gurian, 1993). In spite of
the considerable variability in measures used, studies do show a relationship between
stressful life events and psychological or physical dysfunction in children and
adolescents. Evidence for a causal relationship, however, is weak (Compas, 1987).

Research has sought to explicate factors associated with adolescents' stress-
related coping. Models have been constructed to identify the key variables in the
stress-adjustment relationship (Rice, Herman, & Petersen, 1993; Shermis &
Coleman, 1990; Lazarus & Folkman, 1984; Peterson & Spiga, 1982). However,
such models have rarely been examined using rigorous statistical analyses that allow
for modification of the particular model to provide for a goodness of fit of key
variables based upon the findings. Moreover, there continues to be little
understanding as to how the results of such investigations can be applied to
interventions in the area of adolescent health (Printz et al., 1999).

Clearly in this regard the occurrence of negative events can have a profound
effect on the development of the child’s cognitive and affective neural structures, and
in the connections between them (Goodman & Gotlib, 1999; Ingram et al., 1998).
The extent that such events are (a) frequent, (b) occur in the context of multiple and
likely interacting domains (e.g., divorce, high levels of poverty, problematic peer
relationships), (c) extremely traumatic, and/or (d) significantly deprive the child’s
emotional needs, cognitive and affective development will be proportionally affected
(Ingram, 2003).

Garmezy et al. (1984) have proposed three models for the possible interaction
of risk factors and protective factors to produce competence in children; the
compensatory model, in which stressors, risk and vulnerability factors combine
additively; the challenge model, which suggests a curvilinear relationship, i.e., as long
as stress is not excessive it enhances competence, and the protective model, which
suggests that protective factors modulate or buffer the impact of stressors as variables,
by, for instance, improving coping, adaptation and competence building.
Rutter (1985) outlined several ways in which these factors can interact; multiplicative interaction (the presence of one factor multiplies the effect of another), potentiating (the presence of one factor may potentiate the effect of another), and catalytic transactional (or factors effect behavior only in the presence of other factors, but do not independently alter behavior).

Shermis and Coleman (1990) have also offered a cognitive-behavioral model of adolescent stress and coping. It has five components: environmental stressors, environmental moderators, personal factors, stress outcomes, and behavioral outcomes. Environmental stressors include daily hassles (e.g., getting involved in an argument) and major life vents (e.g., parental divorce, death of a friend or relative, serious illness or injury), with differential effects (Compas, 1987b). Environmental moderators include support from family members, peers, and school personnel. These individuals may offer advice, teach skills, provide material aid, help the adolescent overcome emotional distress, and share responsibilities (Compas, 1987b). They suggested that it is the adolescent’s perception of support that actually determines the extent to which the effects of stress are moderated. Personal factors include cognition as being prominent, which also may impact affective and behavioral outcomes and have identified self-talk as one form of cognitive coping. An earlier conceptualization (Chandler, 1985) included age, cognitive appraisal (e.g., perceptions of threat or loss, perceptions of control), self-esteem, and problem-solving skills as personal moderating factors. Stress outcomes may include physical and psychological symptoms. Chandler (1985) noted the outcomes of stress in the areas of school functioning and social relations. Finally, behavioral outcomes, which are linked to stress outcomes, can be thought of as secondary responses to stress. The authors have listed drug abuse, delinquency, pregnancy, and dropping out of school as maladaptive behavioral responses to stress.

Although much depression may be dysfunctional, the capacity to experience normal depressive symptoms in response to certain adverse situations appears to have been shaped by natural selection. If this is true, then different kinds of situations may evoke different patterns of depressive symptoms that are well suited to solving the adaptive challenges specific to each situation. The authors called this the situation-symptom congruence hypothesis (Keller and Nesse, 2006).
Unhealthy adaptation to stress can take many forms, such as school maladjustment. For example, stressors at home and school may lead to reduced attention span and to diminished motivation to succeed academically (Pryor-Brown & Cowen, 1989). Some students develop socially maladaptive coping patterns, including verbal and physical aggression towards others defiance of authority, acting out, and juvenile delinquency (Compas, Howell, Phares, Williams, & Giunta, 1989). Anxiety (Swearingen & Cohen, 1985a, 1985b), depression, and suicidal ideation (Cohen-Sandler, Berman, & King, 1982) are other reactions to stress. Hammen (1991) has documented how clinically significant depression can contribute to future life stressors that potentially maintain the disorder. Likewise, other research has demonstrated that mild levels of depressive symptoms can contribute to stress generation that in turn predicts future depression (e.g., Potthoff, Holahan, & Joiner, 1995). Research suggests that a gender difference may also be present; girls tend to rate events as more stressful than boys and report more major negative events and daily “hassles” or irritations than boys (Lawrence and Russ, 1985; Lewis, Siegel and Lewis, 1984; Burke and Weir, 1978).

The aspect of stressful life events have always remained as an interesting area of study. Indian studies have also linked depression to the onset of life events and precipitation of psychiatric illness (Bhatti & Channabasavana, 1988; Prakash et al., 1980; Venkoba Rao & Namimalvar, 1976). Satija et al. (1998) observed that depressives experienced significantly more stressful life events and were also using significantly more avoidance coping strategies as compared to their non-depressed counterparts. The moderate and severely depressed were exposed to more stressful life events and were using more avoidance coping strategies as compared to mildly depressed patients. They found that the occurrence and not the severity of depression was linked to the life events. This is line with the earlier studies (Singh et al., 1984; Saxena et al., 1983; Prakash et al., 1980; Venkoba Rao & Namimalvar, 1976; Brown et al., 1973; Paykel et al., 1969, 1975) and with the studies linking life events and first episode of depression (Ghaziuddin et al., 1990; Dolon et al., 1985). But there is lack of reported studies on school going middle adolescence period.

Sharma and Shukla (1993) examined the developmental differentiation in the nature and kind of stress-stimuli that generate stress among the individuals of
different age-groups. Specificity and individuality were observed as primary characteristics of these stress-stimuli along the longitudinal development decalog of the human beings in India. Results revealed that “fear of approaching death’ happened to be the most contributing stimulus for the Old-aged people whereas ‘Failure in getting the demanded and desired objects’ appeared so far the children. ‘Greater Goal Discrepancy between Ability and Aspiration’ and ‘Inability to cope with Professional and Domestic Responsibilities’ have been estimated as most potent factors to cope up with the environmental dynamics of life for the adolescents and adults.

Another key finding of the present study is that mid-adolescents higher on stress reported higher levels of depression as compared with adolescents lower on stress. These results evince and highlight the influence of stress as a crucial variable in triggering mid-adolescent depression and is consonant with the proposed Hypothesis II. This period of mid-adolescence pertaining to the students in Grades 10th, 11th and 12th is associated with immense difficulties and coping with daily hassles in terms of achievement of academic goals, conforming to peer group beliefs and habits, parental attitude towards them, punishment by teachers, etc could predispose them towards developing feelings of inferiority, low self-esteem, depressive tendencies, substance abuse and suicidal behavior. One of the plausible explanations that can be offered in terms of our finding is that adolescence is said to be a period of stress and strain, whims and vigour; problems and perspectives. It is period when the individual begins to attain maturity of the intellect and the body. Rational thinking and judgment ability just find a place in the system of his behaviour. Ego observes a functional role in the enactment of norms and values. Thwarting of any of these values produces stress among the adolescents. As such, the greater goal-discrepancy between ability and aspiration generates frustration; and ultimately develops ‘feeling of fear of failure’ among the adolescents. Over estimation of ability becomes a primary source of stress to them. Most of the stress-stimuli of the adolescence find their source not in affective component, but in their intellect that provides ability which rules their life. As such, the disturbance in intellect of adolescents correspondingly arouses emotional disturbances in them. Inability to deliver proper and effective reasoning, judgment, decision-making and such other
ability-base behavioural outcomes produce stress in them. Thus, the role of intellect is more pronounced in adolescents in generating stress (Sharma and Shukla, 1993).

Among the Indian studies, Biswas et al. (1995) found that during the middle childhood years, the disturbed children had significantly more adjustment problems in the areas of health, school self and home with a significantly higher number of stressful life events in the past home with a significantly higher number of stressful life events in the past one year. In the entire sample, psychological disturbances, adjustment problems and stressful life events were found to have significant positive correlations amongst themselves.

Similar findings were reported by Sterling et al. (1985), Cowen et al. (1984) and Rangaswami and Balakrishnan (1982) who suggested that the cumulative life changes are significantly related to low academic performance and adjustment problems. Their results also showed a relationship between life stress and behavior problems. The life stress scores of children and adolescents were significantly related to mental status, decreased level of self esteem, delinquent behavior and school performance.

The emerging consensus within the literature is that the experience of stressful events during childhood greatly increases an individual’s vulnerability to behavioral and psychological maladjustment, in addition to physical illness. Pearson correlation coefficients have been found to range from .10 to .68, with the majority of studies reporting coefficients between .20 and .30 (Compas, 1987b). Printz et al. (1999) found a similar correlation for major events (r = .33 p [less than] .05), but a higher correlation for daily events (r = .46, p [less than] .001). This suggests that adolescent maladjustment is influenced less by discrete events than by chronic stressors. In general, major life events were predictive of daily hassles, which in turn were associated with adjustment.

There are some data to suggest that, as the number of stressors increase, adolescent functioning deteriorates. For example, in the most direct test of cumulative stress on adolescent functioning, Simmons et al. (1987) found that, as the number of changes in an adolescent’s life increased, functioning and grades deteriorated. Others (e.g., Compas et al., 1989; Masten et al., 1988) also have found that an increase in
the number of stressors in children’s and adolescent’s lives is associated with poorer functioning in a variety of areas.

Researchers, however, found that children with just one risk factor were no more likely to have psychiatric disorder than children without risk factors. When two of the factors occurred together the level of risk went up fourfold. With the presence of more than two the risk became several times higher. Since these conclusions were based on data from a small sample, replication of the work would be useful to ascertain whether or not the same conclusions can be drawn with a larger sample of children (Grant et al., 1989). Even in situations of cumulative risk, however, studies have repeatedly found that a significant proportion of children are not severely damaged (Rutter, 1985; West and Farrington, 1973; Wedge and Prosser, 1973).

Data from a variety of research areas are reviewed consistent with the hypothesis that attention to inner feelings and bodily changes increases awareness of an potency of distress and the prevalence of reported symptoms. A review of previous literature revealed that data regarding the mental problems in mid-adolescents are scarce. One of the latest study in Stockholm County among students (aged 12-16 years), by Wallin et al. (1997) showed that 8% revealed that they were not very happy with life. Four to seven percent of students reported that they took medicine during recent months to combat depression, nervousness, and/or insomnia. Ten percent of boys reported pain (stomach-ache, back pain, headache) while comparable figures for girls were 23%. In the same WHO study, 16% of Swedish boys reported that they felt depressed at least once a week, while the number of girls was 30% (Wallin et al., 1997).

Moreover, some youths experience psychophysiological symptoms in response to chronic or severe levels of stress (Walker & Greene, 1987). The availability of coping resources varies considerably among students. During times of high stress, these resources, whether social or individual, may be insufficient. When coping resources, such as problem-solving skills, are inadequate, stressful situations may give rise to unhealthy outcomes (Spirito, Overholser, & Vinnick, 1995; Wills, Vaccaro, & Benson, 1995).
Different stressors activate selective stress responses in the body but the most commonly activated and the most researched of these systems is the hypothalamic-pituitary-adrenal (HPA) axis. Overdrive of this system is associated with the depressed state (Gold et al., 1988). There is a consensus that major depressive disorder (MDD), and particularly the melancholic subtype, is associated with corticotrophin-releasing hormone (CRH) hypersecretion and subsequent HPA axis overdrive. Many biological and cognitive processes are modified by cortisol, including sleep, appetite, libido, energy, motivation, concentration and memory (Martignoni et al., 1992).

Little is known of the mechanism of activation of the HPA axis following psychological stress but it may involve the stress neurotransmitters 5-hydroxytryptamine (5-HT) or nor adrenaline (NA). Stimulation of either of these neurotransmitter systems results in CRH release from the hypothalamus and subsequent release of adrenocorticotrophic hormone (ACTH) from the anterior pituitary gland. There are several means of activating the hypothalamic secretion of ACTH secretagogues goes some way to explaining an individual’s diathesis to developing depressive syndromes following particular adverse events.

The current focus on identifying genes, which predispose to psychiatric illness sharpens the need to identify environmental factors which interact with genetic predisposition and thus contribute to the multifactorial causation of these disorders. Genetic predisposition may influence the degree of susceptibility of the individual to the effects of early environmental stress and may also determine the psychopathological entity to which the individual is rendered vulnerable as a consequence of the stress. Long term neurobiological consequences of early environmental stressors such as maternal deprivation have been extensively studied in many animal species. Recently, enduring changes in hypothalamic-pituitary-adrenal axis function, including corticotrophin releasing factor gene expression, have received particular attention.

Another line of evidence comes from a study by Taylor et al. (2006) who examined the relation of a stressful early family environment, recent adversity/stress, and the 5-HTTLPR to depressive symptomatology in a normal sample. Results
revealed that a stressful early family environment was significantly related to depressive symptomatology. In addition, gene-by-environment (GxE) interactions were observed between the 5-HTTLPR and both early family environment and current adversity/stress. Individuals homozygous for the short allele had greater depressive symptomatology if they had experienced early or recent adversity but significantly less depressive symptomatology if they reported a supportive early environment or recent positive experiences, compared with participants with the s/l or l/l genotype.

The developmental psychopathology perspective (Sroufe and Rutter, 1984) suggests the following: (1) intergenerational risks are not necessarily specific in nature (i.e., the area of functioning that will be affected by a risk condition is uncertain); (2) risks may occur simultaneously from several sources to affect individual adaptation; and (3) context and family systems affect individual adaptation, which may exacerbate or ameliorate the impact of risk factors on individual children.

There is also some evidence for a familial influence on adolescent depression (Kovacs et al., 1997; Williamson et al., 1995; Goodyer et al., 1993; Harrington et al., 1993) and several investigators have suggested that early-onset cases of depression (before age 20 years) are associated with increased familial risk, (Neuman et al., 1997; Strober, 1992) particularly among the relatives of pubescent probands (Harrington et al., 1997). Eaves et al. (1997) reported substantial genetic effects on depression among a large sample of 8-to-16 years old twins. The results of 1 twin study of childhood and adolescent depression demonstrate increasing heritability with increasing age (Thapar & Me Guffin, 1994).

In systems language, as is aptly described by Virginia Goldner (1985: 539-553), depression in children would be characterized:

"As a manifestation of problematic patterns of relationships within a family. It is this pattern that constitutes the 'problem', not the child's symptoms of (depression) alone. A depression, therefore, is not understood in terms of traditional nosological categories (like those of DSM III-R), but in terms of its part in an interactional pattern between that child and the rest of his/her family. The family therapist, therefore, does not think in terms of 'pathology' located within the child, but in terms
of difficulties located within the family system which includes that child. These difficulties are looked at in terms of how the child's depression affects the family and how the family affects the child's depression. This distinction leads to a very different approach to the treatment of (depression) in children.”

(True & Kaplan, 1993)

When the family is disrupted or stressful, there can be detrimental outcomes for the adolescent. Three types of family stressors often occur in families and have been examined frequently in the literature; parental divorce, interparental conflict, and maternal depression (Forehand et al., 1991). Parental divorce has been associated with an increase in adolescent behavior problems and a decrease in academic performance (e.g., Allison and Furstenberg, 1989). Fendrich et al. (1990) found that both interparental conflict and parental depression were detrimental for children and adolescents; however, they concluded that depression was the more significant risk factor. One apparent question concerns how these stressors operate to negatively influence adolescent functioning. Previous research has suggested the following; divorce distracts parents from using appropriate parenting practices (e.g., monitoring, discipline) (Patterson, 1986); interparental conflict models aggression (Emery, 1982), disrupts parenting (Emery, 1982), and/or leads to rejection of children (Fauber et al., 1990); and maternal depression leads to inconsistent, more irritable, and/or less energetic parenting (Forehand et al., 1987). Obviously, for the three stressors, the same or different mechanisms may operate in influencing adolescent functioning. Furthermore, there is some preliminary evidence to indicate that the three variables are not uniform in their influence (Forehand et al., 1991). Six family factors that are strongly and significantly associated with child psychiatric disorder include severe marital discord, low social status, overcrowding or large family size, paternal criminality, maternal psychiatric disorder, and admission into care of local authority (Rutter, 1979).

Berndt (1979) has noted that in adverse or stressful situations, poor attachment to parents may be offset by strong attachment to peers. Although adults appear to be the main source of support for children, it has been shown that other children can provide support and help buffer stress (Belle, 1988). The idea of
compensation seems logical from the perspective of the adolescent life cycle. According to Grotevant and Cooper (1986), when children reach adolescence they begin to spend more time with friends without adult supervision. Early adolescents attach more importance to acceptance by peers and increasingly turn to them for advice and comfort. Friendships often fulfill developmental needs at this stage better than do relationships with parents. When adolescents' perception of parents' support is negative, irrespective of what is enacted, they may look for compensatory support from peers.

Through increased expression of intimacy and emotional support among peers, adolescents tend to rely on peers as primary sources of social support in response to stressors (Brown, 1996). As compared with younger children, adolescents spend a substantially greater proportion of their waking hours involved in peer interactions (Ellis, Rogoff, & Cromer, 1981). Adolescence may be a developmental context in which the deleterious effects of peer rejection are especially salient (Rudolph & Hammen, 1999). Moreover, developmental theorists suggest that as part of the process of identity formation, adolescents use peers as primary bases for social comparison and reflected self-appraisal (Harter, Stocker, & Robinson, 1996). In other words, acceptance and rejection by peers offer direct feedback for adolescents' sense of worth and self-concept (O'Brien & Bierman, 1988).

Peer rejection has been associated with a host of interpersonal variables that also may cause significant distress and depressive symptoms, including family conflict, low quality friendships, or unsatisfying romantic relationships (Rubin et al., 1998). Rejected children are more likely than others to be targets of peers' aggressive acts, including both overt victimization (e.g., hitting, kicking, teasing) and relational victimization (e.g., ostracism, withdrawal of friendship support, gossip). Peer rejection is also a significant predictor of children's loneliness and can serve as a precipitant to adolescent suicidal behavior (Prinstein, 2003).

However, prospective longitudinal studies examining the effects of peer rejection on the development of depressive symptoms are relatively rare, and extent studies in this area have yielded some mixed results (Bagwell, Newcomb, & Bukowski, 1998; Dumas, Neese, Prinz, & Blechman, 1996; Boivin, Hymel, &
Bukowski, 1995). Research has suggested that as compared to boys, girls experience more negative life events within the interpersonal domain, and these experiences appear to be more predictive of negative affect for girls (Rudolph & Hammen, 1999; Larson & Ham, 1993). Girls also exhibit greater affiliative needs during adolescence contributing to an increased awareness of and sensitivity to conflict and rejection within interpersonal relationships (Cyranowski et al., 2000).

Academic achievement is believed to be based on motivation and hardwork (Stevenson et al., 1990); children who fail to achieve the adults' standards in academic achievement are often regarded as abnormal and problematic (Wu & Tseng, 1985). It may be true that in both Chinese and Western cultures, children who experience social and academic difficulties in the school often receive feedback concerning their performance and consequently develop depressed feelings. For example, social feedback might play a particularly important role in the development of depression in Chinese children because they are required to evaluate peers and themselves regularly and their social and academic achievement is often publicized (Cole, 1991). It has been argued that repeated exposure to negative feedback about social and cognitive competencies inhibits the emergence of positive self-schemata and facilitates the development of depression (Cole, 1991).

Children identified as learning disabled have found to have higher rates of depression than non-learning disabled children (Stevenson and Romney, 1984; Brumback et al., 1977). Depressed learning disabled children were found to have lower self-esteem, personality traits which characterized the more depressed children were high anxiety, low ego strength, and oversensitivity. It is sometimes difficult to differentiate between depression and learning disability.

In Western cultures, it has been consistently found that academic failure is associated with depressed affect (Fauber, Forehand, Long, Burke, & Faust, 1987; Kellam, Brown, Rubin, & Ensminger, 1983). Several studies have revealed that Chinese children tend to feel more depressed than North American children (Crystal et al., 1994; Shek, 1991). It is contended that the relatively high level of depressed feelings in Chinese children may be related to stressful social and academic circumstances in Chinese schools (Chen, Rubin, & Li, 1995).
The obtained finding in the present study is by and large consistent with the earlier research and fairly extensive literature revealing the significant contribution of stress in development of depression among adolescents such as Corcos et al. (1996), Reuter et al. (1999), Rudolph et al. (2000), Adams et al. (1994), Trangkasombat and Likanapichitkul (1997), Schraedley et al. (1999), Takakura et al. (2003), O'Sullivan (2004), and Phillips et al. (2005).

In a previous study, Rowlison and Felner (1988) found that both distal major life events and proximal daily stressors had important degrees of unique and shared variance with adaptive functioning in adolescence, whereas the effects for social support were inconclusive.

Another study by Brown and Moran (1994) examined the vulnerability (predisposing) factors for depressive disorder occurring before age 17 years as sexual abuse (physical sexual contact, excluding willing contact with non-related peers in teenage years), parental indifference (physical or emotional neglect; parental lack of interest or involvement in material care, school work, friends and so on), physical abuse (violence shown towards the subject by a household member; actual beatings, threats with knives and so on) and loss of parent (death or separation followed by inadequate parental care).

A strong line of evidence comes from a study by Windle and Windle (1996) who supported main-effects (vs. stress-buffering) model among middle adolescents. Some predictors (e.g., task-oriented coping, major stressful events) were general in their predictive relations to the outcome variables, whereas others were highly specific (e.g., emotion-focused coping predicting depressed affect).

On similar lines, Williamson et al. (1998) revealed that one half of the depressed adolescents had two or more refined severe events occur during the year prior to onset compared with none of the normal controls. Also, depressed adolescents were significantly more likely to have a major difficulty precede the onset of their depression (27%) compared with normal controls (0%).

Additionally, Hammen et al. (1999) found that depressed youngsters have high rates of recurrent depression and comorbid conditions, impaired academic and
social functioning, exposure to high rates of parental psychopathology, parental assortative mating, severe marital dysfunction, and high rates of severe stressors.

Another line of evidence comes from a study by D'Imperio et al. (2000) showed that there were direct effects for stressor level on several protective resources; however, the hypothesized protective resources did not discriminate resilient from stress-affected youth. Both resilient and stress-affected youth experienced equivalent levels of internalizing symptoms, and these groups' scores were higher than those of low-stress participants.

In a recent study, Nummer and Seiffge-Krenke (2001) revealed that stress and avoidant coping in early and mid-adolescence explained a significant proportion of depressive symptoms among females in late adolescence. Among males, only the level of conflicts with friends in early adolescence contributed to their level of depressive outcome in late adolescence. Rudolph et al. (2001) identified a self-regulatory sequence proceeding from maladaptive self-regulatory beliefs, to academic disengagement, to enhanced perceptions of school-related stress, to depressive symptoms.

On similar lines, Tennant (2002) found that the empirical findings support clinical impressions of the relation of stressors to depression but at the same time provide some clearer understanding in relation to differences of stressor impact on depression type and on index episode, relapse or recurrence. Twin studies now provide the strongest evidence of the relative magnitude of effect of environmental stressors and genetic factors: the former explains at least as much of the variance in depression as our genes.

Further, Rice et al. (2003) indicated that adolescence was associated with a greater number of behaviour-dependent life events. Genetic covariation of negative life events and depression was greater for adolescents than for children. Thus, bivariate model fitting was consistent with the greater heritability of depression seen in adolescence being due to an increase in gene-environment correlation involving negative life events.

According to Eley et al. (2004), the odds of severe adolescent depressive symptoms increased by a factor of 1.5 per standard deviation increase in parental
familial vulnerability to depression. A significant interaction such that those with high parental familial vulnerability, whose parents also had no qualifications, had a threefold risk of severe depressive symptoms.

In another study by Akse et al. (2004) showed that perceived parental rejection was associated with depression and aggression in most of the combined personality type and gender groups among early and middle adolescents. Personality type and gender moderated the associations between perceived parental rejection, depression and aggression.

Another strong line of evidence comes from a study by Adewuya and Ologun (2006) who evaluated the factors associated with depressive symptoms among adolescents (aged 13-18-year-old). The factors significantly associated with adolescents' depressive symptoms include parental depressive symptoms, adolescents' perception of family functioning as poor, adolescents' problems with peers, adolescents' low self-esteem, adolescents' drinking, female gender, and large family size.

3. ROLE OF GENDER IN ADOLESCENT DEPRESSION

Gender is a dauntingly complex variable because it varies with so many other biological, psychological and social variables. Gilbert (1992) states, “Gender refers, not only to biological sex, but also to the psychological, social and cultural features and characteristics that have been strongly associated with the biological categories of the female and male” (p.385).

Gender role orientation refers to a person's belief that he or she possesses certain gender-typed characteristics. Traditional measures of gender role orientation define masculinity as the perceived possession of instrumental personality traits (e.g., assertiveness, independence) rather than the entire spectrum of masculine attributes and behaviors. Hence, the terms masculinity and instrumentality often are used interchangeably. Similarly, femininity typically is defined as the possession of expressive personality characteristics (e.g., emotionality, compassion), so that the term expressivity often is used instead of femininity. Although the traits discussed generally refer to gender-typed personality characteristics, the term gender roles will be used in keeping with previous research.
Gender stereotypes concerning the experience of emotions are sometimes found to be less strong than gender stereotypes concerning the expression of emotions (Brody & Hall, 1993). Sex role constructs have been repeatedly linked with mental health in adults (Spence, 1984), and since the years following puberty are important in their development (Maccoby, 1982) it seems plausible that the development of sex role traits and differential vulnerability to depression in the sexes may be somehow inter-related. Two important alternative hypotheses link feminine attributes to mental health, postulating that the feminine sex role heightens the tendency to respond to stressful episodes with depressive symptoms (Gove & Herb, 1974) or that overly empathic relationships with persons who are under stress 'creates structures and demands that lead to psychological impairment' (Kessler, Mc Cleod & Wethington, 1984).

Studies of adults from several countries have emphatically documented that women have 1.5 to 3 times more current and lifetime unipolar depression than men (Blazer et al., 1994; Weissman et al., 1993, 1996; Kessler et al., 1993, 1994; Wittchen et al., 1992; Cheng, 1989; Hwu et al., 1989; Wells et al., 1989; Bland et al., 1988 a,b; Canino et al., 1987; Lee et al., 1987; Bebbington et al., 1981; Weissman & Klerman, 1977). Results of these studies indicate that women have more psychological symptoms and distress than do men. Men show a higher incidence of behavior disorders such as alcohol abuse (Offord et al., 1987; Myers, 1984).

Radloff and Monroe (1978) summarized a number of findings which indicate that, in difficult situations, women experience loss of control, helplessness and feelings of failure earlier and more often than men. In a series of experiments, Baucomb and Danker – Browne (1979, 1984) found that sex – role orientation, rather than sex per se, was the crucial variable determining feelings of failure and helplessness in their experimental tasks. They found that women low in masculinity were particularly susceptible to developing a range of helplessness symptoms, and argued that 'to the extent that helplessness is an analogue of depression, they may be susceptible to depression' (Baucomb & Danker – Browne, 1984 p. 248).
The onset of adolescence traditionally was viewed as a time of inherent "storm and stress"; however, later this view was no longer accepted (Petersen, 1988) as empirical work suggested that most young people survived adolescence quite well (Larson & Lampson-Petratis, 1989). This age period has been identified as a time of change and transition which can negatively influence the individual and pose potentially higher incidences of difficulties in functioning (Simmons, Burgeson, Carlton-Ford & Blyth, 1987). Most, but not all, of the literature suggests that adolescence is associated with an increase in certain problems (Kashani, Rosenberg & Reid, 1989; Petersen & Hamburg, 1986), the most noted one being depression. Larson and Lampson-Petratis (1989) reported an increase in mildly negative states while Bird et al. (1988) found an increase in clinical depression. Graham (1979) reported that externalizing or acting out problems were consistent from school entry throughout adolescence, with boys manifesting three times as many difficulties as girls. The differential finding reported by Rutter (1986) stated that an increase in depressive disorders but for girls only.

Adolescence is assumed to be the developmental period in which these differences emerge and intensify, creating a pattern which continues with gender differences in depressive symptoms and disorder in adulthood (Leadbeater, Blatt, & Quinlan, 1995). What is less clear, however, is the magnitude and pervasiveness of these differences during adolescence; that is, how large are the effects of gender on depressive symptoms in adolescence? Are gender differences characteristic of the general population, or are they limited to a subgroup of youths, such as those who may be referred for or receive mental health services?

The incidence of behavioural problems and psychological disorders increases during adolescence, and striking sex difference become apparent in the pattern of disorder (Rutter & Garmezy, 1983). Using retrospective data, some of these have pointed to adolescence as the time when this gender difference first appears. The child and adolescent epidemiological literature generally agrees that rates of depression are similar in pre-pubertal boys and girls, and that rates of depressive disorders begin to rise in girls at sometime between childhood and age 15 (Lewinsohn et al., 1995; Reinherz et al., 1993; Angold & Rutter, 1992; Nolen-Hoeksema et al., 1991; Fleming & Offord 1990; Mc Gee et al., 1990; Kashani et al., 1989; Guyer et
The Epidemiological Catchment Area (ECA) studies (Burke et al., 1990) suggested that unipolar depression onset rates were equal in males and females until age 15-19, while the National Co-morbidity Survey (NCS) (Kessler et al., 1993) provided evidence for the emergence of an onset differential by age 10-14.

In a recent study, Wade et al. (2002) presented a cross-national examination of the emergence of the gender gap in depression during adolescence using national longitudinal panel data from Canada, Great Britain, and the United States. Results revealed that females have significantly higher rates of depression, the gender gap in depression consistently emerges by age 14 across all the three national samples and the age group of 16 and 17 year-old adolescents had the highest reported prevalence of depression among females at time 1 (13.3%), which is 2.5 times higher than males at that age.

Several theories have been proffered to explain the adolescent emergence of the gender difference in depression. Changes in circulating gonadal hormones during puberty are often implicated as exerting direct or potentiating effects on the central nervous system that relates to disturbance in mood (Susman et al., 1987). Some have argued that pubertal change in female morphology (e.g., breast development and increase body fat) may be experienced negatively by some adolescent girls, particularly if the timing of these changes occurs before that their peer group (Stattin & Magnusson, 1990). Two recent studies, however, indicate that pubertal status has a greater influence on female depression rates than either age (Angold et al., 1998; Patton et al., 1997) or timing of puberty (Angold et al., 1998).

One of the most influential hypotheses proposes that androgynous individuals are less vulnerable to depression because their relatively high levels of both instrumental and expressive traits give rise to more flexible coping processes than sex-typical traits (Spence & Helmreich, 1978). If there are links between variations in androgens, psychological masculinity and vulnerability to depression, early adolescence, during which there is a marked divergence between males and females in androgen levels, is a period during which correlated changes in masculinity and depression would be expected.
As girls enter adolescence and gender role socialization intensifies, in addition to being encouraged to downplay traditionally masculine characteristics (Eccles, 1987; Block, 1983). As girls discard masculine qualities, they may display fewer behaviors that typically elicit positive reinforcement from others (Burnett, Anderson, & Heppner, 1995). Consequently, when masculine characteristics are emphasized, females with low levels of masculine traits are at particular risk for low self-esteem.

A number of studies to investigate how gender roles are socialized provide evidence for the early emergence of gender-role consistent behavior and suggest some ways in which such behaviors may be “passed on” from parents (Adams et al., 1995; Kuebli, Butler and Fivush, 1995). The results indicated that mothers talked for a longer amount of time about sadness, and more often emphasized the causes of sadness, with daughters than with sons. It may be gender roles and stereotypes lead women into internalizing problems because internalizing problems are expected and reinforced for women while externalizing problems are not.

Estimates of the prevalence and magnitude of gender differences in depressive symptoms may be influenced by several methodological factors, foremost of which are the source of information, the types of symptoms that are measured, and sample characteristics (Compas et al., 1997). Informant differences in reports of internalizing problems in adolescence are well documented, especially the relatively low correspondence between parents and children or adolescents in their reports of depressive symptoms (Kazdin, 1994). To the extent that many symptoms of depression are not readily observed by parents, they may also be less sensitive to gender differences in these symptoms in their children. Thus, gender differences would be expected to be smaller in parents’ reports than in adolescents’ self-reports. Hinden et al. (1997) found significant gender differences and interactions of age and gender in analyses of parents’ and adolescents’ reports of depressed mood and a syndrome of mixed anxiety and depression. Several studies have reported statistically significant differences between male and female adolescents in depressive symptoms, but most have not considered the magnitude of these effects.
The results of the present study revealed a nonsignificant difference between males and females on depression which is in contradiction to the expectation and previous research that consistently documented the higher prevalence of depression among females compared to males. Thus, Hypothesis III i.e., stands rejected. The evidence is less compelling that gender plays an important aetiological role in depression among students in middle adolescence. It is difficult to draw definite conclusion concerning the reasons for no difference between male and female mid-adolescents on depression. Further probe is required into this lack of gender difference in depression among this mid-adolescence developmental stage. Our finding needs further exploration and replication as it has important implications for studies aiming to examine gender differences in depression among adolescents by using self-report instruments. It is suggested for future research to consider multi-informant ratings such as parents' ratings, peer group ratings, teacher ratings, etc to measure the depressive symptoms to draw conclusions regarding this issue.

The plausible explanation can be proffered is that at the developmental stage of mid-adolescence, probably the females and males respond in a similar fashion to the physical changes i.e., pubertal changes unlike the previously held belief about the increased distress reported among girls in maladaptive and dysfunctional ways of handling these changes that take place in contrast to boys. Our sample seemed to respond in the same way to the changes in their physical appearance i.e, responses regarding their height, weight, appearance or looks. Also, in light of the academic pressures faced by the adolescents in this developmental period i.e, the sample (aged 15 to 17 years) belonged to the Grades 10th, 11th and 12th, and are coping with the problems such as the students are about to embark upon a new professional career after completion of their schooling and clearing the entrance tests for the various Institutes to undertake the professional courses. Infact a number of studies have reported heightened fear of failure, not meeting educational goals, etc leads to increased negative affect, distress and maladaptive ways of coping resulting in extreme behavior like delinquency, substance abuse, or suicide. The additional multiple stressors faced by them in relation to the conforming to the belief patterns of the peer group, disappointments in romantic relationships, identity crisis, role confusion, parental pressures, parental marital discord/ conflicts, parental
depressive/psychiatric/ physical illnesses etc. Keeping these factors in view, it seems that both the sexes do not seem to differ in respect to their dealing with such micro (focusing on the day-to-day minor stressors that people experience, i.e., daily hassles) and mezzo level stressors (life changes of some major significance to the individual, i.e., death of a loved one, serious financial problems, etc) that refers to the irritating frustrating, distressing demands made by everyday transactions with the environment. All these factors contribute to the development of psychopathology among mid-adolescents in a similar manner irrespective of their gender in this age group. Moreover, our study utilized a self-report instrument to assess the depressive symptoms per se and not a depressive disorder so may be the mid-adolescents may not differ in their symptomatology and expressiveness of depression. Findings need further probe regarding diagnosis of a depressive disorder and gender differences in that context.

Another possible explanation is in terms of the gender role socialization patterns followed by their parents. In a world of vast social and technological changes, the educated professional parents seem to follow similar parenting and rearing techniques for both the genders. In face of the academic pressures of these adolescents, striving to reach their goals, heightened competitiveness and associated stress, the present day scenario seems to favor females with as much compassion and strong social support by the parents to deal with these stressors as provided to the male mid-adolescents. As a result, they are both socialized to experience and express affect as intensely and externalizing coping strategies are reinforced in girls as much as in boys. Considering the fact that girls are proving their worth and hold better positions in both the academic and professional spheres of life. In terms of psychological masculinity and vulnerability to depression, there may be reduced divergence between males and females in mid-adolescence, a period during which correlated changes in masculinity and depression would be expected. As girls are encouraged to adopt masculine characteristics unlike the traditionally held belief and they may display behaviors that typically elicit positive reinforcement from others.

These reasons are speculative in nature and warrant further replication of the results of this study to generalize them. As the importance to document the extensiveness of gender differences in depressive problems is in determining their
role in overall models of adolescent development. If boys and girls in the general population differ in symptoms of depression, then this difference may represent a pervasive feature of normative adolescent development. Alternatively, if gender differences in these symptoms are limited to clinically referred youths, they may reflect processes that characterize only a subgroup of high-risk adolescents. Gender differences limited to only high-risk groups suggest that adolescence is not intrinsically associated with such differences in depressive symptoms. Also, if gender differences are small in the general population, process-oriented research (Nolen-Hoeksema & Gigrus, 1994) will need to focus on samples of high-risk or clinically referred adolescents to achieve sufficient statistical power. The patterns of gender differences in community versus clinical samples would suggest that prevention and treatment programs need to be tailored differently for boys and girls, depending on the nature and scope of gender differences in the general population as opposed to selected, high-risk subgroups.

The literature on adolescent depression is quite inconsistent concerning gender differences. Some studies find no differences in depression between adolescent males and females (Mitchell et al., 1988; Baron and Joly, 1988; Kaplan et al., 1984; Jacobson et al., 1983; Friedrich et al., 1982). Although this may be due to differences in results that compare untransformed scale scores with categorical cut points (Roberts and Chen, 1995; Roberts et al., 1995; Teri, 1982), inconsistencies in findings likely result from the variability in age ranges across studies. Teri (1982) examined 14- to 17-year-old adolescents with the BDI. She found significant differences across gender and age using categorical cutoffs, but no differences when comparing mean scores.

Another methodological issue involves the types of symptoms that are measured, as gender differences may be more pronounced in some types of internalizing symptoms than others. All of the manifestations of depressive problems are clinically meaningful (Compas, Ey, & Grant, 1993), but there may be considerable variance in the magnitude of gender differences across these different types of symptoms and disorders. Silverstein et al. (1995) found that female adolescents reported more symptoms of mixed anxiety and depression than did male adolescents, but no gender differences in more “pure” symptoms of depression.
A review of literature reveals that adolescents who are referred for mental health services are, not surprisingly, expected to manifest higher levels of depressive symptoms than nonreferred adolescents sampled from the community. Gender differences could be greater in referred samples for two reasons. Referrals for mental health services could reflect gender stereotypic assumptions of parents, teachers, and other adults who are likely to initiate this process. This may include an assumption that girls are more likely than boys to manifest internalizing problems, including symptoms of depression. Gender differences may also be greater in referred samples because these youths represent an extreme subgroup of adolescents who are more vulnerable to internalizing problems, and girls may be more vulnerable than boys to such problems (Nolen-Hoeksema and Girgus, 1994). Alternatively, if parents and others assume that girls are more likely than boys to experience depressive symptoms, this could lead them to minimize gender differences among referred youths, as boys may have to exceed a much higher threshold of depressive symptoms to be referred (Compas et al., 1997).

Previous discipline specific explanations, whether they are biological, hormonal, or psychosocial, have to date been unable to fully account for the emergence of this gender gap (Bebbington, 1996). This suggests that a multifactorial model accounting for the interplay between these various factors is more likely to explain this phenomenon. The actions of socialization agents and the impact of gender stereotypes on a child's construction of gender identity are factors that increase vulnerability to depression. Identification of the emergence of gender differences in depression may provide important clues for further etiologic research. It is of particular importance for psychiatric research and practice to investigate age-related variations in the prevalence of depression across genders to identify the critical age range during which the gender gap in depression begins to manifest. It would aid in identifying treatment and intervention strategies should be directed in an effort to prevent or minimize long-term mental health and related problems. A further investigation into the gender specific pathways leading to this divergence in depression to enhance our understanding of the underlying etiology of depression (Gjerde, 1995).
Though self-report studies find that women and girls do describe themselves as more concerned with relationships than do boys and men (Levit, 1991; Allgood-Merten et al., 1990), there is little evidence that this self-reported greater concern with relationships in females is linked to a greater vulnerability to internalizing problems. For example, high scores on questionnaire measures of communality and concern for others do not tend to be correlated with higher levels of depression or anxiety in either men or women (Allgood-Mertern et al., 1990).

Compas et al. (1997) reported that adolescence is not characterized by pervasive gender differences in depressive symptoms in the general population; rather gender differences are limited to a sub group of adolescents who have been referred for mental health services, with referred girls consistently highest in depressive symptoms. It appeared that most adolescent girls and boys do not differ substantially in the amount of sadness, unhappiness, fear and anxiety that they experience. When the simple effects of gender were examined separately from referral status, nonreferred male and female adolescents did not differ in parents’ ratings of mood, syndrome, or analogue, or in adolescents’ ratings of the analogue of major depression.

This is consistent with the findings reported by Silverstein et al. (1995) in a community sample of adolescents in which significant gender differences were found for self-reports of mixed symptoms of anxiety and depression but not for a more “pure” index of symptoms of major depression. This suggests that the largest gender differences occur in symptoms of affective distress (depressed and anxious mood), and smaller differences may exist in other symptoms of depression (e.g., sleep and appetite disruption, concentration problems).

Results do not fall in line with the previous findings by Kandel and Davies (1982), Wilson & Cairns (1988), Forehand et al. (1991), Ruble et al. (1993), Koenig and Gladstone (1998), Galal et al. (2001), Ge et al. (2001), Sweeting and West (2003), Sen (2004) and Gorenstein et al. (2005) who all concluded that there exists a higher preponderance of female adolescents as compared with male adolescents in depression.

Though a large number of clinical and epidemiological evidences suggest a significant gender difference in depression with females reporting a much higher rate
of depression as compared to males, there are few studies which support a non-significant gender difference in adolescent depression. For example, Makaremi (1992) who investigated sex differences on a depression scale for Iranian adolescents in a sample of high school students who completed the Zung Self-rating Depression Scale as used in the present investigation. Analysis showed no significant differences on the five subscales of Zung's depression scale for boys and for girls. Also, there were no sex differences on the total score for depression.

According to Joiner et al. (1999) who conducted a preliminary examination of sex differences in depressive symptoms among adolescent psychiatric inpatients (aged 12 to 16), the results demonstrated that sex differences were not found for adolescents with specific depressive symptoms and specific anxious symptoms (i.e., the absence of comorbidity). Findings supported the possibility that sex differences in pure forms of depression are overestimated and that comorbid internalizing conditions may be more prevalent in adolescent girls than boys.

On similar lines, Silverstein (1999) reported that female subjects exhibited a higher prevalence that male subjects of somatic depression but not a higher prevalence of pure depression. In three categories of somatic symptoms, i.e. sleep disturbance, fatigue and appetite disturbance, female subjects exhibited twice the prevalence of somatic depression as male subjects but a prevalence of pure depression very similar to that of male subjects (3.0% vs 2.3%).

Another strong line of evidence comes from a study by Kovacs (2001) who determined whether there are gender differences among psychiatrically referred young patients in the presenting features and subsequent course of major depressive disorder (MDD) through adolescence. Results showed that salient features of MDD did not differ for girls versus boys, including age at MDD onset, recovery from the index episode, risk of a new episode, and rates of various comorbid disorders in the index and recurrent episodes. Rates of selected symptoms and severity of the depressive syndrome also were comparable for boys and girls throughout their development.

In another study, Latimer et al. (2002) examined gender differences in rates of comorbid psychiatric disorders among adolescents (aged 12 to 19) with 1 or more
psychoactive substance use disorders. They found that rates of dysthymia, double depression (i.e., major depression and dysthymia), and bipolar disorder were equivalent between genders.

Though a few studies have failed to report gender differences in the severity or symptomatology of depression, in a highly representative sample of patients with depressive disorders, Hildebrandt et al. (2003) found that the severity of depression was similar for men and women i.e., 22% mild, 56% moderate and 23% severe depressive episodes and the mean number of symptoms presented was 6.6 of 10 for both genders.

On similar lines, Maharajh, Neuro and Ali (2004) investigated the prevalence of depressive symptomatology, major depression and dysthymia in Tobagonian adolescents (aged 14 to18 years). They found that though females were more likely to have depressive symptomatology and major depression than males. There were no gender differences in dysthymia.

Another important study by Bennett et al. (2005) examined whether gender differences in depressive symptoms are present during adolescence at an outpatient clinic. Results indicated that depressed girls and boys had similar symptom prevalence and severity ratings for most depressive symptoms. However, depressed girls had more guilt, body image dissatisfaction, self-blame, self-disappointment, feelings of failure, concentration problems, difficulty working, sadness/depressed mood, sleep problems, fatigue, and health worries than depressed boys on some comparisons. In contrast, depressed boys had higher clinician ratings of anhedonia, depressed morning mood, and morning fatigue.

In another recent study conducted in Pakistan by Afridi et al. (2006) determine the clinical manifestations of depressive disorder among cases below 18 years over a period of 3 years (October 2001 to 2004). The diagnostic criteria of ICD-10 (International classification of diseases in its tenth revision) of WHO was used. Results revealed that a 100 (25%) of them were found to be suffering from depressive disorder. Among them, 54 were girls and 46 boys, giving a male to female ratio of 1:1.32 and statistically insignificant gender difference.
Given the strength of stereotypes and self-expectations about the gender differences in the moods and related behaviors, experimental and observational studies seem to have clear advantages over self-report and correlational studies. All studies in this area, however, must contend with the fact that a fundamental component of mood is the subjective experience of mood supports the use of self-report instruments to assess the depressive symptoms. Therefore the multimethod programs of research using self-reports, experimental and observational methods to explore the viability of existing and newly proposed explanations for gender differences in depression should be encouraged.

4. INTERACTION BETWEEN NEGATIVE COGNITION AND STRESS IN PREDISPOSING ADOLESCENTS TOWARDS DEPRESSION

The cognitive diathesis-stress model of depression (Monroe & Simons, 1991; Abramson, Metalsky, & Alloy, 1989; Beck, 1967) postulates that negative cognitions are a vulnerability factor that interacts with negative life events to contribute to the onset and maintenance of depression. According to this perspective, individuals who have a negative cognitive style are more likely to become depressed when they experience stressful life events than are individuals who do not have such a style.

Beck (1967, 1976, 1987) has proposed that depressed individuals have a cognitive triad of negative views about the self, the world, and the future, and negative information-processing biases and distortions. In addition, Beck hypothesized that depressive schemas or dysfunctional attitudes are activated by important stressors within a domain of personality vulnerability, leading to negative automatic thoughts and depression. Beck defines schemas as stored bodies of knowledge that affect the encoding, comprehension, and retrieval of information. Schemata exert this effect by guiding attention, expectancies, interpretations and memory searches. The content and organization of different individuals' schemata vary idiosyncratically according to their particular experiences.

Beck (1967, 1983) hypothesizes that depressogenic schemata are typically latent in individuals vulnerable to depression and must be activated by relevant stressors in order to exert their influence on information processing. In the absence of
such aversive life events, depressogenic schemata remain inactive and do not exert an influence on patterns of thinking. Several studies conducted within the framework of Beck’s theory support this line of reasoning by showing that dysfunctional thinking in individuals vulnerable to depression (as defined by past history of depressive disorder) appears when activating stimuli (mood and life events) have primed otherwise latent underlying cognitions. Such dysfunctional thinking, however, does not appear in non-vulnerable individuals following priming procedures (Dykman, 1997).

The reformulated learned helplessness (Abramson, Seligman, & Teasdale, 1978) and hopelessness (Abramson et al., 1989; Alloy, Abramson, Metalsky & Hartlage, 1988) models of depression also are cognitive diathesis-stress models. According to the reformulated learned helplessness model, when people experience a negative event, those who attribute the causes of negative event to stable, global, and internal factors are more likely to become depressed than are individuals who do not have such a negative explanatory style. The hopelessness theory of depression (Abramson et al., 1989; Abramson, Metalsky & Alloy, 1988) is also a diathesis-stress model in which explanatory style is hypothesized to be a more distal contributory cause that interacts with an important negative life event to create a hopelessness belief is hypothesized to act as a proximal sufficient cause of the hopelessness subtype of depression.

The majority of research that has examined cognitive vulnerability to depression has focused on a depressogenic cognitive style as if it were a trait-like or dispositional variable. Although depressogenic cognitive style has not been conceptualized and treated as one. Although the traitlike nature of cognitive style appears to be a fundamental assumption of HT, there is no research that has explicitly sought to determine whether the attributions and inferences that people make about negative life events are structured in a traitlike manner. Fraley and Roberts (2005) demonstrated that both trait-based models and contextual models (i.e., models that do not assume the existence of an underlying enduring trait) are capable of predicting a high degree of stability across any two time points. To distinguish traitlike and
contextual models, it is necessary to study the pattern of test-retest correlations across multiple time points.

Empirical tests of the learned helplessness and hopelessness models provided considerable evidence that attributional style is correlated with depression in adults (Sweeney, Anderson, & Bailey, 1986) and children (Asarnow & Bates, 1988; Nolen-Hoeksema, Girgus, & Seligman, 1986). Few studies, however, have adequately tested the diathesis-stress model in either adolescents or children.

The results of the present investigation are in consonance with Hypothesis IV. Our study reported that mid-adolescents with high stress and high negative cognition reported higher scores on depression as compared with those low on stress as well as negative cognition. This model supports the cognitive diathesis-stress model and suggests that the occurrence of life events in the presence of cognitive vulnerability will tend to produce a depressive reaction, whereas events or vulnerability on their own may be relatively much less depressogenic. In other words, the operation of vulnerability is event-related and it should not be associated with depression in the absence of an event. From this it follows that among those suffering from depression, there should be most evidence for pre-existing cognitive vulnerability in individuals who have experienced a stressful event. Lower levels of vulnerability should be evident in both depressed people who have not experienced an event and in the non-depressed.

In terms of our sample, the plausible explanation that can be proffered is that when faced with a seemingly overwhelming accumulation of micro-stressors (i.e., daily hassles), the mid-adolescents may feel less capable of solving their problems, despite having the necessary skills. Instead, they often resort to avoidance shift causal attributions to factors beyond their control, or adopt irrational beliefs. It may be that a poor self-concept acts as vulnerability factor that in combination with a stressor that further decreases self-esteem or makes the negative aspects of the self more salient and thus increases the risk of depression. According to hopelessness theory, stressors are particularly likely to lead to pessimistic expectations about the future among individuals who tend to explain such negative events in terms of internal, stable, and
global causes, and who have more negative views of themselves. Therefore, interventions that focus on improving adolescents' orientation to problems—helping them effectively resolve daily stressors—are recommended for reducing the symptomatology.

All individuals encounter negative emotions that result from stressful events, but most do not experience depression as a result. On the other hand, when individuals who possess negative cognitive structures (that are well-integrated with negative affective structures) encounter such experiences, not only should they experience negative emotions, but these negative emotions also activate a variety of maladaptive self-cognitions (Ingram et al., 1998; Beck, 1967). Hence, life stress that is cognitively interpreted in terms of one's inadequacy and inferiority turns a "normal" negative affective state into depression (Teasdale, 1988). This idea is reminiscent of Freud's differentiation between mourning and melancholia; in mourning the person's response to a negative event is "this is terrible" whereas in melancholia the person's response to this event is "I am terrible." The depressogenesis of the cognitive mechanisms therefore lies in the transition from normal negative affective states to a depressive psychopathological state via the connection between negative cognitive self-structures and negative affective structures.

Ingram et al. (1998) have suggested in this regard that cognitive factors serve as the final common pathway to depression, at least for depression that is primarily psychologically mediated (as opposed to that which may be primarily biologically mediated, such as bipolar disorder). The final common pathway hypothesis therefore proposes that the interpretation of stressful events, and interactions with others, are dependent upon the processing functions of depressogenic cognitive structures. More recently, Hammen (1991b) summed up this perspective nicely in a discussion of stress generation in depression:

Negative cognitions about themselves and events may alter their responses to circumstances or may contribute to an inability to cope with emergent situations and may also determine reactions to personally meaningful events [i.e., stress-
generation]. In a sense, therefore, depression causes future depression through the mediation of stressors and cognitions about the self and circumstances. (p. 559)

Empirical tests of cognitive vulnerability-stress models have provided compelling evidence for the identification of attributional styles that may alter the impact of stressors on psychological adjustment; however, in many studies this model has been applied without consideration of developmentally salient stressors that may have an important influence on adaptation. In contrast, some developmental studies have largely focused on the impact of significant life stressors (e.g., peer rejection), but have not considered predisposing vulnerabilities that may mitigate or magnify the effects of these stressors on development (Prinstein and Aikins, 2004).

In one of the earliest statements specifically focusing on vulnerability origins, Rose and Abramson (1992) suggested several developmental factors that may underlie hopelessness. In general, they argue that children who encounter negative events (e.g., maltreatment) attempt to find the causes of these events so that they can attach meaning to them. They further suggest that children evidence a tendency to make internal attributions for all events, and thus tend to see themselves as the cause of maltreatment. In some cases, Rose and Abramson suggest that this internalizing process precipitates the development of the negative attributional style that I turn creates depression risk. For instance, negative events affect the child’s self-concept, and in so doing may lead to generalized tendencies to internalize these negative events. Such tendencies alone, however, are not sufficient to produce a hopelessness attributional style. Rather, negative events are repetitive and occur in relationships with caregivers; these events will undermine the child’s positive self-image as well as his or her optimism about future positive events. Moreover, persistent negative events will produce a pattern of attributions for these events that, over time, also become global and stable. These patterns thus become trait-like and serve as the foundation for hopelessness in the face of stressors in the future; a process that produces hopelessness depression (Ingram, 2003).

Another potential cognitive diathesis that has been hypothesized to interact with stressors is perceived control over events. According to the reformulated learned
helplessness model of depression (Abramson et al., 1978), perceived lack of control over negative outcomes is an important link in the causal chain leading to helplessness depression. There is yet little evidence that a belief in lack of control is a vulnerability factor for depression in children. The perception of lack of control might be particularly salient when individuals are faced with stressor over which having control and having available coping resources is highly desirable, such as academic achievement. Negative expectations for the future, hopelessness, and depression are likely outcomes when individuals believe that they have little or no control over highly important and stressful situations (Hilsman and Garber, 1995).

Weiner et al. (1978; 1985) suggested that there at least two sources of emotions related to achievement: outcomes and causal attributions. An individual’s initial emotional response to an event may be more outcome dependent; that is, at first most individuals respond to failure with some degree of disappointment and displeasure. As the person makes causal attributions for the event, which are especially likely to be generated for important, negative events, more differentiated emotions result. More enduring distress is likely to be due, in part, to the types of attributions individuals make for the negative outcome and the perceived implications it has for their sense of competence and future. Thus, most children who receive unacceptable grades are likely to experience short-term distress, but those with a negative cognitive style are more likely to continue to report depressed affect and symptoms.

Social-cognitive theories of depression (e.g., Abramson et al., 2002; Hankin & Abramson, 2001) offer a promising framework for understanding individual differences in the way people respond, both cognitively and affectively, to negative life events. Generally, these theories posit that some people explain stressful and negative life events in a more optimistic way and, consequently, may be relatively unscathed by them. In contrast, other people interpret such stressors in a more pessimistic manner and as a result may respond to these events with strong and enduring negative emotions.
In particular, the hopelessness theory of depression (HT; Abramson, Metalsky, & Alloy, 1989), a prominent social-cognitive-stress model of depression, posits that individuals have characteristic ways of understanding negative life events. According to HT, people are more likely to become depressed when a negative event is (a) attributed to stable (persisting over time) and global (i.e., affecting multiple areas of life) causes, (b) perceived as leading to other negative consequences in the future, and (c) viewed as implying something negative about the self (e.g., worthlessness). When made in response to stressors in the flow of daily life, these cognitions defined in HT as event-specific inferences. HT postulates that these are individual differences in the way people make event-specific inferences, such that those who exhibit a dispositional depressogenic cognitive style are more likely than others to make negative inferences about events and thus are at a greater risk for becoming depressed (Abramson et al., 1989). In other words, not only it posited that event-specific inferences lead to depression but some people are more likely to make these kinds of inferences about others.

Hankin, Fraley and Abela (2005) suggested two reasons why it is necessary to determine which of these structures best characterize the way that attributions and inferences about the negative life events are made across time. First, if the nature of the inferences that people make about life events is not an enduring facet of their personalities but only a temporary response to current circumstances, then contemporary theories of cognitive vulnerability to depression need to be reevaluated. Second, if these inferences do not conform to a trait like model, then future research may profit by focusing more on the situational contexts that confer vulnerability to depression and less on the dispositional cognitive styles that are hypothesized to serve as a stable vulnerability for depression.

Among the few studies documented in literature investigating this model, is a study by Metalsky et al. (1987) who tested the interaction among attributional style, a stressful event (receiving a poor grade on an exam), and depressed affect in college students. They found that, although most students who received grades less than they considered acceptable reported immediate depressed mood, only those with a stable and global attributional style continued to experience negative affect a few days later.
Thus, the interaction of attributional style with the negative event significantly predicted enduring depressed affect.

**Steinmeier-Pelster (1989)** found in both a short-term prospective field study and a laboratory experiment that attributional style interacted with perceived stress to predict depressed mood. **Kwon and Oei (1992)** found that dysfunctional attitudes interacted with negative events to predict increases in depressive symptoms. They also found that negative automatic thoughts mediated the relationship between dysfunctional attitudes and increases in depressive symptoms in participants experiencing high levels of stress. Another line of evidence was provided by **Metalsky et al. (1993)** similarly found that the interaction between attributional style and stress predicted depressive symptoms, particularly among students who had low self-esteem.

However, as with adult research, only a few prospective studies have investigated the interaction between attributional style and life stress in prospectively predicting depression in children and adolescents. **Dixon and Ahrens (1992)** studied troubled children at summer camp, and their results showed that daily hassles resulted in higher levels of depressive symptoms among children with negative attributional styles than among those with more positive styles. Using a grade-stress methodology, **Hilsman and Garber (1995)** found that academic disappointment predicted increased depressive symptoms more strongly among children with negative attributional styles than among those with more positive styles. Likewise, a 5-year investigation conducted with assessments every 6 months found that negative attributional styles increased risk for depression following life stress after children reached the fifth grade, but not before (**Nolen-Hoekema, Gurgus, & Seligman, 1992**). However, another recent study failed to find a significant interaction between attributional style and life stress in predicting depressive symptoms among children and adolescents (**Bennett & Bates, 1995**).

Additionally, exposure to disappointments, losses, failures, and other negative events over the course of development can affect an individual’s outlook on life, particularly if these experiences are pervasive and severe (**Janoff-Bulman, 1992**).
Chronically aversive life circumstances (e.g., abuse, poverty, parental discord) or major traumatic life events (e.g., parental death, physical assault) are especially likely to affect individuals' sense of themselves, their world, and their future (Janoff-Bulman, 1992; Rose & Abramson, 1992). Aversive events that result in multiple and severe bad outcomes are likely to lead to cognitions of universal helplessness and hopelessness (Abramson et al., 1989); individuals who believe they were responsible for the negative events are more likely to develop cognitions of personal helplessness and low self-esteem (Abramson, Seligman, & Teasdale, 1978). Thus, stressful life experiences can provide the foundation for the formulation of negative beliefs.

The results of the tests of the cognitive diathesis-stress model have been inconsistent. The various studies have differed with regard to the duration between the stressor and the assessment of depressive symptoms, the type of stressor and their measurement of attributions (e.g., general attributional style, specific attributions).

Results of few studies that have examined negative cognition as a diathesis interacting with stressors in children and adolescents have also been mixed. Hammen (1988) reported that in children self-concept and stressors each significantly predicted depressive symptoms, whereas their interaction did not. Hammen, Adrian, and Hiroto (1988) failed to find that attributional style interacted with stressors to predict later depressive diagnoses in a sample of offspring of medically ill, depressed, and normal mothers. In a longitudinal study of children in the third through eighth grades in which depressive symptoms and life stressors were assessed every 6 months, Nolen-Hoeksema, Girgus, & Seligman (1992) and Nolen-Hoeksema et al. (1986) found that the interaction of negative life events and depressogenic explanatory style predicted depressive symptoms at two of nine time points, and more so for older rather than younger children. These interactions of the form that children with a more depressogenic attributional style were at a greater risk for depression when they experienced a negative event than were children without such a cognitive style. Their test of the cognition-stressor interaction was limited, however, by a relatively narrow range of life events and possible problems with multicollinearity. In a cross-sectional study, Cole and Turner (1993) reported that attributional style and negative cognitive errors mediated the relation between stressful events and depressive
symptoms in children, although they found little evidence that the interaction of cognitions and stressors predicted depressive symptoms.

The idea that problematic parent–child interactions produce vulnerability to depression is a theme that occurs across cognitive models. Rudolph, Kurlakowsky, and Conley (2001) showed in a longitudinal study that both family dimensions and stress were associated with helplessness and deficits in perceptions of control. To the extent that a sense of helplessness and perceptions of control contribute to vulnerability to depression, these results reinforced the idea that parenting is important in producing cognitive vulnerability, but also suggest that other factors such as stress may also play a role. Moreover, these data hint that individuals other than parents can play a role in creating vulnerability. In fact, research by Cole, Jacquez, and Maschman (2001) and Williams, Connolly, and Segal (2001) indicate that people outside the family (e.g., teachers and romantic partners) may play some role in generating cognitive vulnerability in children and adolescents.

Echoing these findings, Ingram, Overbey, and Fortier (2001) found that recollections of maternal care were linked to deficits in positive cognition and excesses in negative cognition. Cognition of this type has been specified by depression theories to represent an important causal agent in the onset and maintenance of the disorder. Garber and Flynn (2001) assessed perceptions of self-worth, attributional style, and hopelessness in the children of depressed mothers, and found that maternal depression was related to all three of these categories of negative cognitions. They also found that low maternal care was associated with perceptions of limited child self-worth. Children’s attributional style was also found to mirror maternal attributions for child-related events; specifically, children made attributions for child-related events that were similar to the attributions made by their mothers.

Within the context of having a depressed mother, Goodman and Gotlib (1999) suggest a variety of factors that may be associated with the development of negative cognitive structures (e.g., modeling negative cognition and interactions, and exposure to depressive behaviors and affect). Likewise, Cole et al. (2001) have pointed to the “looking glass” hypothesis to conceptualize the development of
depressive cognitive structures. Suggested by Cooley (1902) and Meade (1934), the looking glass hypothesis proposes that views of oneself are constructed from the perceptions of others. Hence, as children develop self-schemas, a lack of care or rejection by important attachment figures (i.e., caregivers) appear likely to generate personal themes of derogation and unworthiness that become deeply encoded in these self-structures. Also encoded are concepts linked to the experience of disrupted attachment such as representations and memories about the behavior of significant others. In the terminology of attachment theory, these experiences should not only determine the working models (or schemas) of oneself, but should also determine how people are generally inclined to see others, as well as expectations for how to interact with others.

Other studies that have found less support for the cognitive diathesis-stress model include a study by Follette and Jacobson (1987) reported that specific attributions about an exam interacted with the stressor in the expected direction, but general attributional style did not predict depressive symptoms. In another replication study, Hunsley (1989) found that negative attributional style interacted with subjective stress to predict changes in depressed affect immediately after an exam, although the interaction did not predict affect after grades were received.


On similar lines, Southall and Roberts (submitted) tested Metalsky, Joiner, Hardin, and Abramson’s (1993) integrated model of attributional style, self-esteem, and life stress in vulnerability to depressive symptoms among adolescents. Results revealed that among initially asymptomatic participants, the triple interaction between attributional style, self-esteem, and life stress predicted changes in depressive symptoms, initially asymptomatic participants who had a negative attributional style,
low self-esteem, and high life stress showed the greatest increase in depressive symptoms.

In another study, Joiner (2000) suggested that in the presence but not the absence of negative life events, negative attributional style relates to the onset and exacerbation of depressive (not other) symptoms. Moreover, negative attributional style relates to depression onset or exacerbation specifically via changes in hopelessness (not other mediators). Abela (2001) also indicated that a depressogenic attributional style and depressogenic inferential style about consequences interacted with negative events to predict increases in depressive symptoms in seventh-grade children but not in third-grade children.

Another line of evidence comes from a study by Abela and Alessandro (2002) found that consistent with the diathesis-stress component of Beck’s theory, dysfunctional attitudes predicted increases in depressed mood immediately following a negative outcome. In addition, consistent with the causal mediation component of the theory, in negative outcome students, the relationship between dysfunctional attitudes and increases in depressed mood was mediated by negative views of the future.

On similar lines, Kwon and Laurenceau (2002) revealed that attributional style moderated the impact of daily hassles on depressive symptoms. Negative attributional style predicted greater depressive symptom reactivity in response to stress. The results also indicated that attributional style was not predictive of the number of subsequent daily hassles. Thus, the data were supportive of a differential reactivity to stress model, but not supportive of a differential exposure to stress model.

It is evident from a study by Kraaij et al. (2003) that adolescents with a poor parental bonding relationship seemed to be more vulnerable to depressive symptoms in the face of adverse life events than adolescents with more optimal bonding styles. The use of self-blame, rumination, catastrophizing, positive refocusing and positive reappraisal appeared to be related to depressive symptoms. In addition, self-blame,
rumination, and positive reappraisal seemed to have a moderating role in the relationship between the amount of stress experienced and depressive symptoms.

In a recent study, Kennard et al. (2006) found that self-efficacy, cognitive errors, and hopelessness were associated with concurrent depressive symptoms at baseline. In addition, cognitive errors at baseline, controlling for baseline depressive symptoms and the occurrence of stressful events, predicted depressive symptoms at follow-up.

An important challenge for future researchers is to identify the processes by which cognitions in the presence of stressors produce such enduring emotional distress. That is, how do negative cognitions about the cause of events or about one’s competence make individuals vulnerable to depression once a stressor occurs and, most important, why does the distress continue? Do individuals with a negative cognitive style engage in different coping responses when negative events occur? For example, are they more likely to ruminate about the negative meaning of these events concerning the self and their future, thereby maintaining their depressive symptoms (Nolen-Hoeksema, 1991; Abramson et al., 1989)? Future tests of the cognitive-stress model need to assess individuals’ cognitive vulnerabilities and coping repertoires at multiple points both before and after the negative event occurs.

5. INTERACTION BETWEEN STRESS AND GENDER IN PREDISPOSING ADOLESCENT TOWARDS DEPRESSION

Adolescence is not an easy developmental period for many teenagers. When children enter adolescence, they are suddenly exposed to a variety of new experiences and challenges. Some of these experiences and challenges originate from within, such as dealing with pubertal changes, while others are associated with external forces such as peer pressure (Cummings, Greene, & Karraker, 1991). Consequently, how adolescents cope with these challenges and the impact this has on their adjustment has been the impetus for a large amount of research.
Research has indicated that stress is a contributory factor in a variety of physical and mental health problems (Brantley & Jones, 1993; Newberry, Baldwin, Madden, & Gerstenberger, 1987; Holmes & Masuda, 1974). The notion that life events contribute significantly to the development of physical and psychological disorders has spawned a diagnostic category called "psychological factors affecting physical conditions" in the Diagnostic and Statistical Manual of Mental Disorders (Third Edition, Revised).

One period of life characterized by rapid physiological, social, and cognitive changes that may generate stress is adolescence. According to Nielsen (1987), the adolescent is faced with numerous demands (e.g., family, school, peer groups), and "miscoping" responses to these demands (e.g., truancy, drug abuse, isolation) can intensify the stressful transition to adulthood. Although most adolescents are free of serious health problems, studies have consistently shown a positive correlation between the accumulation of recent negative life events and reported psychological and physical health problems (see review by Johnson, 1986). For example, Greene, Walker, Hickson, and Thompson (1985) found that life stress was positively associated with recurrent pain and behavioral problems among adolescents seen at an outpatient clinic.

Besides the developmental stresses there are other stressful undesirable life events which also place new demands and effect a child’s adjustment (Goodyer et al., 1985). The main attributes of stressful life events that affect children’s adjustment are their (a) undesirability (Sarason et al., 1978) (b) recency (Sandler & Block, 1979) and (c) frequency of occurrence (Myers et al., 1974). Moreover the effect of a chronic adversity is much different from an impact of a specific isolated event (Rutter, 1981). Homes and Rahe (1967) assumed that the stressful life events have an additive effect on the psychological well being of an individual.

Recent advances in the psychosocial understanding of depression have elaborated an already complex aetiological model. Although recent stressors have for sometime been recognized predictors of onset, new insights about the origins of these stressors have overlapped with other new work on depression and childhood adversity
to identify a group who 'produce' their own severe life events in response to early negative experience. And recent studies have traced the well-known gender differences in depressive prevalence to differences both in gender role involvement with the provoking life events and in styles of support-seeking/support giving (Harris, 2001).

The results of the present study with respect to gender differences as well as the role of stressful life events in depression demonstrated that females who were high on stress scored significantly higher on depression than males high on stress. But the gender differences were largely eliminated in case of groups low on stress. Clearly the most important variable in reducing the gender differences was stress. Pending replication, these results suggest that if mid-adolescent females felt lower stress they would not experience so much depression different from mid-adolescent males.

Another important finding of this investigation is the non-significant main effect of Gender i.e., the independent role of gender could not contribute as a risk factor for adolescent depression seems to have been confounded by the influence of stress as a moderator and further the interaction between stress and gender to predispose the adolescents towards depression was moderated by the influence of negative cognition which seems to have emerged as a most crucial variable for developing depression among our sample of mid-adolescents.

Many studies have shown that everyday stressors are strongly associated with adolescents' levels of maladjustment and this general relationship was obtained in the present investigation. Further, the prediction that this association would be stronger for female adolescents was also supported in the present study. The present data suggest that girls during the critical middle adolescence period manifest a more extreme reaction to potentially stressful events that occur, i.e., they rate a given stressful event as more intensely problematic than males. In addition to biological changes associated with puberty, adolescents undergo equally dramatic transitions in social roles, including major changes in school environments as well as parental, peer and romantic/sexual relationships. Many of these results are congruent with past
research. Wenz-Gross et al. (1997) and Tubman and Windle (1995) also found that females reported more everyday stressful events and that these events constituted more of a problem in comparison to males. Several other studies (e.g., Nolen-Hoeksema, 1998; Nazroo, Edwards, & Brown, 1997) have shown that girls and women react more strongly to stressful events, however there is no clear research evidence why this gender difference occurs. Kendler, Thorton, and Prescott (2001) suggest that particular events might have a differential impact on males and females, however they found no convincing evidence in their study that females are generally more reactive than males. Our study found evidence in this dataset that certain problems are perceived as impacting differentially depending on gender. The large majority of gender differences on stressor items found here showed an imbalance toward females. It is possible that the stress measure underrepresented events important to males, or it may be that the gender difference in stressor intensity caused this imbalance. Further research will be needed to disentangle this conundrum.

In the present study, adolescent males and females did differ with respect to the experience of stress with females reporting higher scores on depression in response to life events perceived as highly stressful. However, adolescent females did report a greater number of symptoms based on the data, it is not clear whether differences in symptomatology can be attributed to sex role orientation or to differential awareness of one's body. Previous studies (e.g., Cohen, Brownell & Felix, 1990) have shown that preadolescent and adolescent females tend to be more aware of physical symptoms than are male adolescents. Recent data suggests that pubertal maturation "sensitizes" females to the depressogenic effects of negative life events. Future studies should consider sex role orientation and self-awareness as possible moderators of the stress-illness relationship among adolescents.

One limitation of the current study could be the use of self-reports. It has been suggested that self-reports are not always the most reliable or valid method of data collection (Shaffer, 2002). Pipher (1996) has noted that adolescent girls tend to report events and occurrences dramatically and emotionally. On the other hand, boys may be inhibited by social desirability bias and gender stereotypes, and may not
disclose their true feelings (Shaffer, 2002). This problem could be overcome by using an alternative method to collect data, such as interviews or focus groups.

One plausible explanation often given as to why females manifest increased symptomatology associated with stress involves socialization (Reskin & Coverman, 1985; Kessler & McLeod, 1984). Specifically, sex roles differentially expose the sexes to stressful events which may adversely affect well-being. For example, Frank, McLaughlin, and Crusco (1984) examined the effect of sex role orientation on symptom distress among college students. They found that masculine women reported less psychological distress, while feminine men reported greater psychological distress. Therefore it is possible that due to gender role stereotyping and socialization, children respond differently to the stressful events that they face in early adolescence. This is implied by Windle (1992) who concluded that boys are socialized towards more independent and adventurous behaviours, whereas girls are socialized towards more interpersonal behaviours. This is also consistent with Rudolph and Hammen's (1999) findings that particular stressors may have a greater impact on females (dependent interpersonal stressors) while others may have more of an impact on males (non-interpersonal stressors). Therefore it appears possible that gender role socialization may influence the reactions to specific stressors that males and females experience. Moreover, this theory fits with the "cost of caring" hypothesis (Turner & Avison, 1989; Kessler & McLeod, 1984) which posits that women are more affected by events affecting others because they develop more intimate (or affiliative) interpersonal relationships. This would be a useful variable to examine in future studies.

To date, there has been limited research on individual differences (e.g., race and gender) that may influence the experience of stress and subsequent illness among adolescents. With regard to gender, research on adults has shown that men and women tend not to differ on the number of undesirable life events experienced. However, women tend to be more vulnerable when such events occur to someone in their "social network" (Kessler & McLeod, 1984). More specifically, women appear to be more sensitive to the quality of interpersonal relationships than are men. For example, McIntosh, Keywell, Reifman, and Ellsworth (1994) reported greater
stress due to sexism, lack of free time, and lack of time spent with spouse among 
female law students as compared with their male counterparts. In addition, the female students displayed more depression and physical symptoms at the end of the semester. Similarly, adolescent females have been found to be more reactive to stressful life events affecting other individuals than are their male counterparts (Gore, Aseltine, & Colten, 1993).

Research on adolescents has found that girls are less well adjusted than boys and that this gender difference varies by age (Cryanowski, Frank, Young, & Shear, 2000; Poikolainen, Kanerra, & Lonnqvist, 1995; Crystal et al., 1994; Nolen-Hoeksema & Girgus, 1994). Gender differences concerning various psychosocial risk factors have been reported for adolescents (frequently investigated risk factors include the following: dysfunctional family interactions; alcohol and substance abuse; unprotected sexual activity; unhealthy lifestyle; such as dysfunctional eating habits and lack of exercise; and truancy). The literature indicates that girls generally engage in problem behaviors less often that do boys and are likely to terminate such behaviors sooner. Eggert et al. (1994) noted that suicidal girls experience a greater frequency of depression and stressful events, while boys display more problems with anger and greater involvement in high risk behaviors.

These findings have led researchers to suggest that boys and girls at different ages in adolescence may either face different challenges or that they may perceive them differently. A major question here is whether gender differences in the number or type of stressful events that occur in adolescents' lives can be found. A number of recent studies (e.g., Rudolph & Hammen, 1999; Wenz-Gross, Siperstein, Untch, & Widaman, 1997; Tubman & Windle, 1995) have found gender and age differences in Stressor occurrence. In short, they find female adolescents, particularly those in middle adolescence, report higher levels of stressful events. However, gender differences have not been consistently found in Stressor frequency. Ge et al. (1994) conducted a longitudinal study over four years on early adolescents (aged from 9 to 12 years in the first year). They examined the longitudinal patterns of uncontrollable stressful life events and symptoms of depression over this time period, and found that girls and boys experienced approximately equal numbers of Stressors. Nonetheless,
when they examined the relationship between Stressors and depressive symptoms they did find age differences. After age 13, girls' levels of depressive symptoms increased. Furthermore, the change in depressive symptoms was significantly related to changes in the number of stressful events experienced. Hence, the relationship between Stressor frequency and depression appeared to strengthen as girls matured, whereas it decreased for males. This led Ge et al. to conclude that girls are more vulnerable to Stressors than boys. These findings, viewed in relation to Lazarus and Folkman's (1984) Transactional Stress Model, suggest that girls may not necessarily experience more Stressors, instead, they may appraise these events as more threatening or may feel the effect of Stressors more intensely.

Few studies which contradict the present findings suggesting lack of gender difference in perceived stress, include a study by Wagner and Compas (1990) found that although girls reported more negative life events than did boys, there was no significant difference in the strength of the stress-illness relationship as a function of gender. In other words, they reported no evidence of one gender being at greater risk than the other for developing psychological symptoms in response to life stress. The results of the present investigation contradict their findings.

On similar lines, Baldwin et al. (1997) assessed the stress-illness relationship, specifically with respect to race and gender, among adolescents. No significant race or gender differences in reported stress and anxiety levels were found. However, African-American adolescents reported fewer physical symptoms than did their Euro-American counterparts. Further, female adolescents reported significantly more physical symptoms than did males. Overall, life event stress and anxiety were positively related to reported symptomatology. As for gender, adolescent females tend to show greater reactivity to stressful events involving individuals within their social networks as compared with males. However, both groups appear to be similar with regard to negative life events that happen to themselves. No significant gender differences were found here for either measurement of stress - stimulus (number of life events experienced) or cognitive orientations (perceived stress). Therefore, the findings seem to suggest that the general experience of stress during adolescence is consistent across gender.
Fairly extensive literature is available that support our obtained findings, such as Angold et al. (1997) found that the stress – depression relationship became stronger for females as they matured physically it actually decreased for developing males. Hence, by late puberty boys no longer showed a significant correlation between life stress and depressive symptoms, in contrast to the significant and strong relationship displayed by girls in late puberty.

In another study, Silberg et al. (1999) showed a significant effect of life events, with a stronger effect in the pubertal girls. For boys, depression appears to be largely attributable to the occurrence of negative life events, since any age-related increase in male depression is evidenced only among those who have experienced a life event in the past year. The results indicated a significant effect of the genes only in the adolescent girls that account for approximately 28% to 30% of the overall variance in the depression.

On similar lines, Rudolph and Hammen (1999) found that adolescent girls experienced the highest levels of interpersonal stress, especially stress and conflict that they generated within parent-child and peer relationships. Pre-adolescent girls experienced the highest levels of independent stress and conflict in the family context. Adolescent boys experienced the highest levels of non interpersonal stress associated with self-generated events. Girls demonstrated particular vulnerability to depressive responses to dependent stress.

Another line of evidence comes from Takakura and Sakihara (2001) revealed that female students were likely to report more depressive symptoms, life stresses, and low self esteem and poor health practices. Also, Schraedley et al. (1999) found that depressive symptoms were found to differ by gender, age, socioeconomic status, and ethnicity. Importantly, stress and social support appear to be particularly salient aspects of depression among girls. Both physical and sexual abuse was strongly linked with depression for both boys and girls, with sexual abuse having a stronger impact among boys.

Cyranowski et al. (2000) found that among depressed females, 71% reported 1 or more severe, negative life events during the 6 months prior to onset, while only
35% of non depressed females and 40% of non depressed males reported such events during a matched time period consistent with the above findings, only 14% of depressed males reported 1 or more negative life events during 6-month preonset period. They argued that a continuum exists across individuals preferred level of interpersonal affiliation and that both biological and social forces combine to place males and females at subtly different places along this continuum.

Stroud et al. (2002) found that men showed significantly greater cortisol responses to the achievement challenges (involved a mathematical and a verbal challenge) but, women showed greater cortisol responses to the social rejection challenges (involving two social interaction challenges). Thus, women appear more physiologically reactive to social rejection challenges, but men react more to achievement challenges.

Patton et al. (2003) found that pre-existing depressive and anxiety symptoms predicted later events, increasing three fold the risks for neutral/ positive and negative events in females and increased seven-fold the risk of negative events in males. Life events in turn predicted the onset of depressive disorder independently of previous symptoms. Personal threat and loss were associated with disorder in females but no males.

Erginoz et al. (2004) suggest that prevalence of physical symptoms of stress such as headache, abdominal pain and backache; feeling low, irritable, nervous and dizzy; medication use for headache, abdominal pain and nervousness were higher in females than in males.

Ratcliffe (2004) found that girls and older adolescents report greater frequencies and intensities of stressors and worse adjustment than boys and younger adolescents. Girls reported significantly more stressful events from age 12 to 17 than boys, and girls showed higher levels of internalizing from age 13. They also found that girls reported higher perceived Stressor intensity than boys. Results showed that female adolescents, particularly in the critical middle adolescent period, reported more stressors, higher levels of psychological dysfunction, and reveal stronger relationships between stressors and internalizing symptoms than males. More
attention needs to be devoted to determining why girls in middle adolescence report more stressors, rate those stressors as more intensely stressful, and report higher internalizing symptoms than males.

6. ROLE OF SOCIAL SUPPORT IN MODERATING THE INFLUENCE OF NEGATIVE COGNITION, GENDER AND STRESS IN ADOLESCENT DEPRESSION

The four sets of insights have emerged from the literature on social ties and mental health outcomes (defined as stress reactions, psychological well-being, and psychological distress, including depressive symptoms and anxiety). First, the pathways by which social networks and social supports influence mental health can be described by two alternative (although not mutually exclusive) causal models—the main effect model and the stress-buffering model. Second, the protective effects of social ties on mental health are not uniform across groups in society. Gender differences in support derived from social network participation may partly account for the higher prevalence of psychological distress among women compared to men. Social connections may paradoxically increase levels of mental illness symptoms among women with low resources, especially if such connections entail role strain associated with obligations to provide social support to others. Third, egocentric networks are nested within a broader structure of social relationships. The notion of social capital embraces the embeddedness of individual social ties within the broader social structure. Fourth, despite some successes reported in social support interventions to enhance mental health, further work is needed to deepen our understanding of the design, timing, and dose of interventions that work, as well as the characteristics of individuals who benefit the most (Kawachi and Berkman, 2001).

There has been a considerable amount of research showing that support from family, friends, and community networks is related to better physical health and lower levels of psychological symptomatology (e.g., King, Reis, Porter, & Norsen, 1993; House, Landis, & Umberson, 1988; Cohen & Syme, 1985). Protective effects of social support among adults have been found both for structural measures such as
total network size and for functional measures such as availability of emotional and instrumental support (Wills, 1991; Cohen & Wills, 1985). Protective effects also have been noted for adolescents (Wills, Mariani, & Filer, 1996; Sandler, Miller, Short, & Wolchik, 1989). In the Indian context too, social support may be assumed to be a good predictor of psychological well-being as reported by Nathawat & Rathore (1996), Rathore et al. (1994) and Nagpal and Chadha (1991).

Two essential constructs of social support are perceived and received social support which are weakly inter-related (Sarason et al., 1987, 1992). Received support refers to naturally occurring helping behaviors that are being provided, whereas perceived support refers to the belief that such helping behaviors would be provided when needed. Considering how parallel these aspects of support appear to be, it is surprising that they produce strikingly different effects as variables influencing the stress-to-health process. Over the years, research has proclaimed the superiority of perceived social support over received support, because it more consistently promotes psychological health and protects it in times of stress (Cassel, 1976; Cobb, 1976). Perceived social support might be more clearly related to mental health as the type of support that an individual’s needs may not match the specific needs, when under stress and the individual social environment at that time may not be able to protect the person from developing psychopathological symptoms. As Pierce, Sarason, and Sarason (1991) have noted: “A person can believe that others, in general, are likely to be supportive despite the fact that a particular friend is not especially helpful, or even that no one is currently available from whom to get social support: (p.1028). The problem with received support is that, its levels are associated with severity of stressors and psychological reactions, its merit depends on who provides it and who receives it, its receipt may be threatening to self-esteem, its type may not be appropriate, or its delivery may be inept. Even researchers who have conceptualized perceived social support as a relatively stable and elaborate relationship schema (or personality variable) recognize that part of the variance in a person’s global sense of being supported in times of need (Sarason, Sarason & Pierce, 1992). Sarason et al. (1986) found that perceptions of global support displayed traitlike levels of temporal stability, with high test-retest correlations over a 3-year period. Global support was
more strongly correlated with cognitive personality variables than it was with the actual presence of supportive behaviors in the social environment (Lakey & Cassady, 1990).

Most research in this area has shown that perceived support enhances physical and mental health or adjustment (Kessler, Kendler, Heath, Neale, & Eaves, 1992; Hobfoll, Shoham, & Ritter, 1991; Cowen, Pedro-Carroll, & Alpert-Gillis, 1990). Other studies have shown no effect (Weir & Okun, 1989; Blake & Vandiver, 1988). No research has shown a negative effect for perceived support. A small number of studies have documented links between perceived social support and performance on academic or academic-like tasks. Subjects high in social support reported less cognitive interference, concentrated more on performing the task, and reported fewer interfering thoughts and worries during the task (Sarason, Sarason, Keefe, Hayes, & Shearin, 1986). Among students who reported a large number of peer-related stressful events (and presumably low perceived peer support), high intellectual ability frequently was not translated into good grades (Barnes, Potter, & Fiedler, 1983).

Gaps between needed and perceived support (Power et al., 1988) and gaps between needed and actual support (Brown et al., 1987) have been shown to have negative effects on adjustment. Thus, a need for support or a gap between certain dimensions of support may have negative effects on physical and mental health, and perceived support is likely to have a positive effect. The effect of actual support has not been determined.

Previous authors (e.g., Sarason, Shearin, Pierce, & Sarason, 1987) have found that perceived social support can affect the emotional well-being of an individual. Consequently, the effective assessment of social support is a key issue in both research and clinical practice. Until recently, inadequate measures of affiliation need and relationship closeness hindered investigations into the social development of adolescents. For example, assumptions about gender differences (Gilligan, 1982) and age-related changes in affiliation need and relationship closeness have remained virtually untested.
Personality traits may be an important determinant of social support impacting either the perception of social support or the actual creation of the social environment (Andrews & Brown, 1988; Alloway & Bebbington, 1987; Brown et al., 1986). Indeed, Sarason et al. (1986) claim that “an individual’s level of social support is a personality variable in itself”. Furthermore, social support is more of a trait rather than a state variable as it is moderately stable over time (Sarason et al., 1986) and over changing environments (Furukawa & Shibayama, 1997). However, Andrews et al. suggested that social support and the personality measure of low self-esteem may be interrelated in a complicated way, across time and may in turn influence the risk to subsequent depression (Andrews & Brown, 1988).

Three bodies of theory are relevant for predicting how functional support is related to adolescent problem behavior. Stress-coping theory predicts that high parental support will be related to more adaptive coping, better competence, and fewer negative life events and that these will be mediators of the effect of support (Wills & Filer, 1996; Thoits, 1986; Wills, 1985b). The deviancy model predicts that high parental support will be related to less deviance-prone attitudes (Jessor & Jessor, 1977). Affiliation models predict that high parental support will be related to less affiliation with deviant peers, either as a direct effect or as an indirect effect, and that peer affiliations will be a proximal factor for adolescent behavior (Patterson, DeBaryshe, & Ramsey, 1989).

It has become increasingly evident that depressive symptomatology in adolescents is related to the quality of their family relationships. The most widely reported finding in this regard is that depression is inversely related to the level of support, attachment, and approval adolescents experience in the family environment. Developmental theory has proposed that parents’ appropriate responsiveness would increase the effectiveness of socialization processes and enable the child to better develop the ability to self-regulate during times of emotional distress (Rothbart, Derryberry, & Posner, 1994). A close parent-child relationship thus may enable an individual to enter adolescence with better ability to establish supportive relationships with persons outside the family, such as teachers or peers (cf. Wills, Mariani, & Filer, 1996; Rothbart & Ahadi, 1994). These aspects of coping skills may have an
important effect for contributing to resilience in adolescence (Masten, 1994). Further, studies have suggested that family relationships directly impact peer relationships; specifically, problems in family relationships may increase the relative importance of peer relationships (Shulman, Seiffge-Krenke, Levy-Shiff, & Fabian, 1995). In addition, adolescent relationships with teachers also are important, although their importance seems to decrease as adolescence progresses (Goodenow, 1993).

A current and contentious issue in the literature considering the psychological health of adolescents is the extent of influence of the parental relationship and other interpersonal relationships (Wilkinson, 2004). Historically, there are 2 main conceptualizations of the link between family and peer relationships: Compensatory/competition models and Continuity/cognitive models (Cooper and Cooper, 1992; Cooper and Ayers-Lopez, 1985).

Compensatory/competition models typically argue that adolescents seek support in their peer environment in order to satisfy unmet needs in the parental/family environment. Adolescence is seen as a developmental phase where parental relationships become less salient or even inhibitory as the individuals orient themselves to the world of their friends and peers (Coleman, 1961; Blos, 1979). Relationships with parents and with peers are seen as being in tension and representing the “two worlds of childhood”. From this perspective, adolescence is a transitional period when the targets of attachment behavior become oriented more toward peers and intimate friends than towards parents (Cooper et al., 1998).

Continuity/cognitive models, on the other hand, argue that the form and quality of relationships that develop with friends and peers is an extension of the form and quality of relationship that has developed within the family. Rather than being in competition, satisfying relationships in both “worlds” are seen as interrelated and complementary. Over time this “continuity” approach has come to dominate the literature, particularly invoking of attachment theory (Bowlby, 1969, 1997).

Though there has been a considerable amount of research showing that support from family, friends, and community networks is related to better physical health and lower levels of psychological symptomatology, the most significant and
unexpected finding in this study documented the detrimental effects of social support and which is not consonant with Hypothesis V. The results revealed that social support failed to moderate the relationship between negative cognition, stress and gender towards developing depression among the sample of mid-adolescents. Thus, Hypothesis V stands rejected. This finding needs further exploration and replication to be generalization purposes. It is difficult to draw definite conclusion concerning the reasons for the lack of buffer/protective effects of social support as a variable on the significant interaction between the three tested vulnerability or risk factors i.e., negative cognition, stress and gender in depression among this mid-adolescence developmental stage and further probe is required into this issue. The theoretical perspectives and plausible explanations outlined here can help explain the paradox that is puzzling from a naïve perspective on social support and throws a surprising light on some of its implicitly assumed characteristics in accordance with the findings found in the present study regarding the lack of buffer or moderating influence of social support on mid-adolescent depression. These may be fruitful in developing specific predictions of the effects of different types of social support in different situations and relationships and people’s different personalities.

A plausible explanation for the obtained findings can be attempted in terms of Social Comparison theory. According to Schachter, individuals under stress seek out others for reasons of self-evaluation, to assess the appropriateness of their own reactions. There is also evidence that the presence of comparisons may increase stress reactions in such circumstances. For example, in a study by Glass, Gordon, & Henchy (1970), subjects watched a film depicting an aboriginal puberty rite involving mutilation of the genitals of adolescent boys. In contrast to the theoretical expectations, it was found that the presence of a friend during the film led to a higher skin conductance than seeing the film alone or with strangers present. This finding can be interpreted by assuming that the film evokes an embarrassing type of stress, since it may stimulate repressed motives, such as castration anxiety and homosexuality, and that this stress is augmented by the fact that a friend is present. This suggests that under such conditions social support may have a negative effect.
Another line of support comes from the Social Exchange theory that may have important implications for social support and stress (Burgess & Huston, 1979). In equity theory, the most influential social exchange theory, interpersonal relationships are viewed as consisting of an exchange of benefits governed by a norm of equity. In other words, the members in an exchange relation assume that a benefit is given with the expectation of receiving a benefit in return, and the very receipt of it incurs a debt or an obligation to return a similar or at least a comparable benefit. It is predicted that any disturbance of this expected reciprocity, either in the form of not being able to return benefits or not receiving benefits in return from others, will lead to negative affective reactions (Walster, Walster & Berscheid, 1978). Indeed, experimental research on the recipients' reactions to help suggests that helping actions may backfire and trigger negative feelings when people are not able or willing to reciprocate the helping behavior, or when they receive a more favourable rate of outcomes than the person giving help (Hatfield & Sprecher, 1983). Inequity will especially feature when the aid is voluntary and deliberate, and when the person giving help is not supposed to receive any extrinsic gains from helping.

While positive relations between stress and support may indicate that those under stress seek out help more often, in some cases social support does appear to increase the impact that stress has on well-being instead of reducing that effect. For various reasons, this seems quite understandable from a social comparison point of view. First, as indicated above (especially when a stress situation implies strong emotions, embarrassing experiences, or experiences that may evoke social disapproval), affiliation with others may aggravate stress (e.g., Friedman, 1981). Second, social comparison processes may cause stress by changing existing attitudes towards potentially stressful situations. For instance, on the basis of research on group polarization, it has been shown that when people engage in a discussion of potential problems occurring in a shared situation, and there is a predominantly negative view of these problems, they will develop an even more pronounced negative view after the discussion (Hobfoll & London, 1986; Moscovici, 1985). Furthermore, social comparison may have a direct influence upon reactions to specific stressors when other people exhibit particular responses that later become imitated by any
newcomers to the group as they have been led to believe that such behaviour is quite normal in the given situation. Some experimental evidence relating to this issue is now beginning to emerge. Constanza, Derlega & Winstead (1988) examined the effect of various conversational topics among same-sex friends in anticipation of a stressful event (guiding a tarantula spider through a maze). Subjects who had been instructed to talk about their fears, feelings and anxieties experienced more negative affect, and kept the spider at a greater distance than subjects who had been instructed to engage in problem solving conversation.

Nevertheless, while direct reciprocity seems not to be perceived as characteristic of intimate relationships, a large number of studies have shown the importance of a global perception of equity for satisfaction in personal relationships (e.g., Van Yperen & Buunk, 1990). Remarkably, although helping relationships have been analyzed from the perspective of equity theory (Hatfield & Sprecher, 1983), it was not until recently that this theory was applied to the giving and receiving of social support. A few studies have examined reciprocity and equity with respect to social support within ongoing relationships. Rook (1987) suggested that giving more to a relationship than one receives leads to feelings of unfairness and resentment, whereas receiving more than one gives leads to feelings of guilt and shame. Her study of elderly widowed women showed that there was more reciprocity in relationships with friends than with adult children, and that receiving either more or less benefits in exchanges with members of the social network was associated with feelings of loneliness.

One of the puzzling findings in the domain of social support concerns the existence of negative direct as well as buffer effects (Barrera, 1986). For example, in a study of nurses, Kaufman & Beehr (1986) found that all the significant buffer effects turned out to be the opposite of their expectations: the relationship between sources of stress and stress reactions appeared to be higher among individuals who had access to strong social support systems than among individuals who lacked these systems. Winnubst, Marcelissen & Kleber (1982) found that people who had a high responsibility for others at work became more depressed when their colleagues and superiors were more supportive. In a study carried out by Hobfoll & London (1986)
among Israeli women whose loved ones were mobilized in the 1982 Israel-Lebanon war, social support appeared to be related to greater psychological distress. In a study on occupational stress among nearly 2000 employees, Buunk, Janssen & Van Yperen (1989) noted so-called boomerang effects. For example, in some cases social support aggravated the stress reactions or did not affect them at all in work units characterized by a high degree of role conflict, while, at the same time, social support reduced stress reactions in units with a low degree of role conflict. In other words, support seemed to aggravate instead of alleviate stress.

It should be noted that equity theory would predict different effects of social support depending on how support is operationalized. Indeed, social support viewed as social integration or the quality of social relationships implies at least the possibility of reciprocity, whereas a definition of social support in terms of the perceived helpfulness of others or the actual help received from them, implies more an individual in need of help and one or more other(s) willing or not to provide support. Therefore, research is more likely to yield negative effects of social support when support is operationalized in one of the latter two ways than when it is measured in one of the former two ways. Support for this contention can be derived from the study by Buunk & Verhoeven (1991) among police officers, in which it was found that rewarding social interactions on duty were accomplished by less negative emotions at the end of the day, whereas receiving a high level of intimate or instrumental help during the work day was accompanied by more negative affect afterwards.

In addition other factors may also contribute to negative effects of support. These include the undermining of feelings of competence and control (Coates, Renzaglia & Embree, 1983) and threats to self-esteem, such as when help conflicts with values of self-reliance and independence (Fisher, Nadler & Witcher-Alagna, 1982). Furthermore, many probably well-intended support attempts see to fail because people providing support often seem to say the wrong things at the wrong times (e.g., Lehman & Hemphill, 1990). Nevertheless, social comparison and social exchange theory seem to offer an especially fruitful foundation for understanding the negative effects of support.
Intuitively, it is reasonable to assume that some people receive more support than others, due to factors such as the special strains put upon them by the specific nature of their life circumstances, by individual variations in vulnerability to stress, or to a combination of these factors. In context of our sample, since they are 10, 11th & 12th graders, at the threshold of their career and giving board exams, they seem to at the advantage of strong support from their family, similar situation peers & understanding teachers in times of stress. As a consequence, when individuals compare the social support they receive to the social support other people receive from others, they relatively overestimate the degree to which they enjoy support other people. For instance, Affleck & Tennen (1991) found that women with fertility problems believed that they could rely on more social support than other women in the same situation. Brinthaupt, Moreland & Levine (1991) found that freshmen at university expected to receive more benefits and less costs from their prospective membership of several student groups than other students joining the same group. In a large quality of life survey by Campbell, Converse & Rodgers (1976), 38 percent of the respondents claimed that they had more close friends to lean on in times of stress than the average person, while only half that number (19 percent) said they had less than the average number of such friends.

Thus, some people may give more support to others than they receive themselves, while other people may receive more support than they give. Thus, on a group level the average amount of support given and support received should be balanced. However, there is some evidence for an egocentric bias in ‘support bookkeeping’. The existing evidence for an intra-individual give-and-get bias (people believe that they give more support than they get) and for an inter-individual get-and-get-bias (people believe that more support is available to themselves than to others) may seem rather puzzling when social support is studied in isolation. However, it becomes easily understandable when the phenomenon is linked to social comparison processes.

Another plausible explanation could be that the support recipient’s subjective sense of feeling supported may hinge greatly on his or her appraisal of the support provider’s good will and benevolent intent. Because secure and insecure individuals
differ considerably in their general expectations about the availability of close others and their likely responsiveness to need as well as in their expectations about acceptance and rejection, they should be predisposed to differ in the way in which they process information about social support and construe potentially supportive transactions with close others. These biases may be especially likely to occur when the support attempt is somewhat ambiguous, providing greater room for subjective construal. Support attempts may be ambiguous either because support providers are unskilled at providing effective support - because their behavior contains a mixture of helpful and unhelpful responses – or because they misunderstand the type (or amount) of support that is wanted or needed by the support recipient (Dunkel-Schetter, Blasband, Feinstein, & Herbert, 1992; Lehman & Hemphill, 1990).

There is increasing evidence that lack of reciprocity with respect to support does not affect all people to the same degree. In a number of studies, Buunk and his colleagues have shown that the personality of the individuals concerned is crucial in determining the importance of equity and reciprocity for people’s relationship satisfaction (Van Yperen, Buunk & Schaufeli, 1992; Buunk & Van Yperen, 1991). Two traits are considered of particular relevance in this respect: exchange orientation (Milardo & Murstein, 1979), the disposition to be strongly oriented to direct reciprocity, and communal orientation (Clark, Oullette, Powell & Milberg, 1987), the desire to give and receive benefits in response to the needs of, of concern for, others. Applying these concepts on the exchange of social support in an occupational setting, Buunk, Jans, Doosje & Hopstaken (1991) found only among railway employees high in exchange orientation or low in communal orientation was lack of reciprocity related to negative affect. The fact that the personality of the individuals concerned seems to be related to the effects of unreciprocated support may partially explain the inconsistent findings on the effects of support in studies in which individual difference factors have not been taken into account.

Research has suggested that at least under some circumstances, the perception of social support that remains un-utilized is more beneficial than social support that is actually mobilized. There are several possible reasons for this finding. These include the fact that overly intrusive social support may exacerbate stress (Shumaker & Hill,
Efforts to provide support to others may be perceived as controlling and interfering by the recipient (e.g., Lewis & Rook, 1999). The support that a network member provides may be different from that which is needed (e.g., Thoits, 1986), failing to match the needs of the recipient (e.g., Cohen & Wills, 1985; Cohen & McKay, 1984). In addition, Bolger, Zuckerman, and Kessler (2000) found that when people actually drew on specific members of their social support networks for help during stressful times, support seeking often served as an additional cause of distress, because expressing one’s needs to others was esteem reducing, and/or drawing on another person for support was perceived to tax that other person’s resources, such as time and attention.

In a recent study, Plaisier et al. (2007) examined the effect of working conditions and social support on the incidence of depressive and anxiety disorders was examined among working men and women, aged 18 through 65 years with longitudinal data from the Netherlands Mental Health Survey and Incidence Study (NEMESIS). They found that social support did not buffer the unfavorable mental effect of working conditions. Women were more likely to report low levels of decision latitude, whereas men reported higher psychological demands.

Social support has long been known to mute the experience of stress, enhance well-being, reduce the severity of illness, and speed recovery from health disorders when they do occur (Seeman, 1996; Thoits, 1995). To date, however, there has been little consideration of how the patterns of social relationships that are assumed and practiced in a given sociocultural context affect the use and effectiveness of social support. That is, how people decide to solicit and receive support is likely to depend heavily on the nature of the relationships they have with their social networks. Even two equally supportive social networks might differ in the norms that guide interactions and the shared expectations of how a person and the network are connected to each other. Consequently, decisions to seek social support are likely to be affected by norms and expectations (Taylor et al., 2004).

Research in cultural psychology has shown that the norms that govern the nature of relationships differ greatly across cultures. Research has suggested reliable
cultural differences in how people view the self and their relationships that may have implications for whether or not they use social support to cope with stress. Westerners tend to view a person as independent and separate from other people, whereas Asians tend to view a person as fundamentally connected with others (Markus & Kitayam, 1991). Similarly there are compelling reasons to believe that European Americans would be less likely to call on their support networks in times of stress, because in independent cultures, the self is seen as fundamentally separate from others (Markus & Kitayam, 1991); hence, those from independent cultures might perceive that they have a personal responsibility to solve problems individually and not through the assistance of others. This difference might lead to the assumption that coping via social support would be especially common among Asians, because they place emphasis on interconnectedness with their social group but which may not be true (Taylor et al., 2004). Research shows that European Americans are more likely to report needing and receiving social support than are Asians and Asian Americans (Shin, 2002; Hsieh, 2000). Moreover, one study (Liang & Bogat, 1994) found that received social support had negative buffering effect for Asians (i.e., made Asians feel more stressed).

Thus, Asians tend to view a person as primarily a relational entity interdependent with others. In these cultural contexts social relationships, roles, norms, and group solidarity typically are more fundamental to social behavior than an individual’s needs. This interdependent view of the self holds that a person should conform to social norms and respond to group goals by seeking consensus and compromise; as such, personal beliefs and needs are secondary to social norms and relationships (Kim & Markus, 1999; Fiske et al., 1998). In Asian cultural contexts, because emphasis is placed on maintaining harmony within the social group any effort to bring personal problems to the attention of others to enlist their help may risk undermining harmony and/or making inappropriate demands on the group. Thus, a person from an interdependent country may feel that he or she has less to gain personally than he or she can lose socially by calling on others for help. That is, if pursuing the goals of relationships is primary, then a person may prefer not to burden the social network and to solve problems individually instead. Thus, cultural
differences in the relative weight of the self’s goals and goals with respect to relationships may produce cultural differences in whether a person copes with stressors by enlisting the help of the social support network (Markus et al., 1997).

Another interpretation of these results supports a contagion effect for adolescent depressive symptoms and cognitions. Studies examining this contagion hypothesis propose that individuals may be particularly likely to develop a depressogenic attributional style or depressive symptoms through interactions with significant others who exhibit high levels of depressive cognitions or symptoms. Considering that adolescents’ increased orientation towards peer relationships, and heightened susceptibility to peer influence during this developmental period, the potent prospective effects of adolescents’ friends’ psychological characteristics on adolescents’ own functioning are not entirely surprising. A straightforward interpretation of these results would suggest that adolescents’ depressive symptoms and cognitions are directly influenced by the presence of similar affective states among best friends. This is based on the assumption that adolescents’ actively discuss their interpretations of life events and display their emotional states among their peers. Adolescents indeed develop friendships that are characterized by higher levels of emotional disclosure, intimacy, and support than in childhood (Buhrmester & Furman, 1987). Thus, opportunities to discuss negative affective states, cognitions, academic stress and family stressors are available. These relationship characteristics are particularly prominent in reciprocated best friendships and among adolescent girls in particular.

The findings may be best interpreted to suggest that exposure to a close friend who exhibits depressive symptoms is a factor that serves to reinforce or maintain adolescents’ tendencies towards depression. It is not possible to determine from this data whether adolescents’ friends or parents depressive symptoms could causally be associated with adolescents’ own depressive symptoms, or predict the development of attributional styles beyond the effects of other potential predictors (e.g., traumatic events). Nor do these data address whether adolescents might initially select friends who possess similar attributional styles or depressive symptoms (i.e., selection effects). However, findings do support a socialization (i.e., influence) effects between
friends over time that might be especially important to consider as a factor that affects trajectories of depression during this critical developmental interval and may interfere with treatment attempts to reduce adolescents' negative cognitions.

It may be possible that high-risk adolescents may possess negative cognitive structures, and that depressed parents who may transmit these negative cognitive characteristics to their children. However, literature provides evidence that although parents are extremely important, other factors and other interpersonal relations may also contribute to the creation of cognitive vulnerability. For instance, past work has provided evidence for synchrony in the timing of mothers' and childrens' depressive episodes (Hammen, Burge, & Adrian, 1991) as well support for mother's depressive symptoms and attributional styles (Garber & Flynn, 2001; Hammen & Brennan, 2001; Downey & Coyne, 1990). Though, there appears to be little doubt from this present investigation that adolescents at risk for depression have negative self-schemas that, when accessed, are linked to the appearance of self-devaluing and pessimistic thoughts, as well as dysfunctional information processing.

In a study examining possible cognitive vulnerability mechanism in the children of depressed mothers, Taylor and Ingram (1999) found that negative mood enhanced the recall of negative personally relevant stimuli for high-but not low-risk children suggesting the emergence of negative cognitive schemas in these children. These data thus indicate that depressed mothers may transmit negative cognitive characteristics to their children, which might form the basis of negative self-schema that is activated in response to negative mood producing events. In another study, Garber and Flynn (2001) assessed perceptions of self-worth, attributional style, and hopelessness in the children of depressed mothers, and found that maternal depressions was related to all three categories of negative cognitions. Children's attributional style was found to mirror maternal attributions for child related events; specifically children made attributions for child-related events that were similar to the attributions made by their mothers.

Another plausible explanation could be that affiliation with a friend who exhibits depressive symptoms increases the risk of other aversive experiences that can
exacerbate adolescents' own depressive symptoms or cognitions. Affiliation with depressed friends also might increase adolescents' risk of engagement in maladaptive behaviors that often occur in collusion with others (e.g., substance use; school truancy). These potentially mediating variables may explain an indirect effect of peer affiliation that leads to exacerbation of depressive symptoms, higher levels of stress and negative cognitions.

On similar lines, Stevens and Prinstein (2005) found that contagion effects between adolescents' friends depressive symptoms and adolescents' subsequent attributional style were significantly stronger among girls and potential contagion of attributional styles was evident among adolescents in reciprocated friendships. According to Youniss and Smollar (1985), females rely on others for emotional and practical support more often than do males. Females experienced more social support from their mothers than did males. However, paternal support was stronger for males than for females. This finding was lent support by another study by van Beest and Baerveldt (1999). Another line of evidence comes from a study by Meeus (1989) who similarly found that females feel more supported by mothers, males by fathers. In addition, females scored higher on reported support from peers than did males, and more students named females when noting persons to whom they had given support. Females were also more often a schoolmate (38.6%) than was the case for males (32.2%). Friends outside school were more often more important to males (24.5%) than to females (15.2%).