COGNITIVE FACTORS IN DEPRESSION AND EFFICACY OF INTERVENTION IN MANAGING DEPRESSION:
A STUDY AMONG ADOLESCENTS AT RISK OF DEPRESSION

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This is to certify that the thesis entitled "**COGNITIVE FACTORS IN DEPRESSION AND EFFICACY OF INTERVENTION IN MANAGING DEPRESSION: A STUDY AMONG ADOLESCENTS AT RISK OF DEPRESSION**", submitted by **Mr. ANILJOSE P.S.,** to the Department of Psychology, University of Calicut, is a record of bonafide research work carried out by him under my supervision and guidance. The results embodied in the thesis have not been submitted to any other University or Institution for the award of any degree or diploma.

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DECLARATION

I, **ANILJOSE P.S**, do hereby declare that this work reported in the thesis entitled, "**COGNITIVE FACTORS IN DEPRESSION AND EFFICACY OF INTERVENTION IN MANAGING DEPRESSION: A STUDY AMONG ADOLESCENTS AT RISK OF DEPRESSION**" is original and carried out by me in the Department of Psychology, University of Calicut, under the guidance and supervision of **Prof: (Dr.) C.B. Asha.** I further declare that this thesis or any part of this has not been submitted for any degree, diploma, recognition or title in this or any other University or Institution.

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03.12.2007 **ANILJOSE P.S.**

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LIST OF ABBREVIATIONS

ACA	:	Adult Children of Alcoholics.
APA	:	American Psychiatric Association.
AST	:	Adolescent Skill Training.
BMI	:	Body Mass Index.
CBT	:	Cognitive Behavioural Therapy.
CD	:	Conduct Disorder.
DSM	:	Diagnostic and Statistical Manual of Mental Disorders.
ECT	:	Electro Convulsive Therapy.
GABA	:	Gamma Aminobutyric Acid.
HPA	:	Hypothalamine Pitutary Adrenal.
HPG	:	Hypothalamine Pitutary Gonadal.
HPS	:	Hypothalamine Pitutary Somatotropic.
HPT	:	Hypothalamine Pitutary Thyroid.
ICD	:	International Classification of Diseases.
IPT	:	Interpersonal Psychotherapy.
LOC	:	Locus of Control.
LPA	:	Latent Profile Analysis.
MAO	:	Monoamine Oxidase.
MD	:	Major Depression.
MDD	:	Major Depressive Disorder.
MDE	:	Major Depressive Episode.
NIMH	:	National Institute of Mental Health.
TM	:	Transcendental Meditation.
WHO	:	World Health Organization.

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Developmental psychopathology may be different from person to person. There are factors which are culturally determined and may influence development. These could be aspects of temperament, child-rearing practices, nature of development and other stressors which are culture specific as well as the symptoms which are considered pathological in a particular family, subculture or society as a whole.

In the Indian context, child rearing practices, family interactions, peer and school influences, nature of temperament, protective factors and social supports in the environment, social and cultural values, etc are important areas of study and research. The nature of cognitive, language, emotional, social, moral and sex-role development in some core groups such as those who are dependent or insecurely attached, those with attention deficit, those with internalising or externalising problems, and those who are mentally healthy or resilient need to be studied on a longitudinal basis. In a high risk population of children this would be of great value in term of planning of interventions (Kapur, 1995).

Depression during childhood or adolescence has a negative impact on social, academic and family functioning, as well as being associated with an increased risk for recurrence and impairment in social-emotional functioning that extends into adult life. It is not simply a disorder of mood regulation but involves alterations in physiological and cognitive functioning. The study of

depression requires careful attention to developmental issues especially the challenges of adolescence. Depression which first presents during the prepubertal depression is best explained by a model of interaction between genetic and environmental factors (Thapar and Mc Guffin, 1996). More importantly, prepubertal depression represents a strong, but non-specific risk for adult adjustment problems whereas adolescent depression is strongly linked to recurrent depressive episodes during adult life (Harrignton *et al*., 1996). The striking age and gender patterns in depression rates indicate that a developmental theoretical framework is needed to understand factors that may increase vulnerability to depression, with close attention to risk factors for adolescent depression.

THE DEFINITION OF DEPRESSION

The nature and etiology of depression are subject to even more sharply divided opinion. Some authorities contend that depression is primarily a psychogenic disorder; others maintain just as firmly that it is caused by organic factors. A third group supports the concept of two different types of depression: a psychogenic type and an organic type (Butcher, 1992).

The modern text book descriptions of depression symptoms as: disturbed mood (sad, dismayed, futile); self-castigations (the accursed, hatred of the Gods); self-debasing behaviour (wrapped in sac-cloth or dirty rags, he rolls himself, naked in the dirt); wish to die, physical and vegetative

symptoms (agitation, loss of appetite and weight, sleeplessness); and delusions of having committed unpardonable sins.

Depression may be defined in terms of the following attributes.

1) A specific alteration in mood: sadness, loneliness, apathy.
2) A negative self-concept associated with self-reproaches and self-blame.
3) Regressive and self-punitive wishes: desires to escape, hide or die.
4) Vegetative changes: anorexia, insomnia, loss of libido.
5) Change in activity level: retardation or agitation.

The term depression has been used to designate a discrete nosological entity. The term is generally qualified by some adjective to indicate a particular type of form, as for example: reactive depression, agitated depression or psychotic depressive reaction when conceptualised as a specific clinical entity, depression is assumed to have certain consistent attributes in addition to the characteristic signs and symptoms; these attributes include a specifiable type of onset, course, duration and outcome. There is a considerable body of evidence indicating that the clinical entity depression responds to certain drugs and/or Electro Convulsive Therapy (ECT), but there is no consensus as yet regarding its etiology.

HISTORY OF DEPRESSION

People have suffered from depression from the earliest recorded time. Before the birth of Christ the Greek physician Hippocrates known as the

father of medicine, attributed depression to an overabundance of “black bile” in the body. The Greeks called it “Melancholia or black bile” after one of the physiological “HUMORS” that they thought affected mood and controlled emotions. In 1904 Dr. Adolf Meyer an American Psychiatrist and Professor of Psychiatry at Cornell University and Johns Hopkins University concluded that the term “melancholy” gave a stamp of certainty to a vague condition in which there was no positive evidence of disease. He proposed using the term depression to differentiate between “melancholy” (or severe depression) and the more Universal down hearted periods that are part of the human experience. By the 1960s however some of the shortcomings of psychotherapy compared to the efficacy of the newly discovered antidepressants strengthened today’s neurochemical imbalances theory of depression (Horwath, 2004)

MELANCHOLIA

Melancholia is a mental condition characterized by an overriding inability to experience pleasure even in situations that are normally pleasurable. Melancholic individuals describe their depression (usually worse in the morning) as distinct from the sadness or grief they have felt before- even in connection with their depressed mood and loss of pleasure (Bellack and Hersen, 1993). Individuals with melancholia may also experience early awakening, loss of appetite and weight, in appropriate guilt feelings and marked changes of life were suffering a special kind of depressive disorder referred to as involutional melancholia.

ACUTE DEPRESSION

Depression is referred to various terms and has several different subtypes that overlap and are not mutually exclusive. Consequently the term of reference used to refer to or describe a type or subtype can depend on whether a person is talking to a clinician, researcher or other mental health specialist. “Acute” depression is a term that overlaps with clinical, endogenous or Unipolar depression. Acute itself is a term used to describe a condition that quickly develop into a crisis. Thus acute depression seems to come about suddenly and rapidly as opposed to a depression that progress slowly and continues for a long time.

Although the symptoms for some clinical depression are long-lasting enough and sufficiently severe to require treatment, acute depression can be as brief as two weeks or last as long as a year or longer. When it is so short duration, it can clear up spontaneously without treatment. The symptoms develop over a period of four weeks or less. Generally they include such things as pessimism, loss of interest, loss of pleasure, helplessness, hopelessness, self-condemnation and tearfulness. The physical symptoms can include change in appetite, sleep disturbance, agitation, retardation of movement and bodily complaints (Horwath, 2004).

BIPOLAR AFFECTIVE DISORDER

In bipolar disorder also called Manic-Depressive disorder, a patient experiences mood swings of uncontrollable mania, alternating with episodes

of severe depression. According to the American Psychiatric Association the disorder will affect nearly one in 100 people at some point in their lives.

During the manic or high state people may feel well and strong, go without sleep for long periods and plunge into vast, often foolish, undertaking in their personal or business affairs. They have abundant energy and grandiose notions, feel agitated and excited, and believe they are capable of any undertaking (Horwath, 2004). Along with their constant talking, they exhibit an extremely elevated, ecstatic mood, inappropriate degrees of self-confidence, non-stop hyperactivity, increased sexual activity, a decreased need for sleep, heightened irritability and aggressiveness and self-destructive, impulsive behaviour, such as reckless spending.

When they are in a depressive phase they have bouts of inertia and may suffer from any of the symptoms associated with major depressive disorder, as they feel down, dispirited and sad.

UNIPOLAR DISORDER

A type of depression in which a person may be severely depressed and suffer from major depressive disorder but not from manic depressive disorder. It is defined as one depressive episode or a history only of depressive episodes (as opposed to both manic and depressive episodes). A large percentage of people who experience a major depression have only one serious episode in their lifetimes. In other cases, the course of unipolar

disorder may vary and episodes may be separated by long intervals, such as years or they may be closer together (Checkley, 1998). During a down episode victims are dispirited and listless and generally find it difficult to go about their work and other activities. Sometimes unipolar disorder merely drags a person into a state of the blues without interfering with work. It is a term that overlaps with clinical or endogenous depression.

FEATURES OF UNIPOLAR DEPRESSION

Age of Onset

Researchers have documented that the most typical age of onset of major depression in adolescence and young adulthood. (Burke, Riger & Rae, 1990). Young women in particular have enormous liability for depression onset between ages 15 and 19 or by age 25.

There are two important implications. One is that depression is especially likely to affect young people during critical periods of their development, including marriage, child bearing and establishment of careers. Impairment during these important functions might have persisting maladaptive consequences. A second implication is that relatively early onset of depression - or perhaps of any psychological disorder - may portend a relatively worse course of illness, both because of developmental - disruptions and because earlier onset may reflect a more severe form of the disorder.

Episode Length

Two trends are note worthy concerning duration of major depressive episodes. One is that the majority of episodes appear to resolve within six months (including untreated depressions). The second trend however is that a substantial minority of depressions persist for long periods, and may even be chronic.

IMPAIRMENT ASSOCIATED WITH DEPRESSIVE DISORDER

It is hardly surprising that the low mood, loss of interest, decreased energy, sense of futility and low self-esteem associated with depressive disorders would result in dysfunction in important roles such as work, marital and parental adjustment. What is more surprising is the extent of debility, resulting as much or even more self-reported impairment than many serious medical disorders. In the language of illness burden to society due to economic and social disability as well as mortality, the WHO has termed disability in the world and the fourth course of disability in the world and the fourth greatest course of disease burden (expected to more to second most important by the year 2020) Murray and Lopez (1996).

Not surprisingly, studies of the consequences of depression in children and adolescents also indicate significant impairment of functioning. Those with depression show relative difficulties in school performance and conduct and problematic relationships with peers and family members.

COURSE AND CONSEQUENCES OF UNIPOLAR DEPRESSION

Much of what clinicians once believed about depression was that it occurs mostly in middle and older adulthood and rarely in youngsters and that it is commonly expressed as a single episode with full recovery has been found to be untrue.

Who is Affected by Unipolar Depression

Depressive disorders in young children are relatively rare, possibly affecting 2-3% of pre-adolescents and 1% of pre-schoolers. The epidemiological surveys of diagnosis among children have been much more limited in scope than those for adults. The rate of adolescent depression generally indicates much higher rates than in childhood. For instance, the Oregon Adolescent Depression study found that 3% met criteria for current major depression or dysthymia and a total of 20% had a lifetime diagnosis of depressive disorders.

ADOLESCENT DEPRESSION

Today depressive illnesses appear to be occurring more commonly among adolescents. The National Institute of Mental Health (NIMH) report that 8.3% of adolescent experiences depression. With the significant rise in the rate of depression among adolescents had its start in the 1970’s when psychiatric facilities reported that more patients were being diagnosed as depressed and that they were younger than the standard textbook description

of depressed patients as middle aged. This trend very obviously contributes to the dramatic increase in suicide attempts and in death by suicide among adolescents and young adults (Bellack, 1993).

Depressed adolescents can experience feelings of emptiness, anxiety , loneliness, helplessness, guilt, loss of confidence and self-esteem and changes in sleeping and eating habits. In addition they often act out. That is, they try to cover their depression by acting angry, aggressive, running away or becoming delinquent (Verma and Saraswathi, 2002). Manic-depressive disorder in adolescents is often manifested by episodes of impulsivity, irritability and loss of control alternating with periods of withdrawal.

Depression in adolescents can and should be treated, but unfortunately this treatable disorder typically goes unrecognized when it is assumed that such storminess is natural to adolescence (Bellack, 1993). All too often the symptoms are simply chalked up to the normal adjustments of adolescence and as a result depressed young people do not get the help they need. Moreover adolescent people often don’t ask for or get the right help because they fail to recognize the symptoms of depression in themselves or in people they care about.

Since adolescents are so noted for their quickly changing moods and behaviour, it may take careful watching to see differences between a depressive disorder and normal behaviour. The key to recognizing the depressive disorder is that the change in behaviour lasts for weeks or longer.

The people who are having the symptoms of depression for longer than a few weeks or who is doing poorly in school, seem socially withdrawn, uncaring, overly impulsive and no longer interested in activities once enjoyed, should be checked for a possible depressive illness (Verma and Saraswathy, 2002). A trained therapist or counsellor can help a depressed adolescent person learn more positive ways to think about himself or herself, change behaviour cope with problems.

CLINICAL DEPRESSION

The term clinical depression is a general term applied to a depression that lasts for more than a couple of weeks and with symptoms severe and lasting enough to require treatment . In addition to feeling, it can change behaviour, physical health and appearance, academic and job performance and the ability to handle everyday decisions and pressures. It is manifested by more dramatic behavioural changes than normal depression and it is a term that overlaps with major, unipolar or endogenous depression

EXPERIENCE OF DEPRESSION

Depression is a word in such common usage that it is often used interchangeably with upset, disappointed, or some similar term to refer to a negative emotion following a bad experience. Depression may be mood state, lasting only a few moments or hours – occasionally a few days – but in which other elements of the person's functioning are unchanged. It is, in fact,

normal to have mild and brief depressed mood following an important loss or disappointment. Depression as a psychological disorder is more than a temporary, mild mood state. It is a constellation of experiences of mood, physical functioning, quality of thinking and outlook, and behaviours (Horwath, 2004).

The depressed person may feel down or sad, but sadness may often be less apparent than a general lack of interest in activities that were once enjoyed. Changes in mood are accompanied by a gloomy outlook in which the future seems bleak and uninviting, and the person views himself or herself as flawed and inadequate, while circumstances may seem overwhelming, difficult or unrelenting in their deprivation and capacity for disappointment. Because of the negative outlook, the sufferer's motivation and persistence may be impaired. A vicious cycle of negative thoughts and more depressed mood and behaviours may contribute to a prolonged period of depressive suffering.

Mood disorders are psychological disturbances defined by intense emotional experiences of depression or mania (or both). Mood disorders encompass both common place and relatively rare disorders; their features may vary greatly from one individual to another. Some disorders of mood are apparently understandable reactions to life's adversities, while others may seem baffling in their origin and accompanied by psychotic departure from reality. No segment of the population is immune; mood disorders afflict the

young and the old; men and women, and people of any culture (Horwath, 2004). Depressive disorders are so frequent that they have been called the common cold of psychological disorders. Unlike the common cold, however, their consequences might be profoundly distressing and disruptive to the sufferer and his or her family. No matter how frequent and how impairing they may be, mood disorders are often misunderstood, both by society and by the sufferer and those in his or her life, and may be erroneously viewed by others as weaknesses of will or character and features of emotional self control.

DIAGNOSIS OF DEPRESSION

The current diagnostic and statistical manual of mental disorders– fourth edition (DSM IV, American Psychiatric Association (APA, 1994a) and International Classification of Diseases, 10th Revision (ICD10, World Health Organization, 1992) have evolved from various efforts to provide systematic, reliable definitions. There are four key features of diagnosis of depressive disorders; presence of more than depressed or negative mood – requiring a variety of additional syndrome manifestations, duration over a period of week or months to distinguish depression from temporary mood shifts and impairment, indicating that the depression interferes with normal functioning. The fourth feature is critical to distinguishing between unipolar and bipolar mood disorders. There must be information about prior symptomatology sufficient to determine whether the individual has ever

experienced a mania or hypo manic episode. Only if there has never been such an experience could a person receive a diagnosis of unipolar depression. Those with histories of mania are diagnosed with bipolar disorder (Horwath, 2004).

CLASSIFICATION OF CHILDHOOD DEPRESSION

I. Associated with Organic Diseases

A. Part of primary organic disease

Example: Leukaemia

Degenerative diseases

Infectious diseases – juvenile paresis

Metabolic diseases – pituitary disease

Juvenile diabetes, thyroid disease etc.

B. Secondary (reactive) to a physical disease process

II. Deprivation syndrome – the reality based reaction to an impoverished or non-rewarding environment

A. Anaclitic depressions

B. Affectionless character types

III. Syndromes associated with difficulties in individuation

A. Problem of separation individualisation symbiotic psychotic reactions.

B. School phobias with depressive components.

C. Masochistic character structures.

IV. Mid Childhood types

A. Associated with object loss.

B. Failure to meet unattainable ideals.

C. Depressive equivalents (depression with depressive affect).

1) Somatization.

2) Hyperkinessis.

3) Acting out syndromes.

4) Delayed depressive reaction.

a) Mourning at a distance

b) Over idealisation process postponing reaction

c) Denial patterns

5) Eating disturbances (obesity syndromes)

D. Manic-depressive states

E. Affect less character types (generalised anhedonia)

F. Obsessional character (the compensated depressive)

V. Adolescent types

A. Mood liability as a developmental process.

B. Reactive to current loss.

C. Unresolved mourning from current losses.

D. Reaction to earlier losses (traumata).

E. Schizophrenias with prominent affective components.

(Flack and Denghi, 1975)

MAJOR DEPRESSIVE EPISODE AND DYSTHYMIC DISORDER

The two most common unipolar diagnosis are major depressive episode (MDE) and dysthymic disorder to meet diagnostic criteria for MDE, one must be depressed for at least two weeks, experience depressed mood nearly every day, all day or have a lose of interest or pleasure, and at least four of the remaining nine symptoms (covering a range of cognitive, physical and behavioural changes, such as diminished ability to think positively about self or future or to concentrate, thoughts of death, changes in speed and spontaneity of movement). Dysthymic disorders are milder chronic form of depression that includes depressive experiences, lasting for at least two years, accompanied by two or more of six milder depressive symptoms (Checkley, 1998). Both MDE and dysthymic disorder diagnosis required the presence of impaired functioning in the person’s important roles.

NATURE OF DEPRESSION IN CHILDREN AND ADOLESCENTS

Perhaps more than any other disorder in childhood and adolescence depression has presented challenges in conceptualisation and definition. These struggles have been the result of several factors. First, there was resistance to the idea that young people could experience serious depression because psychoanalytic theory held that depression could not occur in childhood or adolescence as a consequence of inadequate development of the super ego. Second, early conceptualisations of depression held that when this problem occurred it was masked by other symptoms or disorders, especially

externalising disorders. Third, when the field finally comes to recognise that depression does occur in young people, the criteria that were applied were downward extension of adult criteria, with only minor exceptions, offering little or no acknowledgement of developmental differences. (Checkley, 1998)

VARIETIES OF DEPRESSION ACCORDING TO DSM III – R

Diagnosis	Main Features
Organic mood disorder, depressed Primary degenerative dementia with depression Multi-infarct dementia with depression Hallucinogen mood disorder, depressed	The person has notably depressed mood, including symptoms associated with major depression, whose primary cause is considered to be interference with normal brain functioning by some organic process. Where the organic process is known (eg: multi-infarct dementia) it is specified in the diagnosis on Axis I or III
Major depression	The person has one or more major depressive episodes in the absence of any manic episode, symptoms include prominent and persistent depressed mood, accompanied by symptoms such as poor appetite, insomnia, psychomotor retardation, decreased sex drive, fatigue, feelings of worthlessness or guilt, inability to concentrate, and thoughts of death or suicide.

Bipolar disorder, depressed	The person experiences a major depressive episode (as in major depression) and has had one or more manic episodes.
Dysthymia	For the past two years, the person has been bothered all or most of the time by a depressed mood, but not of sufficient severity to meet the criteria for major depression
Cyclothymia, depressed	At present or during the past two years, the person has experienced episodes resembling dysthymia but also has had one or more periods of hypomania- characterised by elevated, expensive or irritable mood not of psychotic proportions.
Adjustment disorder with depressed mood	The person reacts with a maladaptive depressed mood to some identifiable stressor occurring within the past three months. “Uncomplicated bereavement” does not qualify. It is assumed the reaction is temporary.

(Carson and Butcher, 1992)

CHARACTERISTICS OF DEPRESSED PERSON

The depressive person is described by Franz Alexander and others as one who has exceptionally high standards and who cannot accept any compromises. He is ego centric and overacts to frustration and denial. His relationship to others is characterised as one of exploitative dependency, in which he control and manipulates others. He is serious, dedicated, and determined to achieve perfection in all things. He feels that he has failed to fulfil his own expectations as well as those of his parents. When he is forced by circumstances to acknowledge some deficiency or failure in his system of values, he feels humiliated by the notion that he has lost status and esteem in the eyes of others. This feeling is accompanied by feelings of hopelessness, despair and depression. It is inevitable that frequent depression will occur ranging from the mild to the several forms. Generally, it is a reaction to the loss or threatened loss of some value that leaves the person feeling powerless and hopeless.

The development of a depressive reaction is therefore potentially present in everyone and is not exclusively related to past experiences. It is intimately related to present hard steps and future expectations. It is accompanied by physiochemical changes in amino acids and Kelosteroids, and by other chemical changes that are reflected indefinable physiological and behavioural responses.

Dr. Metanic Kelien has published that the predisposition to depression is present in all individuals in the inevitable frustration of the infant in relation to mother. She suggests that the infant reacts with anger and feelings of helplessness and guilt. Until the infant is associated of mother's love, these feelings may continue and be enhanced. This is called the depressive position, and in adult depression there is a regression to this period of infantile dependency.

In 1954 Mabel B. Cohen and others discovered that the depressive reaction occurs in response to the patient's inability to live up to his parents and his own expectation of himself. His inability to deal with others as a whole, separate individual perpetuates his tendency to deal with others in extremes as good or bad, black and white and his response to frustration or loss is also in the extremes of depression or mania. They concluded that the depressed person does not suffer genuine feelings that express such feelings as an exploitative technique.

EFFECTS OF DEPRESSION ON OTHERS

A great deal of the social disability of depression is due to two particular aspects of impairment: maladaptive marital relationships and high risk for offspring of depressed parents to develop depression and other disorders. Marital dissatisfaction or divorce among depressed patients are more than among non depressed (Horwath, 2004). It appears that depressed

persons themselves – as well as their sponsors – experience difficulties in the marital relationships.

SEX DIFFERENCES IN DEPRESSION

The gender difference has been noted, with many more women reporting or being treated for depressive disorders than men. The Cross National Collaborative Group found a gender difference in every culture studied and overall, the rate of approximately 2:1 is cited indicating women's prevalence among those with unipolar depressive disorders. A variety of biological and psychological perspectives have been pursued with no final resolution, including hormonal effects and timing of puberty, differential exposure to stressors, gender differences in self esteem, cognition, and coping, societal expectations and access to achievement and many others (Verma and Saraswathy, 2002).

AGE TRENDS IN DEPRESSION

The model of understanding depression concerns evidence that young people especially females experience an increasing rate of depression. It has been suggested that changing and increasing social mobility diminishing supportive resources plus increased stress in the form of heightened expectations and increased competition for careers may have contributed (Verma and Saraswathy, 2002).

THEORETICAL PERSPECTIVES ON DEPRESSION

Most researchers think that depression results from an interaction between a person’s biological and psychological vulnerabilities and the stressful events or difficult ongoing situations in his or her life (Akiskal, 1985).

Biological Perspective

Biological theories assume that the cause of depression lies either in the genes or in some physiological malfunction that may or may not have an inherited base.

Neurotransmitters

Depression is probably the result of a lack of certain chemical neurotransmitters at particular sites in the brain. Neurotransmitters systems, especially the monoamine neurotransmitters have been the most widely studied biological phenomena in depression. The most important monoamine is the catecholamine, neuropinephorine and dopamine and the indolomine serotonin. Other neurotransmitter that have been thought to play a role in depression include gamma – aminobutyric acid (GABA), which seems to inhibit neurotransmitter action and widely found in the central nervous system, and acetylcholine, which is found in both the central and the peripheral nervous system and can be either an inhibitor or a stimulator of transmission between neurons.

The billions of neurons in the brain interact with others by electrochemical means. When the neuron is stimulated, it releases neurotransmitters – chemical substances from vesicles, or storage areas, in the presynaptic neuron. Recent research on antidepressant drugs suggests that serotonin may play a central role in depression. The chemical name for serotonin is 5-hydroxytryptamine. The serotonin then moves into the synaptic cleft. Some of it find its way to specialized acceptors in the postsynaptic neuron. The post synaptic or receiving neuron then alters its electrical and chemical activity. However, serotonin can also be removed from the synapse ie. reuptake mechanisms in the presynaptic neuron take the serotonin back into the presynaptic neuron where it is reused or chemically returned into an earlier stage of the process by which it was synthesised in the neuron. Another way serotonin is deactivated in by the enzyme monoamine oxidase (MAO) that normally causes serotonin to change chemically. Both MAO and the reuptake mechanisms decrease the amount of serotonin available at the synapse.

Psychodynamic Perspective

The psychological study of depression was begun by Sigmund Freud and to him depression is a complex reaction to loss. Depression, or melancholy, as Freud called it was grief gone haywire – excessive drawn out, often unrelated to the environment, and unjustified. Freud described both normal mourning and depression as response to the loss of some one or

something that was loved. He believed that a depressed person has a strong and punishing conscience or super ego. He thought that one reason the conscience becomes so strong is to control the anger and aggressive feelings that otherwise might come forth to hurt others.

Psychoanalytic theorists suggested that clinical episodes of depression happen because the events that set off the depression revive dimly conscious, threatening views of the self and others that are based on childhood experiences. These assumptions appear to be related to a childhood belief that one will never be loved by others, never become worthwhile, and will always lack the ability to control what happens. It may become the children’s inability to obtain a stable, secure relationship with others, which they feel repeatedly about how unlovable or incompetent they are. Some researchers suggest that a combination of traumatic childhood experience and acute external stressful events in adulthood is associated with a major depressive episode more than with other forms of depression or bipolar disorder.

A variation of psychodynamic therapy, interpersonal psychotherapy is often used with depressed clients. Therapists who use this approach believe that depression is best understood in an interpersonal context that emphasizes both peoples’ social effectiveness and the degree to which they experience social support. This therapeutic approach focuses on helping people learn to be more socially effective.

Behavioural Perspective

Behavioural theories proposed that depression is viewed as a function of inadequate or insufficient reinforces (Lazarus, 1968) resulting in a weakened or impoverished behavioural repertoire. In other words, the depressed person's behaviour is no longer positively reinforced because some important reinforcer has been withdrawn or lost.

A behavioural treatment plan for depression was first proposed by Lazarus in 1968. He outlined a variety of treatment approaches to be employed directly to combat the depressed person's loss of reinforcement. He proposes a multimodal behavioural approach for use with severely and chronically depressed patients. The approach involves continuous monitoring and modification of seven behavioural modalities: overt behaviour, affective processes, sensory reactions, emotive imagery, cognitive components, inter-personal relationships and a medical modality. The therapist prescribes reinforcing responses in an effort to replace the lost reinforces that are at the root of depression. If the client remains unmotivated, it may be necessary for the therapist to make home visits and observations, which are described by Lewinsohn as a most powerful procedure.

Lazarus has also treated reactive (neurotic) depression with a combination of three other behavioural techniques. In Lazarus's "time projection with positive reinforcement", i.e., the patient is projected into a

future time and setting that is full of increased activity and enjoyment of old and new activities. He also prescribes “affective expression” – deliberate elicitation of anger, amusement, affection, sexual excitement and anxiety – in attempting to break the depressive cycle. Lazarus also recommends “behavioural deprivation and retaining”, procedure that involves enforcing a prolonged period of inactivity to the point of sensory deprivation. Following the stressful period, almost any stimulation is found positively reinforcing.

In contrast, numerous behaviour therapists have written about their use of more or less standard behaviour therapy methods to deal with mild to moderate depressions. The methods employed in this context include reinforcement, reinstatement, contingency management and task completion, interpersonal feedback, assertive training and self-reinforcement and desensitization etc.

Cognitive Perspective

The cognitive influential psychological theories of depression are derived from the cognitive perspective. The cognitive perspective on depression recognizes that not only cognition but also behaviour and biochemistry are important components of depressive disorders. According to this view depressed person consistently interpret events in distorted ways that result in negative views of themselves, their environment and what may happen in the future. One course of unjustified negative interpretations may

be the presence of schemes or ways of coding and interpreting behaviour. Cognitive therapy techniques are used to counter the effects of schemes and to help the client create new behavioural approaches and alter schemes to make them more adaptive.

Cognitive Styles

Particular cognitive styles are associated with and predict depression in both children and adults. According to Beck's (1996) cognitive model of depression, the depressed individual has a negative view about the world, the self and the future as well as a negative organising self-schema. Abramson, *et al*., (1989) propose a model of depression which stresses the importance of attribution style. Depressed individuals are described as attributing the occurrence of negative events in their lives to stable, integral characteristics of themselves, while positive events are seen as chance occurrences outside the depressed person's control. This pattern of thinking contributes to feelings of hopelessness and helplessness. A depressogenic cognitive style refers to the tendency to see the self and the environment in a negative light, as reflected in low self-esteem, hopelessness about the future and a negative attribution style or the tendency always to see the cup as half – empty rather than half-full. Cognitive distortions are not always a component of depression in adolescence but have been shown to differentiate depressed from non-depressed adolescents and to be more strongly associated with severe depression (Martin et al, 1997).

Beck's Cognitive – Distortion Model

Aaron Beck's cognitive distortion model of depression (Beck, 1996) has been the most influential of the cognitive approaches to depression. Beck believes that depression can best be described as a cognitive triad of negative thought about oneself, the situation and the future. A person who is depressed misinterprets facts in a negative way, focuses on the negative aspects of any situation and also has pessimistic and hopeless expectations about the future. The thoughts of depressed people either form on negative aspects of the past or reflect a negative outlook on what the future will bring. They think about how they have failed in the past, how terrible the future will be and how they will be unable to deal with it or improve it. They attribute or blame any misfortune on their personal defects. Any ambiguous situation is interpreted as evidence of the defect. These schemas affect all the elements of the cognitive triad in later life.

The Humanistic – Existential Perspective

The existential theorists focus on the loss of self-esteem. The theorists, such as Carl Rogers emphasize the difference between a person's ideal self and his or her perceptions of the actual state of things as the source of depression and anxiety. To them depression is likely to result when the difference for the individual to tolerate. It depends on people's high aspirations for achievement and is trying to fill several roles simultaneously.

Depression from a Vulnerability Resilience Perspective

In depression, heredity and other biological factors such as neurotransmitter activity, brain structure and metabolism may be but are not necessarily a result of genetic inheritance. Other personal factors that may play a role in depression include misattributions of the same events and the strength of the supportive relationship a person has. Both biological factors and these other personality related factors can contribute to vulnerability or resistance. Highly personally stressful events, especially those that occur in the context of chronic stress or ongoing difficulties and low levels of support are especially likely to result in depression. (Brown and Patten, 1991).

COMMON SIGNS AND SYMPTOMS

The severity of symptoms varies with individuals. The main signs and symptoms are feeling of apathy, indifference, anxiety, sadness, emptiness, hopelessness, hostility, helplessness, irritability, unworthiness, guilt, fatigue, restlessness, boredom, apprehension, pessimism, inadequacy, inertia, self-depreciation.

Other indications are constant negative thinking, downhearted periods that won't go away , lack of interest in or pleasure from job, family life , hobbies or anything else , loss of self-esteem , sleep problems such as insomnia, a need to sleep too much, night sweats and waking up at early hours, headaches and unexplained physical pains that don't respond to

treatment, constipation, decreased appetite and weight loss (or a compulsion to overeat and weight gain), drug or alcohol abuse, frequent or unexplainable crying spells , changes in sexual habits and behaviour , decreased powers of memory and concentration, inability to give or accept affection, thought of death or suicide (or suicide attempts).

People who are manic - depressive show such symptoms as inappropriate elation, grandiose notions, increased talking, moving and sexual activity, disconnected and racing thoughts, extreme energy, poor judgment and disturbed ability to make decisions, and unsuitable social behaviour.

Symptoms of the Depressed/Anxious Syndrome based on Parent and Adolescent Reports

	Parent Reports	Adolescent Report
1.	Complains of loneliness	I feel lonely
2.	Cries a lot	I cry a lot
3.	Fear he or she might do something bad	I am afraid, I might think or do something bad
4.	Feels he or she has to be perfect	I feel that no one loves me
5.	Feels or complains that no one loves him or her	I feel that others are out to get me
6.	Feels others are out to get him or her	I feel worthless or inferior
7.	Feels worthless or inferior	I am nervous and tense

8.	Nervous, high-strung or tense	I am too fearful or anxious
9.	Too fearful or anxious	I feel too guilty
10.	Feels too guilty	I am self conscious or easily embarrassed
11.	Self-conscious or easily embarrassed	I am suspicious
12.	Suspicious	I am unhappy, sad or depressed
13.	Unhappy, sad or depressed	I worry a lot
14.	Worrying	I worry a lot
		I deliberately try to hurt or kill myself
		I think about killing myself

CAUSES OF DEPRESSION

In adults the broad causes of depression are many. According to Dr.Klerman the possibility of depression may be caused by biological factors, such as viral agent, or by some environmental substance or nutritional change should also be considered .He pointed out that the environmental risk factors could be biological including changes in nutrition, the possible role of viruses or the effect of an unknown depressogenic chemical agent in the water or air. Other environmental risk factors could be non biological.

As far as genetics is concerned research over the past decades strongly suggests a genetic link to depressive disorders and indicates that depression can run in families (Horwath, 2004) Bad life experiences(such as a serious

loss, chronic illness, difficult relationships, midlife crises, financial problems, career set backs, marital problems, frustrations, disappointment or any unwelcome change in life patterns) can also trigger a depressive episode.

People who have low self – esteem, who consistently view themselves and the world with pessimism and who are readily overwhelmed by stress are also prone to depression. Other personality traits that increase the chances of becoming depressed are overdependence, introversion, excessive need for approval, feeling of uselessness and the inability to live up to expectations (Horwath, 2004).

Partly because of experience with drugs that are effective against depression, it has become clear that severe depression can result from abnormalities in brain chemistry and a shortage of certain natural chemicals in parts of the brain.

RISK FACTORS FOR DEPRESSION IN CHILDHOOD AND ADOLESCENCE

Many social, psychological and biological factors have been examined as possible source of risk for depressive symptoms and disorder in children and youth. A wide range of theoretical perspectives including psychodynamic, behavioural, cognitive, interpersonal, family, biological and environmental models have been proposed that vary in their comprehensiveness and in their level of empirical support. Each model can

be used to identify factors that play an etiologic role in the development of depression and therefore may serve as target in preventive interventions for children and adolescents (Weissberg, *et al.*, 1997).

Integration of these various perspectives has led to the developmental bio-psychosocial perspectives on depression during childhood and adolescence. Integrative models have important implications for the prevention of depression in young people. First, they emphasise that developmental processes and children's developmental level must be taken into account in intervention process. Second, they highlight the need to consider a range of factors that may be associated with depression in children. To the extent that depression is a heterogeneous disorder, it is not surprising that there may be a wide range of risk factors and a variety of etiological paths. These include both internal characteristics of the children as well as features of the children's social context. Third, integrative models recognise that the interplay among these factors and their salience may change with development.

Social Problem Solving and Coping Skills

Deficiencies in coping skills and social problem-solving strategies have also been examined as an individual source of vulnerability to depression. Various studies have indicated that depressed children are relatively impaired in various areas of social functioning. A few longitudinal

studies suggest that social deficiencies such as poorer quality of friendships and lower social competence increase the risk for future depression.

Developmental factors: Family, Individual and Environment might contribute to or constitute a predisposition to onset of depression during adolescence

Children of parents with affective disorders are at risk for a host of behavioural and emotional problems. Childhood depression seems to be specifically associated with parental depression. The interaction of genetic and environmental factors are also critical in the development of more severe forms of depression (Rende, *et al*., 1993). For example, depressed parent's styles of interacting with their children may increase their child's vulnerability to developing depression. Depressed mothers are more likely to use withdrawal, conflict, avoidance or over-controlling strategies rather than negotiation to cope with child non-compliance compared to nondepressed mothers (Cumming and Davies, 1994). Depressed mothers also tend to be more hostile and irritable compared to controls. (Beardstee and Wheelock, 1994). Thus, a depressed parent may serve as a model for depressive thinking and coping or may contribute to an overall home environment which increases risk for depression. Increased risk of insecure attachment and disruptions in emotional regulation has also been associated with maternal depression which in turn leads to depression in their children.

Parental Rejection, Hostility and Family Conflict

Depressive symptoms in youths have also been associated with parental rejection (Whitbeeck *et al*., 1992). More extreme forms of negative parent behaviour, such as severe punishment and maltreatment, have also been associated with childhood depression (Downey and Walker, 1992). Although family conflict may be predictive of depressive symptoms both currently and prospectively, family conflict and hostility appear to be characteristics of families of adolescents with a variety of emotional and behavioural problems. The observational studies indicate that depressed youths may not express overtly negative affect (especially anger) and may, in fact, show higher levels of positive affect relative to controls (Sanders *et al*., 1992).

A few studies have investigated parental over control and over protection as it relates specifically to depression in adolescent. Burt *et al.*, (1992) found an association between adolescent perceptions of more parent control and depressive symptoms and Stark et al., (1990) found that a less democratic parenting style and an enmeshed family environment were associated with depression. Adolescent depressive symptoms are also found associated with family interaction characterised by high levels of maternal dominance and low levels of adolescent communicative assertiveness (Kobak and Ferenz-Gillies, 1995).

Adolescent Challenges

Adolescents are faced with significant changes in every aspect of their lives; pubertal development, cognitive maturation, school transition and increased performance pressures in all arenas-academic, sports, social and family. Some have hypothesised that the increase in depression during the adolescent period, which is particularly noteworthy in girls, is secondary to the hormonal changes and brain maturation which accompany pubertal development (Angold and Rutter, 1992). For boys pubertal development, as marked by transition to Tanner stage III or higher, has at least a short-term effect of reducing prevalence of depression. In girls, however, mid-puberty marks an emergence of increased risk for depression (Angold *et al.*, 1998). It was initially unclear whether this increased risk for girls is related to the direct influence of the changing neuro-endocrine environment or whether it is an indirect effect of the social and emotional implications of the girls change in physical presentation.

Angold and Colleagues (1999) explored this further by investigating the risk of physical development as reflected in Tanner stage and changes in hormone levels. These analyses indicated that hormone levels – specifically increasing levels of oestrogen and testosterone levels above the 60th percentile were significantly associated with depression. The researchers conclude that while hormonal changes are not sufficient to cause depression, they do place developing girls into a hormonal risk pool more similar to that

of adult women. Hormonal changes, while related to change in mood, may not be as important in explaining depressed mood as other environmental stressors – (Brooks-Gunn and Warren, 1989). However, the physical, environmental and developmental changes and the stressors associated with these changes appear to play an important role in the onset of depression in adolescence.

Biological Factors

Biological factors including genetics, neurotransmitter process, brain structure and functioning and neuroendocrine processes play a central role in most current models of depression. Research on biological process in child and adolescent depression reflect biological dysregulation of multiple systems including the endocrine system, neurotransmitter functions, and basic body rhythms including sleep cycles.

Physiological Markers

The concept of physiological markers is a useful way to think about physiological influences upon psychopathology in general and depression in particular. The physiological bases of depression focus on the limbic system, specifically the hypothalamus-pituitary axes. Those involving the adrenal (HPD), the thyroid (HPT), the gonadal (HPG) and the somatotropic (HPS) axes have been studied, with all systems exhibiting varying degrees of dysregulation is associated with depression. Additionally, sleep architecture

changes and melatonin secretion has been the subject of study, with alterations occurring in many depressed individuals.

Several endocrine systems are involved in depression – In all cases, a releasing hormone in the hypothalamus moves to the pituitary gland and influence the release there of a stimulating hormone. This hormone then stimulates the release of a hormone by the particular gland in question (thyroid, adrenal, gonad). This hormone is secreted with circulation, where it acts to inhibit the production of the releasing and stimulating hormone at the hypothalamic and pituitary levels (Sheldon *et al*., 1991).

Neurological Impact

A depressed mood as a reaction of neurological disability in common place and can be different to distinguish from persistent depression, which may be more intimately related to the neurological disturbance itself. Diseases of the basal ganglia and of connections to the frontal lobe are particularly liable to course depressive illness. Depression is a common accompaniment of Parkinson's disease, and is not achieved by improvement in motor function following drug treatment; this may indicate an overlap in the underlying biochemical disturbance of monoamine system. Cerebrovascular disease in a frequent cause of mood change, with up to a third of patients developing depression of the stroke and appropriate follow up is essential. Hypomania and euphoria are much less common but can

occur with cerebral infracts and with Huntington's disease. It is often stated that patients with multiple sclerosis develop euphoria and, although this may occur, it in infrequent, depressive illness still being the major mood change (Watson, 1993).

Psycho-neuroendocrinology

Brain functioning and neuroendocrine processes may provide possible mechanisms. Dyssegutation of the human stress response of the Hypothalamine-Pituitary Adrenal (HPA) axis in depressive disorders. The subset of depressed people with abnormal HPA functioning may have a worse type of depression or at least a form that perhaps stems from an underlying disorder of the stress response system. Stress-related neuroendocrine processes may also affect brain development, predisposing to depression(Watson, 1993). Early stress experiencing may sensitize specific neural circuits, resulting in depressive reactions in later life is response to stressful life events.

Cognitive Factors

On the basis of cognitive models of depression in children, it has been established that depressed and non-depressed children differ in most major cognitive processes associated with depression. For example, depressed children have low self-esteem, they often feel hopeless about their future, a risk factor for suicidal behaviour and they also report more negatively

distorted cognitions. Depression particularly is associated with negative cognitions regarding loss and self-concept and the maladaptive attribution styles may also be seen as risk factors for depression.

Stress

Many people use the word stress but fail to define precisely what they mean by stress, how they visualize stress, and how they consider that the mechanism of stress operates. But in psychology stress means a bodily or mental tension resulting from factors that tend to alter an existent equilibrium. Coopermand Marshall notes that stress is often used to denote pressure on the individual, or the effects of this pressure, or an individuals' reactions (Kahn and Cooper, 1993).

Two terms associated with stress are stressor and strain. 'Stressor' refers to those things in the environment (i.e., outside the individual), which might result in the triggering of 'stress'. Strain refers to the way in which the individual responds to 'stress' whether that reaction is physical, psychological, or related to an individual's behaviour. These responses indicate the ill-health or well-being of an individual (Lovallo, 1997).

A sense of reduced control in the face of perceived threat occurs commonly in daily life. Work by Weiss shows that uncontrollable shock leads to behavioural changes corresponding to human depression, namely poor appetite and weight loss, poor performance in tasks requiring

psychomotor performance, loss of energy and apparent fatigue, loss of interest in usual activities (Weiss, 1991). The study of Weiss, Serison, Ambrose, Webster and Hoffman (1985) report the development of depression due to central nervous system alterations associated with uncontrollable stress. Psychological stressors perhaps affect health both physical and mental, because of their meaning to a person and the impact of their meaning for the persons daily life with some awareness of immediate or long term consequences. It is reported that psychological stress responses are internally generated and affect the body in a top-down fashion. Such responses after associated with negative emotions may occur frequently in social settings without being acted out behaviourally. These repeated responses may have negative health consequences (Lovallo, 2005). The threat value depends largely on individual’s interpretation of the events and its meaning for their own lives. Perceptions and evaluations of ongoing events may alter the life of the individuals with consequences for how stress reactions are produced and in relation to which circumstances.

Coping Styles

According to Lazarus, coping is the cognitive and behavioural efforts to manage specific external or internal demands (and conflicts between them) that are appraised as taxing or exceeding the resources of a person. There are three aspects of this definition.

First: Coping is a response to specific demand which is context bound.

Second: Coping strategies are defined by effort, which accounts for just about anything an individual does in his or her transaction with the environment, that is purposeful. Therefore coping need not be a successfully completed act but an attempt to deal with the problem. The attempt may consist of behavioural acts or cognitions.

Third: Coping is seen as a process that changes overtime during a particular encounter (Frydenberg, 1999).

Coping strategies vary in their adaptive value. Coping process range from the helpful to the counter productive. We will distinguish between coping patterns that tend to be helpful and those that tend to be maladaptive. No coping strategy can guarantee a successful outcome. Furthermore the adaptive value of a coping technique depends on the exact nature of the situation (Mc Dougall and William, 1999).

Events that are potential or known threat require some adaptive behavioural intervention to ensure that harm is avoided or its negative effects are limited. Problem focused strategies are found to increase the persons awareness, level of knowledge and range of behavioural and cognitive coping options.

Frustration Tolerance

Frustration occurs when one's stressing are threated, either by obstacles that block progress toward a desired goal or by absence of an

appropriate goal. The frustrations we face depend heavily on such factors as age and the personal characteristics, our specific life situations and the society in which we live (Rosenzweig, 2002). The choice of one alternative leads to frustration with regard to the other. Frustration arises when we must choose one alternative and give up the other. So, the necessity of making a choice commonly involves cognitive strain and often difficult to make up one's mind when each alternative offers values that the other does not the choice is an important one (Coleman, 1988).

Personal Belief and Self Esteem

Personal belief/self-esteem, the evaluative dimension of the self-concept is to do with how worthwhile or confident the persons feel about themselves (Haysen, 1994).

Self-esteem is the complex cognitive affective response, which accompanies behaviour in accordance with conscience. The cognitive aspects include the verbal judgement of the following sort, I am good and worthwhile person. I respect myself as a person because of the way that I act. The affective aspects of the self-esteem is something analogues to the feeling which accompany the expectation of pleasant thing. When a person has high self-esteem he probably anticipates affection praise or admiration from others (Burns, 1982).

The concept of personal belief assumes that the individual has a need to enhance his self-evaluation and to increase, maintain or confirm his

feelings of personal satisfaction, worth and effectiveness. The self-esteem varies with individuals. It is assumed that this variation is reflected in attitudinal measures of self-esteem and that persons with high self-esteem are relatively more satisfied with respect to this need than persons low self-esteem. Self-esteem need is responsive to evaluative information the individual gains from his own behaviour and comparative or reflected appraisal from other people (Burns, 1982). Self-esteem is defined in terms of self-attitudes, which have an emotional and behavioural component. Individual with high self-esteem consider themselves as worth and as equal with others. They can recognize limitation and they expect to grow and improve.

People with low self-esteem who expects to do poorly in a test will likely experience high anxiety and therefore will not work as hard. As a result they actually fail which in between confirms their negative view of themselves (Baron and Byron, 1995). People with high self-esteem tend to be less lonely than those who's self-esteem is low, suggesting that a positive self-evaluation is associated with good social skills. The lower an individual's self-esteem, the more depressed that person feels.

Creative Thinking

Among the many varieties of human abilities, perhaps the greatest admiration is still reserved for thinking, especially the thinking that is regarded as creative. To understand the nature of creative thinking abilities

have expanded almost exponentially in recent years. There are varying opinions as to what constitutes creativity. This is because creativity has been studied from a wide variety of perspectives- philosophy, sociology, neurology, psychology and so on (Gulati, 1997). Guilford suggests that divergent thinking abilities are related to creativity. First of all, the ability to sense problems that call for solutions would result in increased opportunities to work on such problems and increased probability of coming with solutions. He said that higher the rate of production of words, ideas, associations and ways of expressing oneself (fluency), the more likely one would be arrive at an original solution. The greater the variety of ideas produced (original ideas) the greater also the likelihood of arriving at less common place solutions (Howes, 1990). Everyone has some creative potential, but it remains difficult to discern exactly how much potential one has or in what field or domain it may lie. Some psychologists and educators have been concerned with ways of enhancing creativity: one method is the idea of brainstorming and other one is behavioural reinforcement principles and procedures to promulgate creative responses.

Ideational fluency is a measure of divergent thinking. It relates significantly to physical, social and cognitive spontaneity as well as with indices of joy and humour (Liebermann, 1965).

Originality is a concept that applies to production of unique ideas. It pertains to innovate, novel and masterpiece ideas that are not previously

existing. It relates to the total creative endeavour, and depends on opportunity to re-examine possible relationships among associations and ideas generated.

TREATMENT OF DEPRESSION

Depression is the most treatable of all the mental illness. Individuals no longer have to suffer its debilitating symptoms. People with serious depression need encouragement from family and friends to seek the treatment that can ease their problem. Some people need even more help and must be taken for treatment.

When treatment is needed, help is available from physicians, mental health specialist, health maintenance organizations, community mental health centres, hospital department of psychiatry, university or medical school-affiliated programs etc. Some hospitals and universities have special research centres that study and treat depression. The common forms of treatment are: Drug therapy, Electroshock treatment, Psychotherapy, counselling and combinations of treatment etc (Bellack and Hersen, 1993).

TREATMENT OF ADOLESCENT DEPRESSION

Drug therapies do not seem to be very effective with adolescents. A recent double blind study found that fluoxetine reduced symptoms more than a placebo, but complete remission of symptoms was rare. Many other studies have shown that antidepressant drugs are no better than placebos in children and adolescents.

Most psychological interventions are modelled after clinical research with adults. For example: interpersonal therapy (IPT) has been modified for use with depressed adolescents, focusing on issues of concern of adolescents, such as peer pressure, separation from parents and authority issues.

A cognitive behavioural group intervention involving instruction in coping with depression was found to be effective with dressed adolescents, particularly when parents were involved in treatment. Social skills training can be expected to help depressed young people by providing them with the behavioural and verbal means to gain access to pleasant, reinforcing environments, such as making friends and getting along with peers. Stark, Napolitano, Swearer, Schmidt, Jaramillo and Hoile (1996) indicate that cognitive interventions and relaxation training, social skill training and problem solving techniques are very effective.

PSYCHOLOGICAL MANAGEMENT OF ADOLESCENT PROBLEMS

In recent years, psychological interventions for adolescent psychiatric disorders have become more efficacious in comparison to the traditional medical model of therapy, with the exception of treatment of psychosis and some forms of severe behaviour disturbances like depression and stresses. Drug management of psychiatric problems is still of great importance and can be practised only by qualified child psychiatrists, with adequate hospital and laboratory facilities. The drug management should be used with caution and only when absolutely necessary in psychiatric conditions because of the

unknown effects of drugs on the developing brain. So the psychosocial management should be the preferred mode of intervention for people's wellness (Kapur, 1995).

Depression is widely recognised as a serious mental health concern among children and youth. It is clear that substantial number of children and adolescents experience symptoms of sadness, dysphoria and other characteristics associated with depression, whereas a smaller but still significant number of young people experience depression as a disorder as manifested in adults. The consequences of depressive symptoms and disorder during childhood and adolescence are significant as well including greatly increased risk for depression later in life as well as concurrent disruption in functioning in childhood and greatly increased risk for suicidal ideation and attempts. Finally, the importance of depression in young people is reflected in the pernicious tendency for depression to co-occur with a wide range of other problems and disorders; including anxiety, disruptive behaviour disorders and substance abuse (Weissberg and Gullotta, 1997). Depression that co-occurs with other problems or disorders greatly increase the level of associated social problems and impairment.

Despite the significance of depression as a mental health problem during childhood and adolescence, it received relatively little attention as a risk factor determining the potential of future generations. Research on risk reduction and those concerned with cognitive factors like stress, causes for

depression are limited to goals for adults. The absence of attention to depression in young people is especially note worthy in light of the emphasis that it is a major health problem that lead to suicide in adolescents.

INTERVENTIONS

Once an adolescent has been diagnosed with either major depression or dysthymia, both psychotherapy and medication could be options. More and more doctors are realizing that chemical imbalance often account for mental illness, but at the same time, the importance of psychotherapy cannot be discounted. If an adolescent's depression has been caused wholly or in part by psychological factors, medication may relieve the depression, but the underlying cause will not be cured by medication alone. Therapy can help the adolescent deal with his part in a healthy manner and also in learning ways to cope with the very difficult process of growing up.

Antidepressant medication for adolescent is a controversial topic. There are no long term studies that show what kind of impact thus medication will have on an adolescents development a most professional's will recommend therapy as a first line of defence for adolescent with depression, except in cases where the adolescent is severely depressed or suicidal. The decision of whether to treat an adolescent depending on the severity of the adolescent's depression and parents should educate themselves as much as possible in order to make as informed decision.

The promotion of healthy adolescent development has become a major focus of world attention. Cognitive theories of depression emphasize the role of negative thinking and maladaptive attributional style in the development of depression. Based on this theoretical view it is assumed that onset of depression may be prevented by changing the dysfunctional cognitive processes of adolescents. Thus in the present study an effort is made to see whether changing of negative thinking will bring about depressive symptom reduction. The efficacy of creativity training in altering cognitive functions and generating alternative solutions is well recorded. Aniljose's Creative tasks like brainstorming, assertiveness training, relaxation, techniques (positive imagery) and general counselling are used to train adolescents at risk of depression to think constructively and positively and thereby manage depressive reactions.

The psychological factors tend to have a two dimensional effect on mental development and health of the adolescents (1) Direct effect which provide the resources for physical development an expose them to appropriate stimulations for the mastery of various developmental tasks determines the relative social status and sense of completion and satisfaction in terms of the quality of life are aspires for. Dissatisfaction with the immediate social environment and quality of life is reflected as a sense of deprivation. Possibility for such sense of deprivation is dependent on the person's exposure to or awareness of various status of life or people with

different quality of life. The physical deprivation and psychological deprivation and psychological sense of deprivation have different effects; the latter lead to tendencies of depression.

Psychological Interventions

Psychological interventions have been gaining more attention, because it plays an important role as well. It appears that strategies used for reducing anxiety, stress and depression by cognitive psychotherapy, reduce the frequency and severity of fear and anxiety by systematic desensitisation (Peterson, 1996). Adolescence is the period of stress and strain during that period the occurrence of unexpected lose or failure leads to irrational fear and hopeless thinking may become the causes of depression. Operant conditioning techniques in which children are rewarded for not having to be hospitalised are also found to reduce the frequency of such hospitalisation (Edlin, et al, 1998). Cognitive restructuring, Positive thinking, Biofeedback, Laughing therapy, Exercises like running, walking are effective techniques for reducing depressive symptoms in individuals.

In the light of the theoretical literature so far presented it can be assumed that the psychosocial environment and different types of psychotherapies are effective for managing child/ adolescent depression. For further classification the empirical studies conducted in these directions are referred and the relevant ones are presented in the second chapter.

OPERATIONAL DEFINITIONS

Stress

Stress is defined as mental tension that depends largely on individuals interpretation of the events and its meaning for their own life.

Perceptions and evaluations of ongoing events may alter the life of the individuals with consequences for how stress reactions are produced.

Coping Styles

Coping is the cognitive and behavioural efforts used to manage specific external or internal demands and conflicts between them.

The adaptive value of a coping technique depends on how individuals perceive the exact nature of the situation.

Frustration Tolerance

Frustration tolerance means how an individual perceives and tolerates the frustration producing situations.

Frustration arises when one has to choose one alternative and give up the other and this leads to cognitive strain.

Personal Belief

Personal belief is defined as individuals' belie in his/her qualities and attributes. It mainly depends on one's perception about the self and the environment.

Creative Thinking

Ability to become sensitive to problems, deficiencies, gaps in knowledge, missing elements, disharmonies and so on, identifying the difficulty, searching for solutions, making guesses, testing them and finally communicating the results.

Ideation Fluency

Ability to be fluent with ideas, generate large number of associations and alternate solutions to problems.

Originality

Ability to generate innovative, infrequent and unique ideas that are not previously existing.

SIGNIFICANCE OF THE PRESENT STUDY

Adolescent depression is a very prominent dread in the society today. Therefore there is growing interest among psychologists to study this problem from various dimensions.

An adolescent experiences biological as well as psychological changes within him/her during this stage, which is their gateway from child to an adult. Biologically their bodies pass through puberty, which comprises of changes in their body from head to foot. Psychologically the interaction of their family and society also is different as a result of their transition from childhood to adulthood.

Adolescents today face many challenges like denial of individuality, broken families, absence of parents (physical or emotional), death of loved ones, nuclear families and sexual exploitations. Besides familial problems social factors like school and media are also responsible in creating depression in adolescents. Challenges like academic excellence, comparison with fellow students by parents and teachers, harassment by teachers and from senior students are seen to cause depression in adolescents. Exaggerated portrayal of violence, aggression and sex, in media and cinema and especially in the case of Kerala, the highly emotional depiction of sad events create a feeling of insecurity and helplessness which may induce depressive thoughts in them.

Depressed adolescents cannot face stressful situations and challenges in their daily life and will find it difficult to cope with these situations. This may tend to make them great failures in life and may at times lead to suicide and similar other serious problems.

From a developmental perspective a child may be prone to immature and inadequate appraisals of future dangers and disturbances. Hence it is important to develop in them an enhanced age appropriate understanding of the circumstances and meaning of the traumatic experiences. This may be achieved by formulating constructive prevention and intervention strategies in relation to what has occurred and to future situations. Attempted emotional reprocessing can represent efforts to understand the content of emotional

reactions generated by experience so as to increase tolerance, diminish self punishing attributions and maintain or repair the subjective sense of well being.

In the light of the afore mentioned the present study investigate the role of cognitive factors in depression among adolescents and examines the efficacy of a package of intervention for use with adolescent children with high risk of depression.

It is expected that the findings of the research may be used to help adolescents to cope with the daily challenges of the society, be strong willed, competent and mentally healthy that may aid their transition to a successful life.

The present study reads as "Cognitive Factors In Depression and Efficacy of Intervention In Managing Depression: A Study Among Adolescents At Risk of Depression".

REVIEW OF
RELATED LITERATURE

Review of literature is a valuable guide to defining the problem, recognizing its significance, data gathering methods, appropriate study design and source of data. This helps to sharpen the understanding of the problem area and provides a background for the research project. So the researcher must have up-to-date information about what has been thought and done in the area of his/her research. The success of any research work depends upon the understanding and familiarity of the investigator with the studies and literature related to the topic. In review of literature, the researcher attempts to explore what others have learnt about similar works and to gather information relevant to the research problem at hand. Since effective research is based upon past knowledge, the review of related literature helps to eliminate duplication of what has been explored by other researches in the same field. So review of literature is an inevitable part of any research study.

The study of adolescent depression has been the focus of interest of many psychologists in the present century. Numerous attempts have been made to examine the complex nature of the relationship of various causative factors to the onset, prevalence and control of depressive reactions among young children. The present chapter is an attempt to review the studies linking selected cognitive variables to depression and related problems:

Stress and Coping Styles

Frustration Tolerance

Personal Belief/Self Esteem

Creative Thinking, Ideation Fluency and Originality

Other Psycho-Social Factors

Depression Management

STRESS AND COPING STYLES

In a study of 40 depressed patients, Leff, Roatch and Bunney (1970) have found that each patient had been subjected to multiple stressful events prior to early symptoms and to a clustering of such events during the month preceding the actual break down in functioning. Similar to the findings of Leff and her associates are those of Paykel (1983). He studied 185 depressed patients and found that comparable stressful events preceded the onset of the depressive breakdown. The significant events are categorized as (a) marital difficulties, (b) work moves or changes in work conditions, (c) serious personal illness, and death or serious illness of an immediate family member.

Adolescence is the age of stress and strains. Age related physical changes and the resulting psychological disturbances may lead to greater maladjustment, stress and lead to depression in adolescents (Indira and Murthy, 1980a, 1980b, Jaiprakash and Murthy, 1981, 1982, Rangaswamy *et al.* 1982, Jamuna, 1984).

Death of a loved one as a stressful event is found as a precipitating cause leading to depression (Renner and Birren, 1980). Evidences also indicate relationship between somatic symptoms, depression and stress in adolescents. Depression was found to be the most significant factor in the development of somatic complaints. Studies by Rozzine (1996), Schulz and Williamson (1993), Smallegan (1989) Ramamurti (1996), Ramamurti and Jamuna (1984, 1992) reveal that stressful events are important co-factors in depression.

According to Beck (1983), Hammen, Ellicott, Gitlin and Jamison (1989) those who highly value interpersonal relationship are especially vulnerable to depression when negative life events occur within the interpersonal domain, such as rejection or loss of a loved one. They point out that stressful life events can precipitate depression in cognitively vulnerable individuals. Cohen (1995) report a relationship among stress, social support and depression. High stress and low levels of social support seem to be associated with and to predict depressive symptoms (Cohen and Wills, 1985).

Paykel (1983) points out that recent life events precede depression at greater than control rate. Hawkins, Hawkins and Seeley (1993) also have found high stress as a crucial factor in high risk depressive symptomatology.

It is an intriguing developmental observation that the rates of depression increases during early adolescence (Rutter, 1986). The child’s interpretation of the stressor, knowledge of coping strategies and sense of

self-esteem or self efficacy may affect the level of distress experienced and thus the severity of depressive reactions.

Wolfe and Gilland (1987) conducted a study that reported relationship between measures of stress and depression in children. The sample of 102 children and adolescents were psychiatric inpatients that ranged in age for 6.5 to 16 years. The authors found moderate and significant intercorrelations between the stress and depression.

Srivastava and Sinha (1989) confirmed that stressful events during life time are found to be related with the symptoms of depression. A more significant relationship between stressful events of past one year and symptoms of depression is also found.

Lempers, Lempers and Netusil (1990) have reported positive relationship between family financial stress and depressive symptoms in adolescent children. In a study of the relationship of life stressors, personal and social resources and depression. Holahan and Moos (1991) found that under high stress, personal and social resources relate to future psychological health indirectly through adaptive coping strategies.

Lempers and Nutusil (1990) studied the relationship among family financial stress, parent's emotional support for their children, academic achievement and depressive symptoms in a sample of 105, high school students from farm and non farm families. Results of analysis of variance

indicate that parents from farm families report higher level of family financial stress and depression than parents from non farm families. Multiple regression analysis shows that family financial stress as reported by parents was strongly related to adolescent’s depressive symptoms.

Rao and Rao (1990) conducted a study among adolescents which examined the stress and coping in psychologically distressed and nondistressed college students (N=421). Approximately 21% of students have nonspecific psychological distress. Distressed individuals experience greater number of life events, life strains and subjective distress associated with these, when compared with non-distressed individuals. In addition the two groups could be differentiated in terms of the coping behaviour they reported. The tools used were Sociodemographic Data sheet, Life Events Inventory, Life Situations Inventory, the Coping Checklist and General Health Questionnaire.

James and Kazak (1992) investigated the depressive experiences, coping styles and family system within a developmental model of depression that focuses on object representations. The sample included college students with alcoholic fathers (adult children of alcoholics ACA, n=84) and with non-alcoholic parents (n=123). Eight measures were used. ANOVA show that ACAs differ in family perceptions with parental inconsistency discriminating most effectively between groups. As predicted ACAs exhibit greater depression and also shows more on aggressive coping techniques.

In a study Mates and Allison (1993) used a series of focus group interviews to identify major sources of stress and coping responses of adolescent students. Relationships with parents and family, work and lack of money are found to be important sources of stress. Major coping responses include substance use and diversionary activities. Differences between academic streams in sources of stress and coping responses are examined. Because of the long-term nature of schooling and family relationships, these can be seen as examples of chronic life stress.

A study by Orsillo, Mc Caffrey and Fisher (1993) investigated the stress associated with having a depressed sibling by examining the problem-solving (PS) abilities, coping styles, family functioning attributional styles, belief, attitudes and levels of psychological symptomatology of 13 siblings of depressed individuals. Subjects show significant levels of psychological distress on the belief symptom inventory a negative self-appraisal of their effectiveness of in problem solving. They also have displayed emotional coping patterns by endorsing the use of strategies such as wishful thinking, avoidance and self-blame to cope with their problems equally as often as more problem focused strategies.

The study conducted by Chan (1995) assess and described the depressive symptoms and coping strategies of 161 Chinese adolescents using the Beck Depression Inventory (BDI) and the ways of coping Questionnaire (WCQ). Using the BDI cut-off scores of 9/10 and 29/30, respectively, they

found that over 64 percent of the adolescents are in the depressed range and nine percent in the severely depressed range. For general depressive symptom level, Chinese adolescents appear to have higher mean BDI score than US adolescents and Chinese young adults. Their depressive symptoms levels are found to relate to avoidant coping strategies as well as low self-esteem and reduced social support.

In the year 1995 Matson examined the coping strategies of 36 cavegivers of stroke victims and 37 cavegivers of older confused people. The aim was to determine whether coping was associated with stress and depression. The results show that some aspects of coping are significantly associated with subject's stress and depression, particularly non-confronting coping responses (positively associated with stress and depression) and tactical coping responses to specific hassles (Negatively associated with stress and depression).

Verma (1995) studied the effectiveness of coping strategies in adolescent students. Two groups of 120 boys and 85 girls (aged 19-20) from different colleges of Punjab University, were administered the reaction to Hassles, Coping Strategies Questionnaire developed by Grob, Bochmer and Flammer in 1993 to examine their typical coping strategies. Results are discussed under 4 major coping styles: seeking help, cognitive appraisal, emotional defusing and withdrawal. Findings indicate that (a) adolescent students cope with difficult situation in a mature manner, yet they tend to

withdraw from problem they faced in life (b) gender differences are observed: boys occasionally seek refuge in alcohol or drugs to escape from their problems and girls resort to prayers and hoped for the better and (c) girls become more emotionally upset as compared to boys who confront the problems and make an attempt to solve it.

The study by Williamson conducted in 1995, examines the relationship between stressful life events and Major Depressive Disorder (MDD) among adolescent children. The results show that MDD and normal control adolescents have similar rates of total stressful life events in the year before being interviewed. Depressed adolescents have significantly more dependent stressful life events during the previous year than did the normal controls. They concluded that depressed adolescents have an increased risk of experiencing dependent life events.

The study of Person (1996) investigated coping strategies of adolescent males. In this study 374 boys in grades 10, 11 and 12 at an independent boys school in Melbourne, 'Capable' boys were compared with the regular male students. It is found that the capable male students perceive themselves as coping satisfactorily.

In a study Kessler (1997) found stressful life events as strongly related to depression. Result shows that relationship between severe and in some cases, traumatic life events lead to depression. Similar findings confirm the

relationship of stressful events to the onset of episode in bipolar disorder (Ellicott, 1988, Goodwin and Jamison, 1990, Johnson and Robert, 1995).

Satija, Advani, Nathawat (1997) examined the coping responses of 50 depressed and 50 non depressed, 14-20 year old psychiatric clinic out patients in India. Subjects were administered the coping response inventory in either a self-administered or interview format. Results indicate that depressed subjects use significantly fewer problem solving, significantly more avoidance coping behaviour and significantly less approach coping behaviour compared to non depressed subjects.

In a study of 330 adolescents, feelings of depression are found associated with feelings of stress (Cole *et al.* 1998). The more stressed the adolescents become overtime, the higher the resulting level of depression. Moreover, covariation between stress and depression is associated with delinquent behaviors (Hinden *et al.* 1997).

In a study Felsten (1998) evaluated gender differences in the use of three distinct coping strategies and in associations between those strategies, stress and symptoms of depression. The result shows that there is no gender differences in associations between stress, coping and depression for problem-solving or social support seeking. Problem solving is a weak predictor of depression and surprisingly, the stress-depression relationship is slightly stronger in participants who use more problem-solving. Social

support seeking moderate the stress-depression relationship equally in men and women. Avoidance coping is a powerful predictor of depression in men and women, however it exacerbate the negative effect of stress only in men.

Anuradha (2001) has found that depressive disorders, incorporate a spectrum of psychological functions which vary considerably in severity, frequency and duration. A critical issue in research of depression and its correlation with other variables is the frequency and expression of depressive cognitions and behaviours. This study examines the role of psychological and coping factors in depression by studying a group of 130 female and 132 male college and university students. Initial depression is the major predictor of final depression, subjects who are already depressed tend to be depressed when examined after 3-6 months and contributed significantly in the major depression.

Satapathy and Singhal (2001) compared stress, self-esteem, depression and academic performance of visually and hearing impaired adolescents. Results reveal that visually impaired are less stressed and depressed, has higher self esteem and academic performance than the hearing impaired adolescents. Hearing impaired adolescents also exhibit more number of behaviour problems.

In their study Abela and Payne (2003) tested the stress and symptom components of the integration of the hopelessness and self-esteem theories of

depression in a sample of third-and seventh-grade children. The results support the integrative theory and reveal that depressogenic inferential styles interacted with negative events to predict increases in hopelessness but not nonhopelessness depression symptoms in boys with low but not high self-esteem. At the same time, contrary to the integrative theory, depressogenic inferential styles interact with negative events to predict increases in hopelessness but not nonhopelessness depression symptoms in girls with high but not low self-esteem.

Women commonly experience depression in response to interpersonal life events, and also they contribute to the occurrence of stressful events and life contexts. Hammen (2003) studied child rearing and parenting; romantic and marital relationship; generation of stressful life events; enduring social dysfunction even when not depressed. He found that depressed women are often locked into maladaptive interpersonal environments that contribute to the reoccurrence or chronicity of depression.

The study by Dumont and Provost (2004) examined group differences on self-esteem, social support, different strategies of coping and different aspects of social life among 297 adolescents. Groups were classified into 3, based on the scores of depressive symptom and frequency of daily hassles namely, well adjusted, resilient and vulnerable. The results reveal that well adjusted adolescents have higher self-esteem than adolescents in the 2 other groups; resilient adolescents have higher self-esteem than vulnerable

adolescents. The resilient and vulnerable adolescents have higher scores on antisocial and illegal activities than well adjusted adolescents. Finally resilient adolescents have higher scores on problem-solving coping strategies than adolescents in the two other groups.

Schorder (2004) conducted a study to test the utility of the Coping Competence Questionnaire (CCQ) in predicting depression among chronic disease patients. Hierarchical multiple regressions indicate moderator effects of coping competence in the relationship between symptom stress and depression. Symptom stress is strongly correlated with depression among patients who were low in coping competence only. Among patients high in coping competence, depression is low and unaffected by symptom stress.

In a significant study, Waaktaar *et al.* (2004) measured the depressive symptoms in a cohort of community based adolescents (n=163) at two time-points, with 1 year intervening. Depressive symptoms are found as increasing from time 1 to time 2. The effect being stronger for girls than for boys. Depressive symptoms show significant correlation with concurrent measures of recent stressful life events. Previous level of depressive symptoms could predict stressful life events. This demonstrates that a unidirectional model of stressful life events prevails as the cause of depressive symptoms in adolescents.

Stress is a crucial factor leading to depression in adolescents. It is the internal feeling of unhappiness and unwanted tensions which results from

several deleterious changes associated with age such as, reduced income, loss of loved ones, reduced social support, poor social interactions and over dependency may increase the vulnerability of depression among adolescents (Singh, 2005).

Lovejoy and Steuerwald (2005) examined the stress patterns of individuals with cyclothymia, intermittent depression and no affective disorder in a non clinical sample. Individuals with cyclothymia and intermittent depression are reported a higher number of daily stressors than normal controls. They also rated their most unpleasant daily experiences more negatively. The authors concluded that the stress generation mechanisms and negative cognitions may lead to the development of major affective disorders.

The study conducted by Yukawa (2005) investigated sex differences in the relationship among anger, depression and coping strategies. Analyses show that women who reported themselves as angry tended to cope with stress by optimistic and active strategies, while women who reported themselves as depressed tended to cope with stress by withdrawn and passive strategies. Men who reported being depressed tended to select emotion-focused cognitive coping, while men who reported being angry selected no specific coping.

A study by Li, Diuseppe and Forb (2006) investigated the roles of coping and masculinity in higher rates of depressive symptoms among

adolescent girls, as compared to boys. The Reynolds Adolescent Depression Scale and the Bem Sex Role Inventory and measures of coping with general stressors were completed by 246 adolescents. Results show that adolescent girls are more depressed than boys and that girls use more emotion-focused and ruminative coping than do boys. Greater degrees of ruminative coping are related to high levels of depressive symptoms. Problem-focused and distractive coping are positively correlated with masculinity and negatively associated with depression. Girls are more like to use problem-focused coping. Problem focused and distractive coping are found to mediate the negative relationship between masculinity and depression.

Latent profile analysis (LPA) was used by Aldridgea and Roesch (2007) to develop a coping typology of minority adolescents (m =15.5 years). A multiethnic sample (n = 354) was recruited from a program aimed at serving low income students. LPA reveals three distinct coping profiles. The first comprises adolescents who used a number of specific coping strategies at a low level (low generic copers). The second comprises adolescents who emphasized active/approach strategies (eg: planning, active copers). The third comprises adolescents who emphasized avoidant/passive strategies (eg: substance abuse, avoidant copers). Active copers are found to experience significantly less depression and more stress-related growth than low generic copers. Low generic copers not only experience significantly less depression than avoidant copers but also significantly less stress-related growth than active copers.

Madu and Roos (2006) examined the level of maternal depressive symptoms and ways of coping among mothers with pre-term infants as compared with those of 50 mothers with full-term babies. A positive correlation is found between the seeking social support coping strategy and higher levels of depression among mothers of pre-term infants. A positive correlation is also found among mothers of full-term infants who used the “Accepting Responsibility” coping strategy and higher levels of depression.

In a study Ongen (2006) examined the relation between coping strategies and depression among 543 adolescents. Results reveal that low generic copers (those who use low levels of both coping strategies) report more symptoms of depression than high generic copers (those who use high levels of both coping strategies), approachers and avoiders.

Al-Gelban (2007) observed that depression, anxiety and stress are strongly, positively and significantly correlated. The Arabic version of Depression Anxiety and Stress Scale (DASS) is used to established school boys’ levels of depression anxiety and stress. Results indicate that of the 1723 male students recruited to this study, 59.4% had at least one of the three disorders, 40.7% had at least two and 22.6% had all the three disorders. Moreover, more than one third of the participants (38.2%) have depression, 48.9% have anxiety and 35.5% have stress.

The study by Fletta, Besserb and Hewitt (2007) examined the associations among dimensions of perfectionism, self-perception and

depression. The results indicate that both self perception and socially prescribed perfectionism are associated significantly with depression. Statistical tests of moderator effects indicate that socially prescribed perfectionism and self perception predict elevated levels of depression.

Hankin, Mermelstein and Roesch (2007) examed stress exposure and reactivity models as explanations for why girls exhibit greater levels of depressive symptoms than boys. Girls report more depressive symptoms and stressors in certain contexts than boys. The longitudinal direction of effects between depression and stressors varies depending on the stressors domain. Gils reacted more strongly to stressors in the form of depression.

FRUSTRATION TOLERANCE

Studies on frustration tolerance report that inability to tolerate frustration leads to mental breakdown, maladjustment and problems in interpersonal relationships. Low frustration tolerance relates to antisocial and other maladaptive behaviours also. It is also pointed out that most neurotics and psychotics show deficiencies in their capacity to tolerate frustration. Males are found to tolerate frustration more than females (Rai, 1997).

Ability to tolerate frustration is affected by the quality of the stressor as well as its intensity, duration, predictability and control (Glass and Singer, 1974; Cohen and Weinstein, 1981).

Harrington (2006) investigated the relationship between a multi-dimensional Frustration Discomfort Scale (FDS) and measures of depressed

mood, anxiety and anger in a clinical population. Results indicate that FDS sub-scales are differently related to specific emotions, independent of self esteem and negative effect. The entitlement subscale is uniquely associated with anger, discomfort, intolerance with depressed mood, and emotional intolerance with anxiety and depression.

PERSONAL BELIEF/ SELF ESTEEM AND RELATED FACTORS

In a study Beck (1967) reported that the negative cognitive set is significantly related to severe depressive reactions in people. The negative cognitive set includes negative views of the self, the world and the future. Such a negative cognitive set results in abnormally extreme negative effect in life and leads to depression.

Beck (1967, 1976) suggests that individuals who have negative schema about themselves and who experience negative life events within a life domain relevant to that negative self-schema are particularly prone to becoming depressed. It is also found that individuals who chronically do not receive positive regard from significant others or who receive high rates of negative and critical interactions with others are likely to develop negative views of themselves. They when confronted with stressors relevant to their negative self schema are at risk for becoming depressed (Rosenberg, 1979).

It is reported that young adolescents are most likely to be affected with feelings of unhappiness and self-doubt if under stress from several

sources. In one study adolescents girls who were going through physical and social changes showed the lowest self-confidence and self-esteem (Simons, Rosenberg and Rosenberg, 1973). In another study of adolescent boys going through puberty showed lower self-esteem than those had not yet reached puberty (Jaquish and Saviri-Williams, 1981). According to Connell (1981) and Harter and Connell (1982) many young adolescents go through a period of questioning their competence.

Norvel (1985) investigated the relationship between children's self perception and depression. The sample consisted of 30 psychiatric inpatients and had a mean age of 11.5 years. The authors acknowledged that the result suggest a significant relationship between self perception and depression among children. They also concluded that depression is a multidimensional trait.

Sandler, Miller, Short and Wolchick (1989) have pointed out that increasing self esteem improves one's feeling of well being. Significant negative association between self esteem and depression is reported by Beer and Beer (1993).

Family, friends and colleagues can help to prevent depression by providing affection and approval, confidence and encouragement and guidance. Taken together, the benefits that others provide make an individual to have high self esteem and self perception. Self esteem is necessary in

times of stress and crisis that occurs in life. Grore (1990) in a study of men who had lost their jobs has found physical illness and psychological disturbances as more than those who have supportive friends and family backgrounds.

Nolen-Hoeksema, Girgus and Seligman (1992) reported that negative attributional style do not predict later symptoms of depression in adolescents, rather stressful life events seem to be the major precipitant of symptoms. However, as they grow older they tend to develop more negative cognitive styles which tend to predict symptoms of depression in reaction to additional negative events.

King (1996) conducted a study among adolescents from the United States and Japan and found that feelings of depression among American adolescents are associated with problematic self-perception regarding physical attractiveness and social acceptance and with problematic behavioural conduct. Among the Japanese adolescents feelings of depression are related to problematic self-perceptions involving interpersonal connectedness, peer social acceptance, and physical attractiveness and to problem of behavioural conduct.

Self-image and self-perceived competencies have been considered to be related to depression in childhood and adolescence (Masi, *et al*. 2000). Data indicate that the emotional beliefs (about schooling and learning) are

significantly related to depressive symptomatology. Females scored higher CDI and school anxiety. Self-image assessed with specific questionnaire and self-reported depressive symptoms assessed with the Children's Depression Inventory in a school sample of 150 adolescents.

Soares and Grossi (2000) investigated the associations between self-esteem (SE), anxiety/depression (i.e., GHQ) pain variables (eg: complexity), perceived disability and coping styles in 651 patients (mean age 45 years 72% female) seeking care from general practitioners or muscle pain. The regression analyses showed that SE is lower among female patients. And SE is negatively associated with anxiety/depression and positively associated with pain intensity and active coping. The relationship between SE and pain intensity seems to be influenced by level of depression. It was concluded that SE is related to female, gender, anxiety, depression. Pain intensity and active coping style in pain patients.

Kim and Kim (2001) examined whether body mass index (BMI) and perception of body weight problem predict level of self-esteem and depression in Korean female adolescents. The sample consisted of 303 females, ranging in age from 15 to 19 years, who were attending four high school located in Seoul, Korea. Results show that perception of a weight problem, but not BMI, contribute significantly to the prediction of level of self esteem and depression.

Haugen and Lund (2002) showed low self-concept and attributional style as related to depression in adolescents. Two self-esteem variables were found to constitute important predictors of depression, while the contributions of the attributional variables were of minor importance. In addition, pessimistic attributions to both positive and negative events resulted in higher depression than pessimistic attributions to either kind of events, and to neither kind of events.

The relationship of self-esteem and depression with alcohol and other drugs (ATOD) use was tested in a California statewide sample of more than 4300 Asian American adolescent student done by Otsuki (2003). Correlations reveal that cigarette, alcohol and marijuana use are generally more related to high depression and low self esteem in females than in males. The results indicate that in females, depression is significantly related to alcohol and tobacco use, but self-esteem is not. Neither self-esteem nor depression is a significant contributor to marijuana use.

Negative or low belief in one's competence to cope with the basic challenges of life and being worthy of happiness can lead to lack of confidence, unreasonable rationalization, self-centeredness, fatalistic attitude, feeling of loss of credibility etc (Veeraja, 2004). Children with low self esteem/ low personal worth feel inadequate and are afraid of others and their rejection. Extreme low self esteem is frequently accompanied by serious psychological problems (Clark - Stewart, Perlmutter and Freeman, 1988). On

the contrary those with high self esteem are found to be independent, creative, accepted in social groups, more assertive, able to express opinions and better at taking criticism (Coopersmith, 1967). It builds conviction, optimism, relationships, ability and responsibility. These characteristics reflect a psychologically healthy mind rather than problems and mental illhealth.

Depressive adolescents are found to have more social problems, higher level of fantasies in relation to their sickness, death and poor self esteem than normal adolescents. Depressive boys seem to experience higher level of guilt than depressive girls and depression in general differ from the normal children in value system and psychosocial deprivation (Radhakrishnan, 2005).

Charge and Lin (2007) observed the cognitive triad, which refers to an adolescent's views of the self, the world and future, and found this to be related to both depressive symptoms and suicidal ideation. A cross-sectional and correlational design was used in this study. Instruments used included the Children's Depression Inventory and the cognitive Triad Inventory for children. Regression analysis reveals that the cognitive triad significantly mediate and moderate the relationship between depressive symptoms and suicidal ideation.

Safford, Alloy, Abramson and Crossfield (2007) investigated the role of negative coping style in predicting the occurrence of depression.

Undergraduates identified as either high (n=76) or low (n =81) in negative coping styles are assessed for lifetime history of depression. Beck Depression Inventory is used for the study. Results show that individuals with negative coping styles generated more depressive symptoms than individuals with more positive coping styles. Results suggest that the underlying negative coping style may account for the stress generation and depression in adolescence.

CREATIVE THINKING, IDEATIONAL FLUENCY AND ORIGINALITY

Bhattacharya's studies (1956, 1960a, 1960b) on creative painters revealed that female painters are more emotional with shallow feeling for life as compared to male painters. In a host of studies Raychaudhari (1961 a, 1961 b, 1962 a, 1962 b, 1964, 1965 a, 1965 b, 1965 c) has show that creativity is linked to well being problems and that artistic persons including musicians are found to have feelings of depression in their childhood. They are distinctly recognized by their emotional temperamental qualities throw by other aspects of personality (Raychaudhuri, 1980). In their study Dabrowski (1963) have examined the origin of emotional difficulties and neurotic behaviour among talented children. It is reported that exceptionally able individuals tend to have overall exceptional sensitivity and greater excitability which under stress conditions can lead to neurosis in them.

On the clinical scales of the Minnesota of a Multiphasic Personality Inventory which measure tendencies in the individual toward the major

psychiatric disturbances such as depression, schizophrenia, paranoia, hysteria and the like creative persons score five to ten points higher than the general populations. This indicates psychic disturbance but with adequate control mechanism (Mackinnon,1980).

On the contrary to the belief that creative thinking results in disorder and sickness evidence suggests just the opposite that creative children are too busy to become ill or maladjusted (Torrance, 1962, 1970, 1980) and they are more adjusted and mentally healthy (Asha, 1980, 1984, 1988, 2003).

Evidence suggests that ideationally fluent Kindergarten children tend to be more spontaneous, playful and humorous (Lieberman, 1965). Both boys and girls are found to be more erratic in their work orientation, more prone to respond aggressively to frustration. They are also found as shy, restricted, insecure and withdrawn (Singer and Rummo, 1973).

OTHER PSYCHO-SOCIAL FACTORS

Karthikeyan and Swaminathan (1977) studied predictors of depression among youth. The sample consisted of 100 youth all of whom were men in the age group of 21 years of 40 years. Max Hamilton Depression Rating Scale, Spielberg's State Trait Anxiety Scale, Spielberg's Anger Scale and an interview schedule were administered to ascertain the factors contributing to depression among youth. Results reveal that anger and anger expression, state anxiety, severity of somatic problems and negative personal habits contributed to depression among youth.

Hops (1990) conducted studies to identify psychological correlates of depressive symptoms among adolescents. Batteries of psychological instruments were administered twice to over 2000 students in 4 high schools one month apart. Depression was assessed with the centre for epidemiological studies depression scale. As with adults dysphoria was correlated with a wide range of difficulties. With girls reporting significantly more symptoms from the 2 self- reports of depression, 4 groups were formed, high-high, high-low, low-high and low-low and girls were found as disproportionately represented among the high-high groups.

Avision and Mealpine (1992) examined sources of gender differences in depressive symptoms among 306 adolescents (aged 15-20 years, 54% female). Females experienced substantially higher levels of depressive symptoms than males. There was a significant relationship between stress and depression. Psychosocial resources appeared to be important protective factors associated with lower levels of depressive symptoms. Parent child relationship were important correlates of depressive symptoms and partially accounted for the gender difference in levels of depression.

Angold and Costello (1993) studied the depressive co-morbidity in children and adolescents. The authors reviewed recent epidemiological studies using standardized interviews and DSM-IIIR criteria. Results indicate that there is a high rate of co-morbidity in children and adolescents with major depressive disorders or dysthymia.

Brage (1993) investigated the extent of loneliness among 156 mid western adolescents (62 boys and 94 girls aged 11-18 years) in relation to depression, self-esteem, family strength, parent-adolescent communication, age and gender. It is found that students have high loneliness scores and that older subjects are loneliner than younger students. There is a significant relationship between loneliness and depression. Loneliness is negatively related to self-esteem family strengths and mother-adolescent communication.

Mennen (1993) evaluated the level of distress in sexually abused girls (aged 6-18 years) as predicted by the relationships of the perpetrator to the victim, the kind of abuse, the use of force, remoral from the home and race or ethnicity. Students completed measures of depression, anxiety and self worth, which were then trichotomized into distress levels. Penetration predicted higher levels of distress on depression and self-worth measures. Force predicted higher levels of distress on those measures when the perpetrator was not a father figure and lower levels of distress when the abuse was a father figure.

Bharkat, Saikh and Abdul (1998) discussed the role of physical and social environment in determining and shaping the behaviour of the individual. According to them a stressful and unhealthy environment can lead to several behavioural problems such as stress, depression, low self esteem and school failures. Psychopathology can help to alternate some of the behaviour problems.

Antonelli, Rubini and Fossone (2000) in their study of residential and non residential adolescent students show that the residential students have more negative self concept, lower levels of self esteem and more depressive symptoms than non residential students.

Moos, Rudolf and Brernie (2000) studied the impact of family environment in mental health of adults. The authors used Family Environment Scale for this study on subjects. The study reveals that families of distressed youth and adult tend to be high in conflict and low in cohesion, expressiveness, independence and integration. High family support has been found to be associated with reduced anxiety and depression and high self esteem, self-reliance and competence.

Moos (2000) described a conceptual model of the determinants and impact of family climate. High family support has been found to be associated with reduced stress and depression and high self-esteem, self reliance and competence.

Bisschop *et al.* (2004) estimated the direct and buffer effects of psychosocial resources on depression and examined whether these effects are different for various chronic diseases. Depressive symptoms, the presence of seven frequently occurring chronic diseases, social support and personal coping resources, physical functioning and socio-demographic variables were assessed by structured interviews. Results indicate that all resources, except social network size, show direct effect on depressive symptoms regardless of

the presence of chronic diseases. Having a partner, high self-esteem mastery, self-efficacy and feeling less lonely additionally buffer the psychological resources and exert a buffer effect on depressive symptoms.

Eley *et al.* (2004) studied family risk for depression on results from both biological and social influences. These may also be associated with other characteristics, including alcohol use, smoking and body mass index, and with environmental risks such as social problems, life events and educational level, all of which may be associated with depression in offspring. Questionnaires were obtained from 1294 parents of 1818 adolescent offspring. The analysis indicates a significant interaction such that those with high parental familial vulnerability, whose parents also have no qualification, and have a threefold risk of severe depressive symptoms.

Filho *et al.* (2004) conducted studied the association between gender, race, and social class and prevalence of depressive disorders in an urban sample (N=2302) in Bahia. Individuals mental health status was assessed by the PSAD/MPA scale. Race was assessed with a combination of self-designation and a system of racial classification. The overall relevance of depressive symptom was 12% with a female. Male ratio of 2:1. Divorced/ Widowed persons showed the highest prevalence and single the lowest. There was a negative correlation with education. Three-way interaction analysis found strong gender effect for poor and working class group for all race.

Marmorstein and Lacono (2004) examined conduct disorder (CD) and major depression (MD) in adolescents in relations to parent-child and psychopathology in their parents. Participants were drawn from a population based sample of twins and their families. Affected participant had life time diagnoses of CD/MD, controls had no history of either disorder. Results indicate that the presence of CD/MDD in an adolescent is related to increased rates of maternal MDD and parental antisocial behaviour. Both CD and MDD in adolescents are directly associated with high parent child conflict.

Fitzpatrick *et al.* (2005) observed depressive symptomatology among a sample of 10 to 18 years old African-American youths (N=1538). In addition to gender and age differences, adolescents exposed to threatening environments (school, neighbourhood, home) reported more depressive symptoms. Social capital had a significant inverse relationship with adolescent depression. Self-esteem and social capital index were negatively related to depressive symptomatology. Further more, the interaction effects of gender with social capital, age with self-esteem and age with grades were significant, indicating the presence of a buffering effect.

Hale *et al.* (2005) studied the association of perceived parental rejection to adolescent depression and aggression. The study focused on 1329 high school students aged 10-19 years. The subjects completed depression, aggression and perceived parental rejection questionnaires. The results reveal that perceived parental rejection mediates through adolescent depression and explains aggressive behaviour of adolescents as tested by a mediation level.

Locker and Cropley (2005) conducted a study to investigate changes occurring in anxiety, depression and self-esteem in secondary school children as they approached important school examinations and to examine variations between schools of differing design and status. Gender differences are found in majority of measures with females displaying greater levels of depression and negative affect immediately before the examinations, whereas males report higher positive affect and self-esteem and lower depression and anxiety, even within the week prior to the examinations. Differences between the schools are also found.

Thompson (2005) explored the roles of anxiety, depression and hopelessness as mediators between known risk factors and suicidal behaviors among, 1,287 potential high school dropouts. The result shows direct effects of depression and hopelessness on suicidal behaviours for males and direct effects of hopelessness, but not depression for females. For both males and females, anxiety is directly linked to depression and hopelessness, drug involvement had both direct and indirect effects on suicidal behaviour. Lack of family support show indirect influences on suicidal behaviors through anxiety for both males and females.

Kiviruusu, Huurrea and Aroa (2007) examined the association between chronic illness and depression and the role of psychosocial resources (coping styles, locus of control (LOC) and social support) in this association, among young Finnish adults aged 32. Gender differences in these phenomena

were also investigated. The results show that the chronically ill males are more depressed than healthy control males. They also used more emotion-focused coping, have a more external LOC and are less often married or cohabiting than healthy males. The association between chronic illness and depression among males attenuate when the effects of emotion-focused coping disposition and LOC are taken into account, indicating a possible mediating role for these resources. Among females no differences are found in depression or psychosocial resources between the chronically ill and healthy control groups. Psychosocial resources, especially LOC, explain the gender difference in the association between chronic illness and depression. Only a few buffering effects of psychosocial resources emerge: an active problem-solving coping disposition among the chronically ill males and perceived social support among the chronically ill females seem to act as buffers against depression. The results indicate a significant gender disparity in the association between chronic illness and depression among young adults.

DEPRESSION MANAGEMENT

Beck (1967, 1976), Beck and Young (1985), Young, Beck and Weinberger (1993) examined the role of deep-seated negative thinking in generating depression. The results show that negative thinking seems natural to them. Clients are taught that errors in thinking can directly cause depression. Treatment involves correcting cognitive errors and substituting less depressing and more realistic thoughts and appraisals.

Sanchoz, Lewinsohn and Larson (1980), assigned depressed out patients (N= 32) to either group assertion training or 'traditional' group psychotherapy. The results show that over a relatively short period of time, assertiveness training is more effective than traditional Psychotherapy in increasing self-reported assertiveness and alleviating depression.

In a study conducted by Hayman and Cope (1980) twenty-six moderately depressed females (mean age 21.3 yrs) were assigned randomly to assertiveness training. Results supported the effectiveness of treatment. Experimental subjects became significantly more assertive and engaged in significantly more activities than control subjects. Eight weeks after treatment, the experimental subjects' scores indicated significantly less depression. Other findings include significant negative correlations between measures of depression and assertiveness.

The study by Borkovec and Andrews (1987) examined thirty volunteers who met depressive symptoms and who received 12 sessions of training in progressive muscular relaxation. Sixteen of them were given cognitive therapy during 10 of those sessions and the remaining 14 received non directive therapy. Therapy was provided by 16 graduate student clinicians. The group as a whole showed substantial reductions in depressive symptoms and daily self-monitoring, although relaxation plus cognitive therapy produced significantly greater improvement than relaxation plus non-directive therapy. On several pre-therapy, post-therapy comparisons.

relaxation reduces depression and the results show significant positive relation between relaxation and outcomes.

In an investigation by Burns and Hocksema (1991) factor analysis of the self-help inventory in a group of 307 consecutive outpatients seeking Cognitive Behavioural Therapy (CBT) for affective disorders revealed 3 factors that assessed the frequency with which subjects used active coping strategies when depressed, the perceived helpfulness of these coping strategies and their willingness to learn new coping strategies. The frequency and helpfulness scale do not predict patient's subsequent compliance with self-help assignments or their rate of improvement during the first 12 weeks of treatment. These findings suggest that very resourceful patients are not better candidates for CBT than other patients and that patients' expectations about the value of active coping strategies do not predict the response to CBT. In contrast the willingness scale was correlated with the degree of improvement during the first 12 weeks of treatment. The willingness scale and compliance with self help assignment made addictive separate contributions to clinical improvement.

In a study Chan (1993) examined the components of assertiveness and depressive symptoms of 183 Chinese University undergraduate students with their responses to Rathus Assertiveness Schedule and the Beck Depression Inventory. Three dimensions of assertiveness emerged: expressing, controlling and demanding responses. These components were

found to relate differently to the beliefs in specific assertive rights, although there was no evidence that nonassertive behaviors could arise from beliefs that one did not have the rights to act assertively. Nonassertive responses, especially in expressing and disclosing oneself, correlated with depressed mood.

Alexander (1995) reviewed literature comparing relaxation and meditation techniques. Meta-analysis shows transcendental meditation (TM) to be significantly more effective than other forms of relaxation or meditation in (i) reducing psycho-physiological arousal (ii) reducing stress (iii) increasing positive mental health on measures of self esteem and (iv) reducing alcohol, nicotine, and illicit drug use relative to standard treatment and prevention programmes. Randomized controlled traits show that the TM technique significantly reduced hypertension and mortality in the elderly compared with a mental or physical relaxation technique.

In a study Janowick and Hackman (1995) explored the efficacy of assertiveness training and relaxation in promoting self-esteem and changes in depressive symptoms among adolescents. Two groups were given assertiveness training and a yogic relaxation technique referred to as *shavasana*. Pre and post test measures were taken on the personal orientation inventory and behavioural relaxation scale. Both groups showed significant increases in scores on self-esteem and decreased scores on depression.

Marcotte (1996) examined the efficacy of cognitive behavioural therapy on adolescent depression. Results suggest that short-term group cognitive behavioural interventions are effective with early and late adolescents. Treatment components included relaxation, cognitive restructuring, self-control skills, communication and problem solving skills. No single strategy seems to be more effective than the other.

Aniljose and Asha (2002) examined the efficiency of creativity training among children at risk of depression. Subject's were divided into two groups experimental and control groups. Experimental groups were given one month creativity training as a package. The results show that creativity training is effective for children at risk of depression and experimental group shows more symptom reduction than control group.

In the study Ellias and Bernard (2006) examined the effectiveness of cognitive behavioural therapy to childhood disorders. They found that individuals who can accept events and attributes no matter how negative, will experience natural feelings of disappointment and frustration, but will rarely manifest clinical depression. The increasing prevalence of depression in the child and adolescent population practitioners would be well advised to consider this approach in the prevention and treatment of depression in young clients. To promote school-based prevention programs that teach the connection between thoughts, feelings and behaviours, combined with a comprehensive intervention approach will hopefully empower young people to deal with this serious mental health problem.

A community-based nursing study was conducted by Sloman (2002) in Sydney, Australia to compare the effects of progressive muscle relaxation and guided imagery on anxiety and quality of life in people with advanced cancer. In the study, 56 people with advanced Cancer who were experiencing anxiety and depression were randomly assigned to 1 of 4 treatment conditions: (1) Progressive muscle relaxation training, (2) guided imagery training, (3)both of these treatment and (4) control group. Subjects were tested before and after learning muscle relaxation and guided imagery technique for anxiety, depression and quality of life using the Hospital Anxiety and Depression Scale and the Functional Living Index Cancer Scale. Results shows that there is no significant improvement for anxiety; however, significant positive changes occurred for depression and quality of life.

Larun, Nordheim , Ekeland ,Hagen and Heian (2006) assessed the effect of exercise interventions in reducing or preventing anxiety or depression in children and young people up to 20 years of age. The trials were combined using meta-analysis method. Results show that the depression scores showed a statistically significant difference in favor of the exercise group. They conclude that there appears to be an effect in favor of exercise in reducing depression and anxiety scores in the general population of children and adolescents.

Lee and Overholser (2006) developed an integrated treatment plan for person with depression and personality dysfunction. The challenges encountered by the therapist include: (i) differentiating borderline personality

from depressive symptoms. (ii) maintaining the therapeutic alliance (iii) managing impulsivity and self-destructive tendencies (iv) staying focused on long term therapeutic goals and (v) coping with non compliance. Over the course of 27 sessions, the client was able to make positive changes in mood, self-image and impulsive tendencies. Although the client's boarder line personality traits complicated the course of treatment for depression, neglecting these personality problems would have left the client vulnerable to depressive relapse.

A study reports on the efficacy of Cognitive Behavioral Therapy (CBT), Adolescent Skill Training - a group indicated preventive intervention (Young, Mufson and Davies, 2006). Adolescents in the two intervention conditions are compared on depression symptoms. The results show that adolescents who receive Cognitive Behavioral Therapy and Adolescent Skill Training have significantly fewer depression symptoms and better overall functioning at post-intervention and at follow-up.

A study by Bolton and Bass (2007) investigated the objective of assessing the effect of locally feasible interventions on depression and anxiety among adolescent survivors of war and displacement in Northern Uganda. The intervention methods are locally developed screening tools that assessed the effectiveness of interventions in reducing symptoms of depression and anxiety. Activity based intervention (creative play) Interpersonal Psychotherapy was used with individuals wait listed to receive treatment at

study end. The measure is a decrease in score on a depression symptom scale.

A study conducted by Brustein –Klomek(2007) examined the efficacy of interpersonal Psychotherapy for depressed adolescents. The aim of the study was to introduce the theoretical formulation, practical application and efficacy of interpersonal Psychotherapy for depressed adolescents. Instruments used Beck’s Depression Inventory to 120 Boys and girls from school. The results show that interpersonal Psychotherapy is an evidence based Psychotherapy for depressed adolescents in both hospital-based and community outpatient settings.

Horowitz *et al.* (2007) evaluated the efficacy of intervention programs for preventing depressive symptoms in adolescents. Participants were 380 high school students randomly assigned to a Cognitive Behavioral Program (CB), an Interpersonal Psychotherapy Adolescent Skill Training Program (IPT-AST) or a no-intervention control. The intervention involved eight 90 minutes weekly session run in small groups during wellness classes. At post intervention, students in both the CB and IPT-AST groups reported significantly lower levels of depressive symptoms than did those in the no intervention group.

A study was conducted by Newman and Motta (2007) to investigate the effects of aerobic exercise on children PTSD, Depression and Anxiety. Measures included Children’s PTSD Inventory, Children’s Depression

Inventory and the Revised Children's Manifest Anxiety Scale. This small 'n' study utilized a staggered baseline, pre/post repeated measures design. Results show that this study provided support for the positive effects of aerobic exercise on reducing PTSD, Depression and Anxiety.

Ramsay and Main (2007) utilized a quasi experimental pretest-post test design to assess the effectiveness of counselling type, in a sample of individuals diagnosed with low self esteem, high in anxiety and depression. Nine females underwent group peer counselling and nine underwent individual counselling. Both group peer counselling and individual counselling are found to significantly increasing self-esteem, self reported levels of overall life satisfaction and reduced anxiety and depression.

An evaluation of the effectiveness of Cognitive Behaviour Therapy for 12-14 year old school children was done by Habib, Seif (2007). The sample comprised 198 boys and 136 girls. Students were assessed using the Child Depression Inventory and the Coopersmith Self-Esteem Inventory. The 32 children with depression were offered Cognitive Behaviour Therapy. They were assessed 3 months after the intervention using the same tools and the results indicate the effectiveness of this therapy and reduction in depressive symptoms.

The studies reviewed above clearly suggest that depression among adolescent children is caused by a variety of factors. And more generally, it is not a single factor but a combination of different factors that operate to produce and maintain depressive feelings in them.

METHOD

The term method refers to the rules applicable to research or work in a given area and includes the research design, sample, tools, procedures and analyses of data.

Design

Generally, a research design is the overall plan of an investigation. The plan should describe the research question or questions, the methods of observation and measurement, the different conditions of observation and manipulation, procedures of collecting data under different experimental arrangements, and the method of data analysis. In essence, a research design refers to the methods and procedures of an investigation.

Research design not only anticipates and specifies the seemingly countless decisions connected with carrying out data collection, processing and analysis but it presents a logical basis for these decisions also (Manheim, 1997). According to Bulmer "research design is the specification of the problem, conceptual definitions, derivation of hypothesis to test, and definition of population to be studied" (c.f. Zikmund, 1998) has described research design as a master plan specifying the methods and procedures for collecting and analyzing the needed information.

The research objectives depend on whether the research is descriptive, exploratory, explanatory or experimental. A clear understanding of research

design is necessary to do research. Whether the investigator will produce reliable and valid data on the research question will depend mostly on the design used in the study.

Research design in psychology can be divided into two broad types: experimental research design and passive observational design. In the first type of design variables are systematically imposed on or withheld from the subjects, either by experimental or by naturally forming conditions in society. In the passive observational research design, the researcher merely observes subject under many natural conditions and records the subjects' scores (or status) on a number of variables. Later these scores and status conditions under which the observations were made are interrelated. No attempt is made by the researcher to impose conditions or make systematic changes (Asher, 1994).

The present study is intended to examine the role of cognitive factors in depression. It is also planned to design a suitable intervention package and to test the efficacy of it in managing depression. Pre-post experimental control design is used for this purpose. The study is planned among adolescents at risk of depression.

Sample

Three higher secondary schools from Thrissur, Malappuram and Kozhikode Districts were selected for drawing the sample. Three hundred higher secondary school students of the age between 15-19 were included in

the study. In each school two classes were assigned for conducting the study by the school authority based on their convenience.

From among the 300 students 60 were selected for the intervention purpose. They were selected on the basis of their scores on the Malayalam version of Beck's Depression Inventory. The participants who volunteered to undergo the training programme were included in the intervention phase of the study. From among them 30 students were randomly assigned to the experimental group and 30 in the control group. Informed consent was obtained from parents/significant others for involving children in the present study.

The following tools were used in the present study

1) The Beck Depression Inventory (Malayalam version)
2) The Shibu-Stress Inventory
3) AECOM Coping Style Scale (Adapted version)
4) Personal Belief Scale
5) Frustration Tolerance Scale
6) Tests of Creative Thinking Abilities

DESCRIPTION OF THE TESTS USED

The Beck Depression Inventory –BDI (1996)

The Beck Depression Inventory- Second Edition (BDI-II) is a 21 item self-report instrument for measuring the severity of depression in adults and

adolescents aged 13 years and older. This version of the inventory (BDI-II) was developed for the assessment of symptoms-corresponding to criteria for diagnosing depressive disorders listed in the American Psychiatrist Association's Diagnostic and Statistical Manual of Mental Disorders and Statistical Manual of Mental Disorders fourth edition-DSM IV-1994.

During the last 35 years the BDI has become one of the most widely accepted instrument for assessing the severity of depression in diagnosed patients and for detecting possible depression in normal populations.

Reliability and Validity

The two comprehensive reviews concerning the BDI's applications and psychometric properties across a broad spectrum of both clinical and non clinical populations have reported its high reliability, regardless of clinical population. The average coefficient alpha of the BDI for psychiatric patients falls in the high 0.80s. Similarly, the concurrent and construct validity of the BDI with respect to a variety of psychological measures has been established. The BDI, moreover differentiated patients with clinical depression from non depressed psychiatric patients (Steer et al, 1986).

Adaptation of the Scale

In adapting the Beck Depression Inventory for the present study the English version was translated into simple Malayalam language without loosing the concept of items by an expert in Malayalam language. This was

back translated to English by an independent translator who is equally competent in both languages. There is no difference between the Original English and back translated English version. Hence the Malayalam version was found to be satisfactory for this study.

Administration and Scoring

Beck Depression Inventory was administered as follows:

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

Scoring

It is scored by summing the ratings for the 21 items. Each item is rated on a 4-point scale ranging from 0 to 3. If an examine has made multiple endorsements for an item, the alternative with the highest rating is used. The maximum total score is 63.

The cut score guidelines below are suggested for total scores of patients diagnosed with major depression.

Total Scores	Range
0-13	Minimal
14-19	Mild
20-28	Moderate
29-63	Severe

Reliability and Validity

A sample of 50 (male-24, Female 26) of the age group 17-20 was used for this purpose. The odd-even-reliability applying Karl Pearson's Correlation Coefficient was found to be 0.64. This value shows that adapted version is fairly reliable for the particular study. It had both content and predictive validity.

The S.S. Inventory (Shibu and Dhrmangadhan, 1992)

Stress is a part of every day life, and human body's response to stressful stimuli seems to play a key role in mankind's survival. At moments of comfort and convenience stress may not be a problem. But when confronted with challenge and controversy, the way in which people react (physically, emotionally and spiritually) is an index of their success in dealing with stress. The present inventory measures the level of stress in an individual.

The S.S. Inventory contains thirty items capable of assessing responses with regard to family stress, social stress and environmental stress. Scoring was done based on the manual.

Reliability and Validity

In the present scale the split-half method is used for determining the reliability. The odd-even reliability obtained for the S.S. Inventory is 0.79. And the inventory has satisfactory face validity and content validity.

Frustration Tolerance FRTO (Rai, 1983)

Frustration occurs when a person is unable to reach the desired goal on account of some barrier or other, or due to the absence of desired and appropriate goals. Barriers may be external or internal. Inability to achieve one's goal may also lead to self-devaluation and inferiority (Rai, 1983).

The term frustration tolerance refers to the amount of stress one can tolerate before his integrated functioning is seriously impaired. Thus frustration tolerance refers to the capacity of the individual to show persistence in efforts despite repeated failures and antagonistic environment. Thus it is necessary to tolerate the frustration resulting from such events as failure in examination, loss of status etc, to maintain the integration of the personality (Rai, 1983).

Scoring

Time and number of attempts are summed and mean time and mean number of attempts are calculated for each subject to know his/her frustration tolerance. Data obtained in this manner may be analysed using any test of significance.

AECOM Coping Style Scale

Coping mechanisms serve as an internal source of emotional strength and moderate a person's reaction to any perceived stress, whether internal or external. Coping is defined as the 'cognitive and beahvioural efforts used to master, tolerate and reduce demands that exceed a person's resources (Cohen and Lazarus, 1979). Several studies have demonstrated crucial role of coping styles in buffering the impacts of different stressors on the development of overt psychiatric morbidity (Folkman, *et al.*, 1986). It appear that it is not the stressor alone that leads to serious outcome but the way in which a person perceives and respond to it. It has been reported that depressed individuals have more difficulties in coping with interpersonal problems than do non-depressed or the general population (Lineham *et al*., 1986).

AECOM Scale (Plutclik, 1980)

The AECOM (Albert Einstein College of Medicine) coping scale for the measurement of coping styles is a questionnaire based on the psycho-evolutionary theory of emotion developed by Plutclik in 1980, which postulates systematic connection between 8 basic emotions and 8 coping styles. This consists of 87 items each rated by the subject on a 4 point scale ranging from "never" to "often" weighted 0 to 3. It is based on the expressed opinion that the way each individual cope with successful life events in relatively independent on his or her emotional or psychopathological state and characteristic of his or her.

This model assumes that there are 8 basic coping styles that may be used by an individual in his or her attempt to reduce stress or cope with life problems. These coping styles defined by the author are:

Minimization

Minimizing the importance of the problem or situation (I look on the bright side of things). Twelve items belong to this category. Range of scores - 0-36.

Suppression

Avoiding the problem or situation (I avoid thinking about unpleasant things). Thirteen items belong to this category. Range of scores – 0-39.

Seeking Succorance

Asking others for help (when I have a problem to try to let others help me). Eleven items belong to this category. Range of scores 0.33.

Replacement

Dealing with problems by identifying alternate solution (if an illness or accident prevented me from doing my usual work, I would still find useful things to do). Twelve items belong to this category. Range of scores 0-30.

Blame

Blaming others or the ‘system’ for your problem (the arguments I get into are started by other people). Ten items belong to this category. Range of scores – 0-30.

Substitution

Engaging in tension reducing activities such as alcohol or drug use or sports (when I get upset, I look for something to eat). Eleven items belong to this category. Range of scores – 0-33.

Mapping

Collecting information about the situation or problem (I get as much information as I can before I make a decision). Eight items belong to this category. Range of scores – 0-24.

Reversal

Acting opposite of the way he or she feels (I try to see funny side of upsetting situations). Ten items belong to this category. Range of scores 0-30.

Reliability and Validity

The internal reliability is measured by Cronbach's alpha (α) was as follows: Minimization 0.71, Suppression 0.82, Help seeking 0.67, Replacement 0.62, Blame 0.73, Substitution 0.64, Mapping 0.80, Reversal 0.46 and 0.78 for the entire scale. The internal validity of the scale was found to have a α value between 0.58 and 0.79 with a mean α-value of 0.70. The questionnaire had both predictive validity and discriminative validity.

Adaptation of the Scale

In adapting AECOM coping scale for the present study the English version was translated into simple Malayalam language without loosing the

concept of items by an expert in Malayalam language. This was back translated to English by an independent translator who is equally competent in both languages. There was no difference between the original English and back translated English version. Hence the Malayalam version was found to be satisfactory for this study.

Administration and Scoring

AECOM coping style scale was administered in an open interview method. Each item listed in the scale was read out to the subject and the response was entered in a 4 point scale. Scoring was done as per the directions in the manual.

Reliability and Validity

A sample of 60 (male, N=34, Females N= 26) of the age group 18 to 60 in Calicut was used for this purpose. The odd-even reliability applying Spearman's Product Moment Correlation Coefficient was found to be 0.77. This value shows that adapted version is fairly reliable for the particular study. It had both predictive and discriminative validity.

Personal Belief Scale - PBS (Aniljose and Asha, 2005)

Individual strength and success to a great extent depends on one's own belief about his or her personal qualities and life in general. The present inventory is prepared and standardized in order to assess the strength and direction of person's belief about himself/herself and the way he/she feels about life in general.

Personal Belief Scale consists of 28 positive and negative statements. The response to each item is to be marked in the categories of A, B, C, D or E as required by the subject. In the columns provided for each of the 28 items. A high score indicates strong positive personal belief and a low score shows negative personal belief.

Scoring

The scoring was done as follows:

A score of 5, 4, 3, 2 or 1 was given to the category Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree respectively for positive items. The scoring was done in the reverse order for a negative item.

Reliability and Validity

There are different methods for estimating the reliability of a test. The present scale the split-half method is used for determining the reliability. For this purpose a sample of 50 subjects including male and female of the age group 18-20 years have been selected. Odd and even items in the inventory is calculated using Pearson's correlation (r). The correlation thus obtained for the PBS is 0.64.

To ascertain the validity of the present scale scores obtained by a sample of 50 subjects belonging to the age group of 18-20 years on the PBS were correlated with those obtained by them on the Self-Esteem Inventory. The correlation coefficient is 0.71.

Test of Creative Thinking Abilities - TCTA (Asha, 1993)

Research on creative thinking suggests that it is desirable in our schools to locate children who are endowed with unusual potentialities and who therefore need special handling. Early recognition of talent is expected to help parents, teachers and policy makers to understand, interpret and respond adequately to children's needs, predict future achievement as well as to institute appropriate measures for their healthy psychological growth and functioning.

In the present study used the adapted version of Wallach and Kogan's Test of Creative Thinking Abilities (TCTA). It consist of five sub-tests. Three of them are verbal and two are non-verbal in nature. The verbal tests are:-

Instances:- This sub-test is one of the three verbal techniques used to assess creativity. This consist of four items. But in the present study we used only two item. The subjects are asked to generate possible instances of a class concept that is specified in verbal form.

Alternate Uses:- From this instrument we used two objects. The subjects are to generate possible uses for these verbally specified objects.

Similarities:- From this sub-test we used only two pairs of objects. The subjects are to generate possible similarities between two verbally specified objects.

The non-verbal or visual stimuli tests are:

Pattern meanings: This sub test consists of two verbal stimulus, materials, each in a separate card. Each stimulus is a pattern of lines. The subjects are to generate meanings or interpretations relevant to the pattern in question.

Line meanings: This sub-test consist of two visual stimulus materials, each in a separate card. Each stimulus is mere lines of some form. The subjects are to generate meanings or interpretations relevant to the form of lines in question.

Administration and Scoring

After giving the general information regarding the nature of the tests, blank sheets of paper for writing the responses are to be distributed among the subjects. They should be instructed to write down the personal details required for the study at the top of the response sheet. Then the tests should be given one by one with the specific instructions needed for answering the items in each test. The instructions are to be read to the group by the investigator in a clear and even tone. The examples may be explained to them wherever necessary. Simple clarifications may also be given on request without affecting the quantity and quality of the responses. This is done to make sure that the subjects understand the requirements of each of the sub-tests before proceeding to the task proper.

The following procedures are to be used in administering the different sub-tests of the TCTA.

Instances: “I am going to read the name of an object and it is your job to write as many things as you can that are like what is read out”.

Alternate Uses: “Here I am going to name an object you are to write down the different way in which the object can be used”.

Similarities:

“ In this part of the task I am going to name two objects. You have to think of all the ways in which these two objects are like. ie., I might name any two objects, your job will be to tell me all the possible ways in which these two objects are alike”.

Pattern Meanings:

“In this task you can really feel free to use your imagination. You will be shown a number of drawings. After looking at each one of it, you are to write all the things you think each complete drawing could be”.

Line Meanings:

“In this game like task I am going to show you some lines. After looking at each one, your job is to write all the things it makes you think of. You have to write what the whole line makes, you think of not just a part of it”.

In the case of creativity instruments two types of scores viz., number and uniqueness may be obtained. It was done based on the manual. In all the

sub scales a high score indicates high creativity and low score indicate poor creativity.

The scores for ideational fluency is obtained by calculating the total of all the responses given for each item and summing up all these totals.

Originality of responses is derived based on the statistical infrequency of the innovative ideas provided in each items and then summing up all these together.

Reliability and Validity

Reliability of the instrument was ascertained by finding out item-sum correlations and also by odd-even method. The scores obtained by 100 boys (mean age = 14.68) and 100 girls (mean age = 14.42) were used to find out the reliability coefficients by both methods. The results which respect to boys indicate that of the 88 item-sum correlations 82 are 0.44 or better and 6 are 0.28 or better. In the case of girls of the 88 correlations 8 are below 0.40 but above 0.24 and 82 are above 0.40 or better. The results reveal a fairly high degree of internal consistency of the number and uniqueness measures of the creativity subtests.

To estimate validity coefficients two external criteria namely the test of creative thinking and high school personality questionnaire on the calculated dimension of creativity were used. The correlation between the scores of the present TCTA and Test of Creative Thinking has turned out to be 0.77 for boys and 0.75 for girls.

INTERVENTION

Once an individual has been diagnosed as at risk depression both psychotherapy and counseling could be options. More and more doctors are realizing that chemical imbalances often account for mental illness, but at the same time the importance of psychotherapy cannot be discounted. If an individual's depression has been caused wholly or in part by psychological factors, counselling may relieve the depression, but the underlying cause will not be cured by counselling alone. Therapy can help the person deal with his part in a healthy manner and also in learning ways to cope with very difficult process of growing up.

Antidepressant medication or counselling is a controversial topic. There are no long term studies that show what kind of impact this treatment procedures will have on individual's development. Most professionals will recommend therapy as a first line of defense for the people with depression.

A careful examination of outcome studies on depression among adolescent children suggest that rather than a specific therapy a combination of different therapeutic procedures will be more effective in managing the causative factor and controlling depressive reactions. Hence in the present study a package of intervention procedures is used with children at risk of depression. It is designed based on the understanding that effective approach to deal with problems includes efforts to increase physical/ mental

preparedness, for eg: through physical exercise, yoga or meditation, creative diversions for cognitive as well as emotional enrichment and strategies of dealing with basic emotional problems. The package includes:

i. Relaxation
ii. Assertiveness training
iii. Brain storming and
iv. General counseling

(i) Relaxation

Applying progressive relaxation procedures to depression emerged from the observation that anxiety symptoms often occur along with depression. Moreover depression can be exacerbated by stress. A few research studies have demonstrated the superior effectiveness of progressive relaxation alone to no treatment in adolescents and adults with mild to moderate depression and in women with post partum depression. More frequently research supports the inclusion of a relaxation component in a comprehensive treatment package for depression. In addition to progressive relaxation training, the coping with depression course is composed of several treatment components including cognitive therapy, social skills training, pleasant events scheduling, self-monitoring and training in personal goal achievement in a group setting (Grover and Nagle, 2002).

Relaxation is generally defined as the state or condition which is opposite to the state of tension. Progressive muscle relaxation is a technique

of stress management developed by American physician Edmund Jacobson in the early 1920's. He argues that muscular tension accompanies anxiety, one can reduce anxiety by learning how to relax the muscular tension. Jacobson's Deep Muscle Relaxation Training was used in the present study. It is also known as the progressive relaxation training because as the training procedure proceeds from hand to head and from head down towards the rest of the body, the individual bound to feel progressively more and more relaxed (Masters ,Thomas and Hollon,1994). The major steps of Jacobson's Progressive Muscle Relaxation as follows:

1. Right (or dominant) hand and forearm
2. Right (or dominant) biceps
3. Left (or opposite) hand and forearm
4. Left (or opposite) biceps
5. Shoulders and upper back
6. Neck
7. Lower cheeks and jaws
8. Upper cheeks and nose
9. Forehead
10. Chest (breathing)
11. Abdominal region
12. Right (or dominant) thigh.
13. Right (or dominant) calf

14. Right (or dominant) foot
15. Left (or opposite) thigh
16. Left (or opposite) calf
17. Left (or opposite) foot.

(Mc Neil and Lawrence, 2002)

At first the general instructions are given as follows:

“The aim of providing training in relaxation is to increase the discrimination of muscle tension and to train you to relax even in small degree of tension. Relaxation is a skill to be learned. Please do not take this as drudgery. That is never perceives relaxation as something that is imposed. By practice, you can have voluntary control over tension (Swaminathan and Kaliappan, 1997).

The procedure involves training the subjects to successively tense and relax various muscle groups in their body, while the instruction directs their attention to pleasant sensations. The subjects were instructed to alternate tense and relax each muscle groups. The entire procedure takes 20 to 30 minutes.

(ii) Assertiveness Training

Assertiveness training is a form of behaviour therapy designed to help people stand up for themselves to empower themselves, in more contemporary terms. Assertiveness is a response that seeks to maintain an

appropriate balance between passivity and aggression. Assertive responses promote fairness and equality in human interactions, based on a positive sense of respect for self and others. Assertiveness training has a decades-long history in mental health and personal growth groups. The approach was introduced to encourage people to stand up for themselves appropriately in their interactions with others, today, assertiveness training is used as part of communication training in settings as diverse as schools, corporate boardrooms, and psychiatric hospitals, for programs as varied as substance abuse treatment, social skills training, vocational programs etc.

The purpose of assertiveness training is to teach persons appropriate strategies for identifying and acting on their desires, needs and opinions while remaining respectful of others. This form of training is tailored to the needs of specific participants and the situations they find particularly challenging. It is a broad approach that can be applied to many different personal, academic, health care and work situations. Specific areas of intervention and change in assertiveness training include conflict resolution, realistic goal-setting depression and stress management. In addition to emotional and psychological benefits, taking a more active approach to self-determination has been shown to have positive outcomes in many personal choices related to health, including being assertive in risky sexual situations, abstaining from using drugs or alcohol and assuming responsibility for self-care if one has a chronic illness like diabetes or cancer etc.

Assertiveness training typically begins with an information-gathering exercise in which participants are asked to think about and list the areas in their life in which they have difficulty asserting themselves. Very often they will notice specific situations or patterns of behaviour that they want to focus on during the course. The next stage in assertive training is usually role-plays designed to help-participants practice clearer and more direct forms of communicating with others. The role-plays allow for practice and repetition of the new technique helping each person learn assertive responses by acting on them. Feedback is provided to improve the response and the role-play is repeated. Self-observation skills, awareness of personal preferences and assuming personal responsibility are important components of the assertiveness training process.

An enhanced sense of well-being and more positive self-esteem are typical results from assertiveness training. Many participants report that they feel better about themselves and more capable of handling the stresses of daily life. In addition people who have participated in assertiveness training have a better sense of boundaries, and are able to set appropriate and healthy limits with others.

A healthy sense of self-determination and respect for others is the ultimate outcome of assertiveness training. Such a balance helps each person work better with others and make appropriate decisions for themselves.

(iii) Brainstorming

Brainstorming is a group creativity technique designed to generate a large number of ideas for the solution to a problem. The method was first popularized in the late 1930s, by Alex Faickney Osborn. The traditional brainstorming may not increase the productivity of groups, it has other potential benefits, such as enhancing the enjoyment of group work and develop interpersonal relations.

There are four basic rules in brainstorming these are intended to reduce the social inhibitions that occur in groups and therefore stimulate the generation of new ideas. The expected result is a dynamic synergy that will dramatically increase the creativity of the group.

1) Focus on quantity: It means enhancing divergent production, aiming to facilitate problem solving through the maximum, quantity breed quality.
2) No criticism: It is often emphasized that in group brainstorming, criticism should be put ‘on hold’ so that one can creates a supportive atmosphere where participants feel free to generate unusual ideas.
3) Unusual ideas are welcome: To get a group and long list of ideas, unusual ideas are welcomed. They may open new ways of thinking and provide better solutions.
4) Combine and improve ideas: Good ideas can be combined to form a

single very good idea, as suggested by the slogan “1+1 = 3”. This approach is assumed to lead to better and more complete ideas than merely generating new ideas along. It is believed to stimulate the building of ideas by a process of association.

Process of Conducting Brainstorming

1) Participants who have an idea but no possibility to present it are encouraged to write down their idea and present it later.
2) The idea collector should number the ideas, so that the chairperson can use the number to encourage quantitative idea generation.
3) The idea collector should repeat the idea in the words he or she has written it, to confirm that it expresses the meaning intended by the originator.
4) When more participants are having ideas, the one with the most associated idea should have priority. This to encourage elaboration on previous ideas.

In short Brainstorming is a popular method of group interaction in both educational and day to day life situations. Although it does not appear to provide a measurable advantage in creative output, brainstorming is an enjoyable exercise that is typically well received by participants. Newer variations of brainstorming seek to overcome barriers like inhibitions, tensions and may well prove superior to the original technique. How well

these newer methods work, and whether or not they should still be classified as brainstorming, are questions that require further research before they can be answered.

(iv) General Counselling

Counseling is a process that involves the use of psychological methods in giving professional guidance and assistance to individuals, families or groups. From a broader perspective, counseling involves the use of interpersonal interactions, including but not limited to those between therapist and client (s), to identify, process and resolve relational, cognitive, emotional, cultural and/or spiritual issues that hinder client development or growth. Counseling allow clients to communicate their thought and feelings spontaneously in a caring and nonthreatening environment. The use of techniques that allow clients to create and express themselves in nonverbal ways are often less threatening and can help clients gain an understanding of their strengths as well as their weaknesses and conflicts.

In terms of the counselor, creative interventions require that counselors devote time and energy to being flexible, spontaneous and sometimes provocative. The circumstances sometimes may helps the interventions successful. One way of setting up circumstances so therapeutic creativity is possible is to make therapeutic sessions more similar to play than to work. By doing so, clients are attracted to participating in activities the counselor may suggest because therapeutic directives are seen as non-threatening and

even fun. This is not to diminish clients pain or the struggle required in many cases for change, but to simply suggest that successful therapy may involve a combination of play and hard work and that creativity at some level may be a requirement for successful intervention.

There are three phases in intervention

I Phase

As a first step, the investigator met the concerned authority of the selected schools and explained the nature of the study. Then the date for the first phase of the study was fixed.

During the first phase base line data were collected from the subjects.

Procedure

The tests are self-administering. The instruction were given in the test itself but the investigator explained it for their clarity. The subject were asked to read the instructions and to fill the space given for personal details. Then the subjects were asked to read each tests and mark their answers in an appropriate space according to their choice. After they were completed, the investigator selected 300 subjects with their scores. From among them 60 were selected as high risk of depression based on their scores in BDI. Then they were randomly allotted to the experimental and control group, so as to have 30 subjects in each group.

II Phase

In the second phase, the experimental group were given one month training including Relaxation, Assertiveness training, Brain-storming and General counseling were given to them.

The control group was not given any task but requested to participate in the study after one month. After one month training the above tests were given to the 60 subjects. Other instructions are the same as given before. After the test was completed the investigator thanked for their co-operation and collected the materials back.

III Phase

A follow up was conducted one month after the training. Both experimental and control group were assessed using appropriate tests with procedure employed in the pre-test phase.

OBJECTIVES OF THE STUDY

The present study has two parts. In part I the objective was to examine the role of selected cognitive factors namely, stress, coping styles, frustration tolerance, personal belief, creative thinking, ideational fluency and originality of ideas. In part II, the objective was to plan and design a package of intervention and test the efficacy of it to manage stress, to improve personal belief and reduce depression among adolescent children.

1. To study the degree and nature of depression in adolescent population.

2. To study the effect of variables like stress, coping style, frustration tolerance, personal belief and creative thinking on depression in adolescents.

3. To study the effect of psychological intervention on depressed adolescent population.

HYPOTHESES

The following hypotheses were examined in the present study

I. Adolescent children with high risk of depression differ from those with low risk of depression on stress.

II. There is difference between adolescent children with high risk of depression and low risk of depression on coping styles.

III. Adolescent children with high risk of depression differ children with low risk of depression on frustration tolerance.

IV. Groups of adolescents with high risk of depression and low risk of depression differ from each other on personal belief.

V. There is difference between adolescent children with high risk of depression and low risk of depression on creative thinking.

VI. High risk and low risk groups of adolescent children differ from each other on ideational fluency.

VII. Adolescent children with high risk of depression and low risk of depression differ from each other in originality of ideas.

VIII. The intervention package is effective in reducing stress, improving personal belief and reducing depression among adolescent children.

STATISTICAL ANALYSIS

The hypotheses framed were tested using Analysis of Variance (two-way), ‘t’ tests and group profile analysis was also done when required.

RESULTS AND DISCUSSION

The objective of the present study was to see whether there is any significant difference between adolescent children with high risk of depression and those with comparably low risk of depression in cognitive factors viz., stress, coping styles, frustration tolerance, personal belief, creative thinking, ideational fluency and originality of ideas. For this purpose the samples of boys as well as girls were divided into three groups viz., groups with high risk of depression, moderate risk of depression and low risk of depression based on their scores in Beck's Depression Inventory. Thus, children who scored below 19 were considered as low risk group, those scored between 20 and 28 as moderate risk group and those scored above 28 as high risk group.

Then, the scores obtained by these groups of boys and girls on dependent variables such as stress, coping styles, frustration tolerance, personal belief, creative thinking, ideational fluency and originality of ideas were subjected to two-way analysis with a view to study possible interactions if any. In cases where F-ratios were found significant, differences in the mean scores between the groups compared were tested for significance using 't' test for independent samples.

The results are presented and discussed in the following pages. There are two sections in this chapter Part I presents the results and discussion

relating independent variables of sex and depression to dependent variables of cognitive factors. Part II deals with intervention and outcomes.

PART I

This section presents the results of analysis of the scores on different cognitive factors in relation to depression and sex.

Classification of the sample used for analysis is given in the Table 1.

TABLE 1: Number of children in groups of high, moderate and low risk of depression

Level of Depression	Sample (Total)	Boys	Girls
High risk	100	30	70
Moderate risk	91	35	56
Low risk	109	36	73

Table 1 shows the sample size and distribution of the subjects in terms of sex and depression. The table indicates preponderance of girls compared to boys among the subjects. This may be due to the educational and cultural background of Kerala. According to the state higher secondary board more girls than boys, (the ratio being 2:1 approximately, for girls and boys respectively) register for higher secondary education in the schools of Kerala. This is reflected in the sample of girls and boys drawn for the present study. When proportionate representation of the higher secondary student population was sought, chances of girls' for inclusion in the sample were more than those of boys.

Again it seems that parents invest more in male children than female children. They are aware of boys' problems more and attend to solve them immediately but girls' problems are not given much attention (Joseph, 2005). Thus they get accumulated and develop into mental health problems. Further unlike in the case of boys adolescence brings with it additional stresses and strains for girls in relation to menarche and related emotional conditions. This is likely to play a crucial role in making girls more psychologically distressed and depressive as seen in the present sample. Similar characteristic patterns of samples are reported by Weissman and Boyd, (1983); Suharabanu (2005) and Hankin, Mermelstein and Roesch (2007).

TABLE 2: Analysis of Variance of the scores on stress of the three groups of boys and girls

Source	Sum of Squares	df	Mean Squares	F	Sig.
Sex	419.90	1	419.90	1.22	0.27
Depression	8739.84	2	4369.92	12.65	0.00
Sex & Depression	344.43	2	172.25	0.50	0.61
Error	101537.39	294	345.37	- -	- -
Total	113178.92	299	- -	- -	- -

Summary of ANOVA (2-way) presented in Table 2 shows that sex has no significant effect on stress. Depression is found to have a highly significant effect on stress. However the interaction effect of sex and depression on stress is not found significant.

The results indicate that adolescent boys and girls do not differ with respect to their experience of stress. And stress experienced varies with the levels of depression shown by the adolescent children.

TABLE 3: Means, SDs and t-values of the scores on stress of the groups with high, moderate and low risk of depression.

Depression	N	Means	Std. Deviation	Std. Error Mean	t
Low	109	50.81	20.02	1.92	4.99**
Moderate	91	64.33	17.89	1.88	
Low	109	50.81	20.02	1.92	4.38**
High	100	62.23	17.45	1.75	
Moderate	91	64.33	17.89	1.88	0.82
High	100	62.23	17.45	1.75	

*** Significant at 0.01 level*

Table 3 presents the means, SDs and ‘t’ values of the three groups namely high, moderate and low risk groups of adolescents. The results indicate that there is significant difference between low and moderate risk groups. The difference is significant at 0.01 level. Mean values of the groups show that the less depressed adolescent group experience low stress compared to moderately depressed group. An examination of the mean scores of high and low depressed groups of adolescents suggests significant difference between them is stress experienced. Here also the less depressed group seems to have less stress than the more depressed group. The highly depressed children are found as experiencing comparably more stress than low and moderate groups.

The results suggest that high stress is a factor that is likely to trigger depression in adolescent children.

The hypothesis that is adolescent children with high risk of depression differ from those with low risk of depression on stress is accepted.

The present findings may be explained in terms of the changes associated with this life stage. Adolescence is recognized as a period of much emotional turmoil. Children at this developmental stage are subject to the stresses and strains and thus to the ups and downs in their mood. The several deleterious changes and extremes of dejection and exhilaration characterize this mood change and is likely to increase the vulnerability to depression.

The findings are supported by a number of studies. For example, Hawkins, Hawkins and Seeley (1993), Al-Gelban (2007) and others. Paykel (1983) reports that comparable stressful events precede depressive breakdown. Studies by Lempers, Lempers and Netusil (1990). Holahan and Moose (1991), Singh (2005), Hankin, Mermelstein and Roesch (2007) are also in line with the present results.

TABLE 4: Analysis of Variance of the scores on coping strategy of minimization of the three groups of boys and girls.

Source	Sum of Squares	df	Mean Squares	F	Sig.
Sex	52.11	1	52.11	2.45	0.12
Depression	11.98	2	5.99	0.28	0.76
Sex & Depression	41.44	2	20.72	0.97	0.38
Error	6291.26	294	21.40	- -	- -
Total	6391.79	299	- -	- -	- -

Summary of ANOVA of the scores on coping strategy of minimization is presented in Table 4. The results show that there is no significant effect for sex or depression on minimization. The combined effect of sex and depression on minimization is also not significant. The findings indicate that both boys and girls are similar in their use of minimization as a strategy to deal with depression. The same trend is seen in the case of children with high, moderate and low risk of depression.

TABLE 5: Analysis of Variance of the scores on coping strategy of suppression of the three groups of boys and girls

Source	Sum of Squares	df	Mean Squares	F	Sig.
Sex	0.01	1	0.01	0.00	0.99
Depression	135.34	2	67.67	2.24	0.11
Sex & Depression	109.46	2	54.73	1.81	0.17
Error	8888.03	294	30.23	- -	- -
Total	9070.92	299	- -	- -	- -

With respect to the coping style suppression the results (Table 5) show no significant effect of sex or level of depression. The combined effect of sex and depression is also not significant on suppression.

TABLE 6: Analysis of Variance of the scores on coping strategy of seeking succorance of the three groups of boys and girls

Source	Sum of Squares	df	Mean Squares	F	Sig.
Sex	16.14	1	16.14	0.80	0.37
Depression	30.38	2	15.19	0.75	0.47
Sex & Depression	20.22	2	10.11	0.50	0.61
Error	5941.47	294	20.21	- -	- -
Total	6033.53	299	- -	- -	- -

Table 6 presents the results Two-Way ANOVA done on the scores on the coping style seeking succorance. Status of sex or level of depression does not seem to relate to seeking succorance. The combined effect of sex and depression on this coping style is also not significant.

TABLE 7:Analysis of Variance of the scores on coping strategy of replacement of the three groups of boys and girls

Source	Sum of Squares	df	Mean Squares	F	Sig.
Sex	65.23	1	65.23	2.82	0.09
Depression	61.75	2	30.88	1.34	0.27
Sex & Depression	13.68	2	6.84	0.30	0.74
Error	6801.26	294	23.13	- -	- -

Total	6938.84	299	- -	- -	- -

Table 7 shows the results of analysis of variance of the scores on the coping strategy of replacement. The findings reveal that there is no significant effect of sex on replacement. A similar trend is seen with respect to depression also. The combined effect of sex and depression is also not significant on replacement.

TABLE 8:Analysis of Variance of the scores on coping strategy of blame of the three groups of boys and girls

Source	Sum of Squares	df	Mean Squares	F	Sig.
Sex	3.75	1	3.75	0.20	0.10
Depression	2.62	2	1.31	0.07	0.93
Sex & Depression	13.35	2	6.67	0.36	0.70
Error	5461.53	294	18.58	- -	- -
Total	5475.55	299	- -	- -	- -

Table 8 shows the summary of ANOVA (Two-Way) of the scores on coping strategy of blame. The results show no significant effect for sex or depression. The interaction effect of sex and depression is also not found significant on blame. The results indicate that boys and girls are homogenous with respect to the use of blame. Similarly children with high, moderate and low level of depression are also similar in using blame as a coping style.

TABLE 9:Analysis of Variance of the scores on coping strategy of substitution of the three groups of boys and girls

Source	Sum of Squares	Df	Mean Squares	F	Sig.
Sex	42.59	1	42.59	2.34	0.13
Depression	46.72	2	23.36	1.29	0.28
Sex & Depression	2.62	2	1.31	0.07	0.93
Error	5346.08	294	18.18	--	--
Total	5455.08	299	--	--	--

Table 9 shows the summary of Analysis of Variance of the coping strategy of substitution. Sex seems to have no effect on substitution. Levels of depression also do not relate to substitution. The combined effect of sex and depression is also not found significant.

TABLE 10: Analysis of Variance of the scores on coping strategy of mapping of the three groups of boys and girls

Source	Sum of Squares	Df	Mean Squares	F	Sig.
Sex	10.35	1	10.35	0.61	0.44
Depression	28.13	2	14.07	0.83	0.44
Sex & Depression	5.13	2	2.57	0.15	0.86
Error	5003.62	294	17.02	- -	- -
Total	5046.95	299	- -	- -	- -

The analysis of the scores on mapping (Table 10) also shows that there is no significant effect for sex on this coping style. Depression also

does not relate to mapping. The joint effect of sex and depression is also not found significant on mapping.

TABLE 11: Analysis of Variance of the scores on coping strategy of reversal of the three groups of boys and girls

Source	Sum of Squares	Df	Mean Squares	F	Sig.
Sex	0.92	1	0.92	0.04	0.83
Depression	18.94	2	9.47	0.46	0.64
Sex & Depression	30.18	2	15.09	0.73	0.49
Error	6115.56	294	20.80	- -	- -
Total	6171.59	299	- -	- -	- -

Summary of ANOVA of the scores on reversal is presented in Table 11. The results suggest no significant influence for sex on reversal as a coping strategy. Level of depression among adolescent children also have no relation with reversal. A similar trend is seen when the combined effect of sex and depression of reversal is examined.

Analyses of the scores on different coping strategies employed by adolescent children indicate that both boys and girls are more or less similar in using the different coping styles in dealing with depression. Level of depression also plays no significant role with respect to the use of coping methods. Those with high, moderate and low risk of depression are found similar in their use of the different strategies of coping with depression.

FIGURE 1: Coping Styles used by girls with low risk of depression

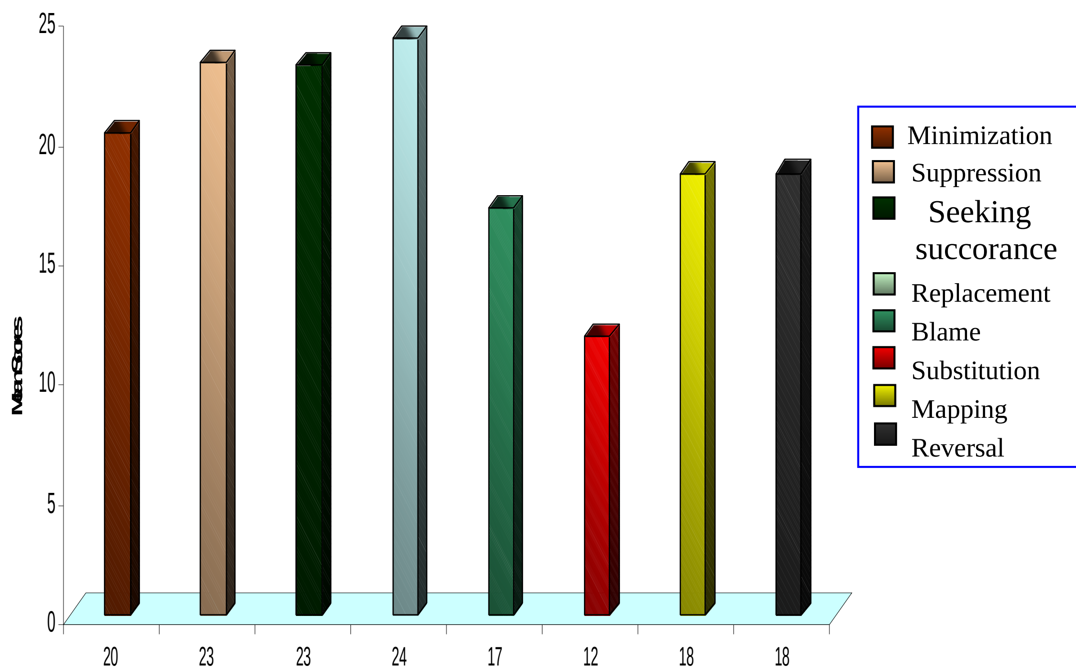


Figure 2: Coping styles used by girls with moderate risk of depression

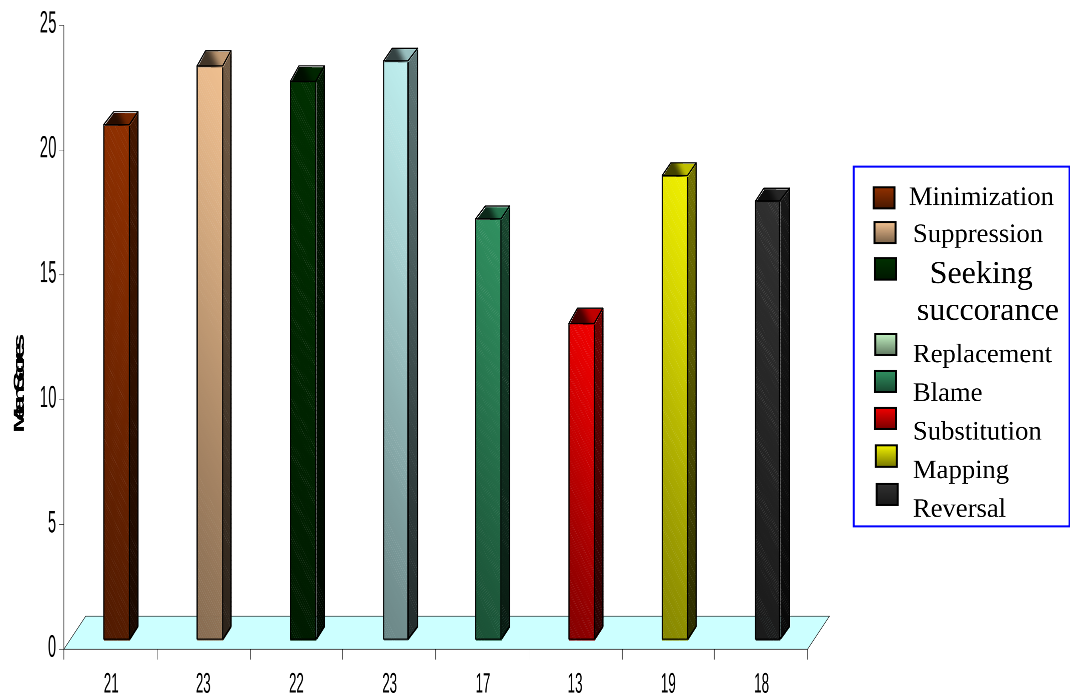


Figure 3: Coping styles used by girls with high risk of depression

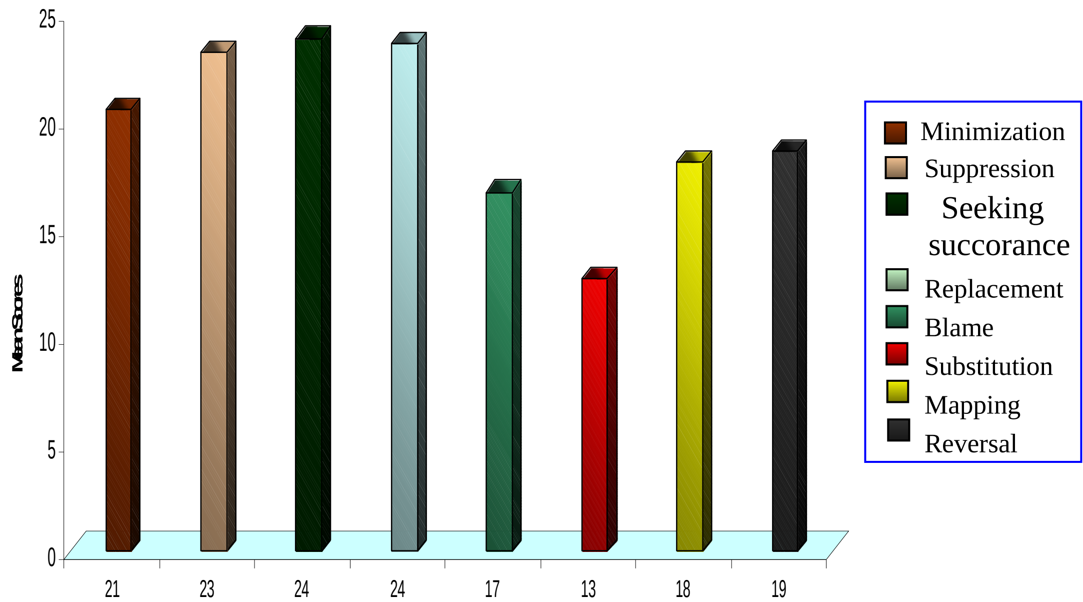


Figure 4: Coping styles used by boys with low risk of depression

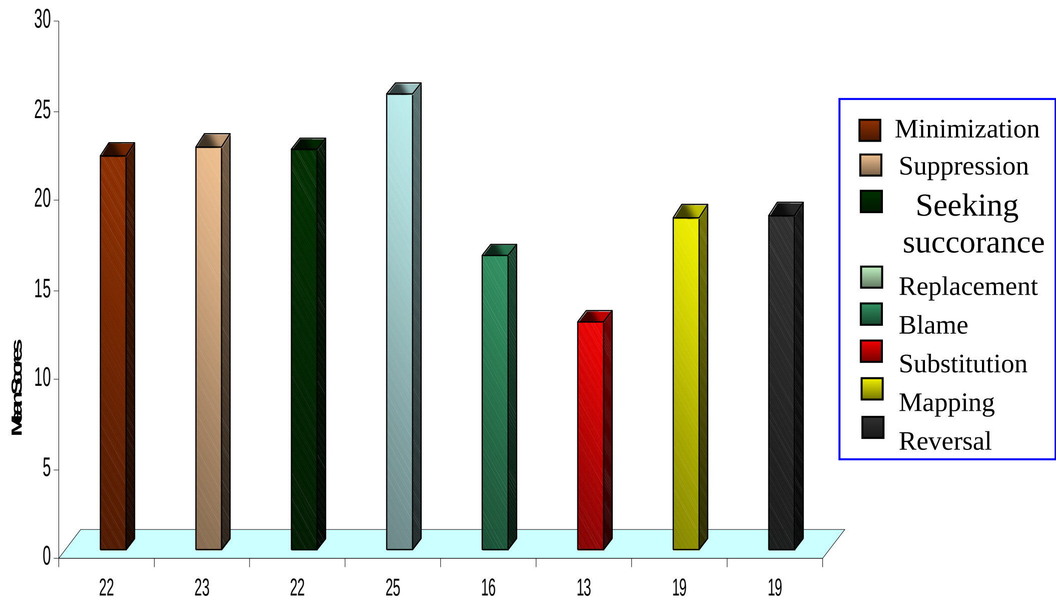


Figure 5: Coping styles used by boys with moderate risk of depression

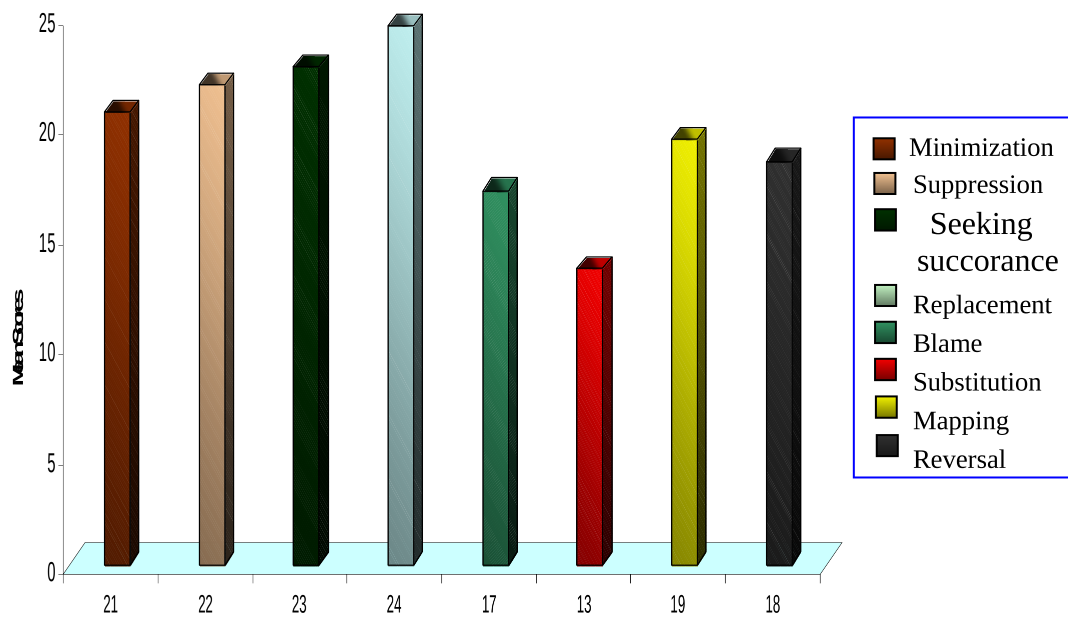
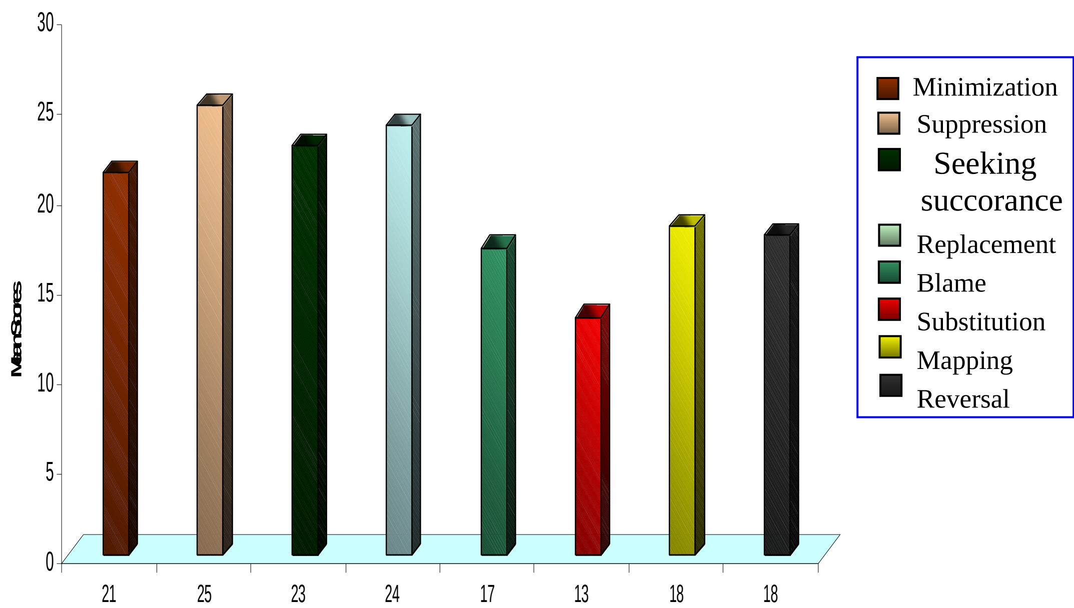


Figure 6:Coping styles used by boys with high risk of depression



The results of the analysis relating depression and coping styles suggest that groups of adolescent boys and girls employ different strategies to deal with their problems with more or less similar effectiveness. In this context a group profile analysis was planned to examine how predominantly they use each coping style and is there any one or more coping styles that each group use specifically to deal with their burden of strains and problems. The results are presented graphically in Figures 1 to 6.

Figure 1 shows that girls with low risk of depression use positive coping skills like replacement predominantly followed by seeking help (succorance) and minimization. Suppression is also used to some extent. Figure 2 illustrates the coping styles of moderately depressed girls. Along with healthy coping styles like replacement negative coping skills like suppression is also predominantly used by this group. The group profiles of girls with high risk of depression are presented in Figure 3. They are found as employing different styles with suppression assuming an important role.

Profiles of boys with low, moderate and high risk of depression are presented in figures 4, 5 and 6 respectively. Figure 4 shows low risk group of boys as using replacement predominantly than any other coping strategies. Seeking help and minimization are also used generally. Boys with moderate depression are also found using replacement, predominantly. But unhealthy style of suppression is also found more predominantly used by them when compared to positive coping style of minimization. An examination of the

profiles of boys at high risk of depression (Figure 6) reveals that they employ suppression predominantly than any other coping styles to deal with problems of life.

The group profiles show that both boys and girls at risk of high depression tend to use the negative coping style suppression more predominantly. This suggests that avoiding the problem is in excess among high risk groups. Where as those at low risk of depression seem to depend more on other positive strategies like replacement. It seems that learning about the situation and looking for alternative ways to solve it leads to reducing risk of depression among adolescents. The results reject the hypothesis that there is difference between adolescent children with higher risk of depression and low risk of depression on coping styles. This is more or less in line with the findings reported by Aldridgea and Roesch (2007) that active copers experience significantly less depression.

TABLE 12: Analysis of Variance of the scores on frustration tolerance of the three groups of boys and girls

Source	Sum of Squares	Df	Mean Squares	F	Sig.
Sex	73.91	1	73.91	0.25	0.62
Depression	48.72	2	24.36	0.08	0.92
Sex & Depression	452.13	2	226.07	0.77	0.46
Error	86365.37	294	293.76	--	--
Total	86888.19	299	--	--	--

Table 12 shows the summary (2-way ANOVA) of frustration tolerance scores of the three groups of children. The results reveal that there is no significant effect for sex on frustration tolerance. Effect of depression on frustration tolerance is also not significant. The combined effect of sex and depression also not found significant on frustration tolerance. It shows that different groups of depressed adolescents are homogenous with respect to their ability to tolerate frustration. Similarly boys and girls do not differ in their frustration tolerance capacity.

The present findings are somewhat in contradiction with those reported by Harrington (2006). He found unique association between one measure of frustration discomfort and depressed mood in clinical population.

The hypothesis that adolescent children with high risk of depression differ from children with low risk of depression on frustration tolerance is rejected.

TABLE 13: Analysis of Variance of the scores on personal belief of the three groups of boys and girls

Source	Sum of Squares	df	Mean Squares	F	Sig.
Sex	55.95	1	55.95	0.40	0.53
Depression	1392.08	2	696.04	4.91	0.01
Sex & Depression	952.01	2	476.00	3.36	0.04
Error	41694.13	294	141.82	--	--
Total	45481.24	299	--	--	--

Summary of analysis of variance (Two-way) presented in Table 13 shows that sex has no significant effect on personal belief. This suggests that boys and girls are homogenous with respect to personal belief. But depression is found to have a highly significant effect on personal belief. Again, the combined effect of sex and depression on personal belief is also found significant.

TABLE 14: Means, SDs and the t-value of the scores on personal belief of the group with high, moderate and low risk of depression

Depression	N	Means	Std. Deviation	Std. Error Mean	t
Low	109	97.14	12.07	1.16	0.56
Moderate	91	96.22	11.03	1.16	
Low	109	97.14	12.07	1.16	3.99**
High	100	90.29	12.72	1.27	
Moderate	91	96.22	11.03	1.16	3.43**
High	100	90.29	12.72	1.27	

*** significant at 0.01 level*

The means SDs and ‘t’ values of the scores presented in Table 14 show the strength and directions of personal belief of the groups of children with high, moderate and low risk of depression. The results reveal that the difference in mean scores of the low and moderate groups is not significant. At the same time mean scores of the low and high groups show a significant difference and it is significant at 0.01 level. The results revealed that adolescents with strong positive personal belief are less depressed than those

having low scores on personal belief. The moderate and high risk groups of adolescents also differ significantly from each other at 0.01 level. The results also indicate that adolescent children with strong and positive personal belief are less prone to depression.

TABLE 15: Means, SDs and the t-value of the scores on personal belief of boys with high, moderate and low risk of depression

Depression	N	Means	Std. Deviation	Std. Error Mean	t
Low	36	95.50	10.12	1.69	0.03
Moderate	35	95.57	11.69	1.98	
Low	36	95.50	10.12	1.69	0.31
High	30	94.67	11.44	2.09	
Moderate	35	95.57	11.69	1.98	0.31
High	30	94.67	11.44	2.09	

Table 15 shows the means, SDs and ‘t’ values of the scores on personal belief of the boys’ groups with high, moderate and low risk of depression. The results in the above table indicate that there are no significant differences among low, moderate and high risk groups of adolescent boys on personal belief. The findings suggest that adolescent boys with high risk of depression, moderate risk of depression as well as those with low risk of depression are more or less similar with regard to personal belief.

TABLE 16: Means, SDs and the t-value of the scores on personal belief of the girls with high, moderate and low risk of depression

Depression	N	Means	Std. Deviation	Std. Error Mean	t
Low	73	97.95	12.91	1.51	0.62
Moderate	56	96.63	10.68	1.43	
Low	73	97.95	12.91	1.51	4.42**
High	70	88.41	12.85	1.54	
Moderate	56	96.63	10.68	1.43	3.84**
High	70	88.41	12.85	1.54	

*** Significant at 0.01 level*

The results presented in Table 16 show the means, SDs and ‘t’ values of the scores on personal belief of the girls’ groups with high, moderate and low risk of depression. The results indicate that the difference in personal belief mean scores of the low and moderate groups of girls is not significant. But the difference in personal belief measures between low and high group of girls is significant at 0.01 level. Similarly the moderate and high risk groups of adolescent girls seem to differ significantly at 0.01 level in personal belief. This significant relation shows that groups of girls with moderate and high risk of depression are less confident of their personal qualities. On the contrary adolescent girls with positive personal belief are found as less depressed. The results suggest that strong belief in ones personal qualities and attributes is a factor that leads to mental health. The findings also reveal that lack of self esteem is likely to lead to depressive reactions in adolescent girls.

TABLE 17: Means, SDs and the t-value of the scores on personal belief of the girls and boys comparison with high, moderate and low risk of depression

Groups	Sex	N	Means	Std. Deviation	Std. Error Mean	t
High risk	Male	30	94.67	11.44	2.09	2.30*
	Female	70	88.41	12.85	1.54	
Moderate risk	Male	35	95.57	11.69	1.98	0.441
	Female	56	96.63	10.68	1.43	
Low risk	Male	36	95.50	10.12	1.69	0.99
	Female	73	97.95	12.91	1.51	

** Significant at 0.05 level*

Table 17 gives the means, SDs and 't' values of the scores on personal belief of girls as well as boys groups with high, moderate and low risk of depression. The results indicate that the low risk adolescent boys and girls do not differ significantly on personal belief. Again, there is no significant difference between moderate risk groups of adolescent boys and girls on their personal belief. Both low risk as well as moderate risk groups of boys and girls are similar with respect belief in their personal qualities and attributes as well as their life in general.

However, when the mean scores on personal belief of boys and girls with high risk of depression are compared, the results indicate significant difference between them on personal belief. It is found that boys have comparably stronger positive belief in their personal qualities, attributes and general life than girls.

The hypothesis that groups of adolescents with high risk of depression and low risk of depression differ from each other on personal belief is accepted.

The results suggest that adolescent children who are at minimal risk of depression have strong positive belief above themselves. This suggest that positive perception about personal qualities an attributes is likely to reduce the risk of depression among adolescent children.

The findings may be explained as follows. Belief in oneself and the environment and satisfaction with oneself is likely to function as a support provision that gives children strength encounter adverse conditions and emotional situations in life. The feelings that they are persons of worth on an equal plane with others and able to do things as well as most other people acts like a morale booster. This may ease their tension and increase stable feelings in them rather than depressive reactions.

The present findings are in conformity with the findings reported by researchers like Clarke, Stewart, Perlmutter and Friedman (1988), Veeraja (2004), Sandler, Miller, Short and Wolchick (1989), Beer and Beer (1993) and Beck (1976).

The present results are also more or less in agreement with earlier reports less in agreement with earlier reports by Rosenberg (1979), Jaquish and Savin-Williams (1981), Kim and Kim (2005), Soares and Grossi (2000) and Charge and Lin (2007).

TABLE 18: Analysis of variance of the scores on creative thinking of the three groups of boys and girls.

Source	Sum of Squares	df	Mean Squares	F	Sig.
Sex	664.94	1	664.94	0.66	0.43
Depression	515.04	2	257.52	0.25	0.78
Sex & Depression	1788.24	2	894.12	0.88	0.42
Error	297925.93	294	1013.35	--	--
Total	300345.13	299	--	--	--

The results presented in the Table 18 reveal no significant relation of sex to creative thinking. The effect of depression on creative thinking is also not significant. The combined effect of sex and depression on creative ability is also not significant. The results suggest that creativity is not related levels of depression. Those with low, moderate and high risk of depression are similar with respect to creative abilities. The present results indicate that girls and boys are similar with respect to their ability to produce novel and original ideas.

The hypothesis that there is difference between adolescent children with high risk of depression and low risk of depression on creative thinking is rejected.

TABLE 19: Analysis of Variance of the scores on ideational fluency of ideas of the three groups of boys and girls

Source	Sum of Squares	df	Mean Squares	F	Sig.
Sex	365.23	1	365.23	0.65	0.42
Depression	170.84	2	85.42	0.15	0.86
Sex & Depression	1106.35	2	553.18	0.99	0.37
Error	164722.16	294	560.28	--	--
Total	166216.99	299	- -	--	--

Table 19 present the summary of analysis of variance (Two-Way) of ideational fluency of the adolescent children. The results reveal that sex is not significantly related to ideational fluency. Level of depression also has no effect on fluency. Interaction effect of sex and depression is also not significant on fluency. The results indicate that adolescent boys and girls do not differ in fluency of ideas. Adolescent children with high, moderate and low risk of depression are more or less similar with respect to their ability to generate large number of ideas.

TABLE 20: Analysis of Variance of the scores on originality of the three groups of boys and girls

Source	Sum of Squares	df	Mean Squares	F	Sig.
Sex	41.01	1	41.01	0.49	0.49
Depression	244.18	2	122.09	1.44	0.24
Sex & Depression	120.75	2	60.38	0.71	0.49
Error	24859.39	294	84.56	-	-
Total	25257.24	299	-	-	-

The results presented in Table 20 show the summary of ANOVA (Two-Way) of scores on originality of ideas. The results reveal no significant effect for sex or depression on originality. The combined effect of sex and depression is also not significant on originality. The results show homogeneity of the groups of adolescent boys and girls regarding their ability to produce original and novel ideas. Similarly, both boys and girls with high, moderate and low risk of depression are found similar in their ability to generate novel and unique ideas.

The present results contradict the findings of earlier studies reported by Ray Chaudhuri (1964) and Dabrowski (1963).

The results presented and discussed so far reveal the significant role of stress and personal belief in depression among adolescent children. The analysis conducted were for examining the independent effects of stress and personal belief on depression. Since the effects of these two factors on depression were clearly evident in the study, the next attempt was to understand the interactive effect of stress and personal belief on depression. For this purpose a reverse analysis was done treating depression as dependent variable and stress and personal belief as independent variables. Since no sex difference was revealed by the analysis, reported in the previous pages, either with respect to stress or personal belief, the data from boys and girls were pooled together and treated in the present analysis.

In this analysis a 3x2 factorial design was used with 3 levels of stress as high, moderate and low based on the quartiles of the stress score distribution and 2 levels of personal belief as positive and negative based on the median of the score distribution of personal belief.

The results of the analysis (Two-Way ANOVA) to find out the combined effect of stress and personal belief on adolescent depression are given in the next few pages.

TABLE 21: Summary of ANOVA (2-Way) of the scores on depression

Source	**Sum of Squares**	**df**	**Mean Squares**	**F**	**Sig.**
Stress	1033.76	2	516.88	9.37**	0.00
Personal Belief	458.70	1	458.70	8.32**	0.00
Stress & Personal belief	171.52	2	85.76	1.56	0.21
Error	16215.02	294	55.15	-	-
Total	18196.04	299			

*** Significant at 0.01 level*

Summary of ANOVA presented in Table 21 indicates significant effect for stress on depression. Similarly, significant for personal belief on depression is also seen. But, the interaction effect of stress and personal belief on depression is not significant. The results suggest that stress in itself is capable of producing depression among adolescents. Personal belief also is a factor independently strong enough to lead to the onset of depression

among them. However, these factors do not interact to produce depression among adolescent children.

TABLE 22: Mean, SDs and t-value of the scores on depression of the groups with high, moderate and low stress

Stress	N	Mean	SDs	Std. Error Mean	t
Low	55	12.22	7.89	1.06	4.32**
Moderate	203	17.33	7.76	0.54	
Low	55	12.22	7.89	1.06	3.73**
High	42	17.67	5.97	0.92	
Moderate	203	17.33	7.76	0.54	0.26
High	42	17.67	5.97	0.92	

*** Significant at 0.01 level*

The results presented in Table 22 show that children with low stress are les depression than those with moderate stress and high stress. Highly depressed children are found to have a very high score on depression. The results reveal that stress has a high positive relationship with depression and high stress leads to depressive reactions in adolescent children.

The results are supported by earlier studies by Lovejoy and Stenerwald (2005), Waaktaar *et al*. (2004), , Rao and Rao (1990) and others.

TABLE 23: Mean, SDs and t-value of the scores on depression of the group with positive and negative personal belief

Personal Belief	N	Mean	SDs	Std. Error Mean	t
Negative	162	18.01	8.37	0.66	3.84**
Positive	138	14.61	6.65	0.57	

** Significant at 0.01 level

Table 23 presents the results of t- analysis of the scores with respect to depression in relation to personal belief. The significant t-value obtained indicates that positive personal belief relates low scores in depression. Children with negative perception about themselves and the environment seem to be more depressed than those having positive personal belief. The findings suggest that positive belief reduces risk of depression among adolescent children.

The present results confirm the findings by Charge and Lin (2007). Radha Krishnan (2005), Haugen and Lund (2002) and others.

The result shown in Table 22 and 23 further affirm the findings reported in the analysis relating stress as well as personal belief as dependent variables to depression as independent variable elsewhere in the present chapter.

PART II

The findings presented in Part I of the present study suggest a strong relationship of two cognitive factors namely stress and personal belief to depression in adolescent children. It seems that how children perceive stress and also how they feel about themselves and their life has a strong influence on whether they develop and maintain depressive tendencies or not.

Since, stress and personal belief are found related to depression, the second stage of the study was devoted to plan and design an appropriate package of intervention that would help to manage stress and enhance personal belief of children at risk of depression and thereby reduce depressive symptoms in them.

The results of intervention are presented in Tables 24 to 32. A diagrammatic presentation of the results is done in Figures 7-11.

TABLE 24: Efficacy of intervention: Means, SDs and 't' values of stress scores at pre-intervention, post-intervention and follow-up by experimental group

Interventions	N	Mean	SD	Std. Error Mean	t
Pre-intervention	30	68.93	15.02	2.74	4.50**
Post-intervention	30	52.90	12.44	2.27	
Post-intervention	30	52.90	12.44	2.27	2.30*
Follow up	30	60.83	14.22	2.60	

*** Significant at 0.01 level*

** Significant at 0.05 level*

The analyses presented in Part I of this chapter reveal stress as a crucial factor that relates to depression in children. Stress scores of the experimental group at pre, post and follow up stages are given in table 24. The results reveal that stress scores at pre-intervention and post-intervention differ significantly. Significant difference in stress scores at pot intervention and follow-up also is noticed. When mean stress scores are examined it is seen that the scores have come down at post intervention (Mean score = 52.90) from those at pre-intervention (Mean score = 68. 93). It is a noticeable reduction of sixteen points approximately.

However, the follow-up stage shows a relapse. From that of the post-intervention stage the follow-up stage witnesses an increase in stress scores and this is found significant also. But however, when the depression scores of the experimental group is considered, this increase does not seem to affect it adversely. This suggests that in spite of the increase in stress, the children are able to maintain stability in mood as a result of intervention.

The results indicates that the present package of intervention is very effective in reducing stress of children at risk of depression.

TABLE 25: Efficacy of intervention: Means, SDs and 't' values of personal belief scores at pre-intervention, post-intervention and follow-up by experimental group

Interventions	N	Mean	SD	Std. Error Mean	t
Pre-intervention	30	90.10	9.70	1.77	2.69**
Post-intervention	30	96.23	7.80	1.42	
Post-intervention	30	96.23	7.80	1.42	0.46
Follow up	30	97.17	7.65	1.40	

*** Significant at 0.01 level*

A second cognitive factor that is found as positively related to depression in adolescent children is personal belief. The scores of personal belief obtained by the experimental group (Table 25) at pre, post and follow-up stages show changes from stage to stage. The pre-intervention and post-intervention scores seem to differ significantly at 0.01 level. At post-intervention stage personal belief is found to improve considerably. At follow-up also personal belief score is found to improve. But no significant difference is noticed between post-intervention and follow-up scores. The results show that intervention helps to improve the experimental subjects', belief in their personal qualities and worth. The results prove the efficacy of intervention package in enhancing belief in self among experimental group of children at risk of depression.

TABLE 26: Efficacy of intervention: Means, SDs and 't' values of depression scores at pre-intervention, post-intervention and follow-up by experimental group

Interventions	N	Mean	SD	Std. Error Mean	t
Pre-intervention	30	21.80	4.66	0.85	4.10**
Post-intervention	30	17.23	3.93	0.72	
Post-intervention	30	17.23	3.93	0.72	1.77
Follow up	30	15.53	3.49	0.64	

*** Significant at 0.01 level*

Table 26 presents the outcome of intervention used with the experimental group. The results clearly suggest the efficacy of intervention in managing depression. From the table of results it could be seen that the mean depression score at pre-intervention phase is 21.80 with SD of 4.86. After intervention mean depression score is reduced to 17.23 with SD of 3.93.The 't' value of the difference between these two mean scores is found to be 4.10 which is significant at 0.01 level. At the follow-up the mean depression score has been reduced to 15.53. But however no significance in the difference between the mean scores at post and follow-up stages is noticed. The results show that in the case of experimental group the package of intervention is effective in reducing the symptoms in adolescents at risk of high depression.

TABLE 27:Efficacy of intervention: Means, SDs and 't' values of stress scores during pre-intervention, post-intervention and follow-up by control group

Interventions	N	Mean	SD	Std. Error Mean	t
Pre-intervention	30	62.97	11.04	2.02	1.08
Post-intervention	30	66.03	10.88	1.99	
Post-intervention	30	66.03	10.88	1.99	0.25
Follow up	30	65.33	10.22	1.87	

Table 27 gives means, SDs and t-values of the stress scores of the control group at pre, post and follow-up stages. No significant difference between the mean stress scores at pre and post as well as post and follow-up stages is noticed. The results show that the subjects of the control group experience stress more or less homogeneously during the entire period of the study.

TABLE 28: Efficacy of intervention: Means, SDs and 't' values of personal belief scores at pre-intervention, post-intervention and follow-up by control group

Interventions	N	Mean	SD	Std. Error Mean	t
Pre-intervention	30	92.43	14.12	2.58	1.38
Post-intervention	30	87.60	12.97	2.37	
Post-intervention	30	87.60	12.97	2.37	0.19
Follow up	30	86.97	12.48	2.28	

The results in respect of personal belief of the control group are presented in Table 28. In the case of the control group no significant difference in personal belief scores is noticed between pre-intervention and post-intervention stages. Similarly no significant difference is seen between post-intervention and follow-up scores on personal belief. However, slight but a gradual reduction in personal belief scores in the negative direction is noticed starting from pre-intervention to post-intervention stages. This may be attributed to chance factors.

The result pertaining to personal belief suggest that control group maintains the baseline scores more or less similarly at pre, post and follow-up stages of the study.

TABLE 29:Efficacy of intervention: Means, SDs and 't' values of depression scores at pre-intervention, post-intervention and follow-up by control group

Interventions	N	Mean	SD	Std. Error Mean	t
Pre-intervention	30	23.23	5.50	1.00	0.64
Post-intervention	30	24.07	4.46	0.81	
Post-intervention	30	24.07	4.46	0.81	0.46
Follow up	30	23.57	3.91	0.71	

The results in Table 29 present the means, SDs and t-values of the depression scores of the control group at pre, post and follow-up stages. No significant difference in the scores of depression is noticed between pre and

post as well as post and follow-up stages. This indicates that depressive reactions are maintained in the case of control group through out the period of the study.

TABLE 30: Efficacy of intervention: Means, SDs and 't' values of stress scores at pre-intervention, post-intervention and follow-up by experimental and control group.

Interventions	groups	N	Mean	SD	Std. Error Mean	t
Pre-intervention	Experimental Group	30	68.93	15.02	2.74	1.75
	Control Group	30	62.97	11.04	2.04	
Post intervention	Experimental Group	30	52.90	12.44	2.27	4.35**
	Control Group	30	66.03	10.88	1.99	
Follow up	Experimental Group	30	60.83	14.22	2.60	1.40
	Control Group	30	65.33	10.22	1.87	

*** Significant at 0.01 level*

The means, SDs and t-values of the stress scores at pre, post and follow-up stages are given in Table 30. The results show no change in the stress of experimental and control group at pre intervention. At post-intervention stage, the experimental group and control group differs significantly in the stress scores obtained. Compared to the control group the experimental group shows a reduction in the stress scores. This reveals that intervention is effective in reducing stress of children at risk of depression.

TABLE 31: Efficacy of intervention: Means, SDs and 't' values of personal belief scores at pre-intervention, post-intervention and follow-up by experimental and control group

Interventions	Groups	N	Mean	SD	Std. Error Mean	t
Pre-intervention	Experimental Group	30	90.10	9.70	1.77	0.75
	Control Group	30	92.43	14.12	2.58	
Post-intervention	Experimental Group	30	96.23	7.80	1.42	3.13**
	Control Group	30	87.60	12.97	2.37	
Follow up	Experimental Group	30	97.17	7.65	1.40	3.82**
	Control Group	30	86.97	12.48	2.28	

*** Significant at 0.01 level*

Pre-intervention, post-intervention and follow-up results with respect to personal belief are presented in Table 31. Baseline scores of experimental and control groups show no significant difference. Experimental and control groups differ from each other in personal belief at post-intervention stage. A similar trend is seen at follow-up stage also. In both instances experimental group has shown considerable improvement on personal belief.

The present results show that intervention used is helpful in enhancing personal belief of children at risk of depression.

TABLE 32: Efficacy of intervention: Means, SDs and 't' values of depression scores at pre-intervention, post-intervention and follow-up by experimental and control group

Interventions	Groups	N	Mean	SD	Std. Error Mean	T
Pre-intervention	Experimental Group	30	21.80	4.66	0.85	1.09
	Control Group	30	23.23	5.50	1.00	
Post-intervention	Experimental Group	30	17.23	3.93	0.72	6.20**
	Control Group	30	24.07	4.46	0.81	
Follow up	Experimental Group	30	15.53	3.49	0.64	8.39**
	Control Group	30	23.57	3.91	0.71	

*** Significant at 0.01 level*

The results in Table 32 compare the depression scores of the experimental and control groups at pre-intervention, post-intervention and follow-up stages. The pre-intervention scores of the experimental and control groups show no significant difference. But after intervention these two groups are seen to differ significantly with respect to mean depression scores.

In the case of the experimental group intervention has resulted in the reduction of depression when compared to the control group. At follow up also the experimental and control groups differ significantly in depression. And in the case of the experimental group a further reduction in depression scores is found at the follow up stage.

From the results it is concluded that intervention reduces depression significantly. It seems that the present package is very effective in managing

depression among adolescent children.

Figure 7

Diagrammatic representation of
efficacy of intervention of experimental group

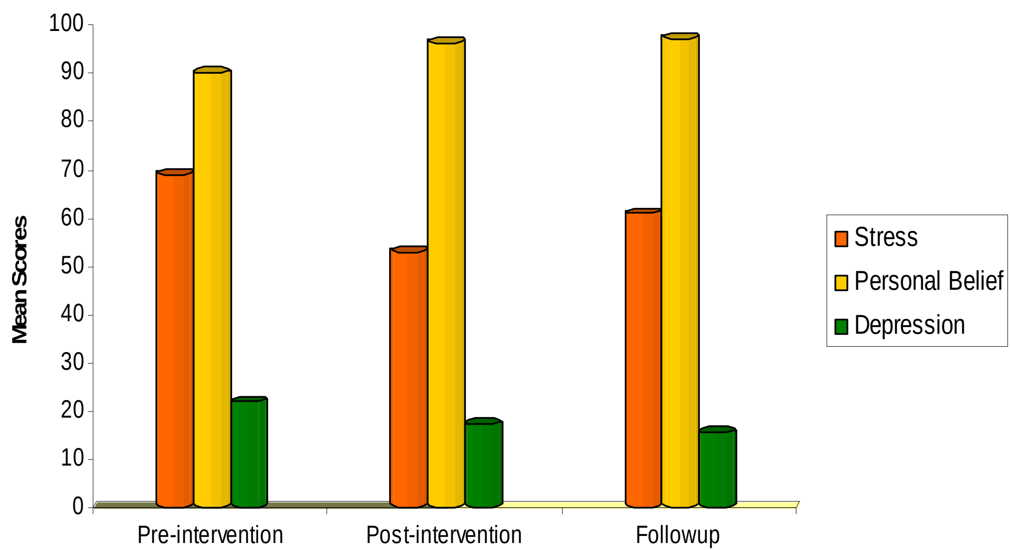


Figure 8

Diagrammatic representation of

efficacy of intervention of control group

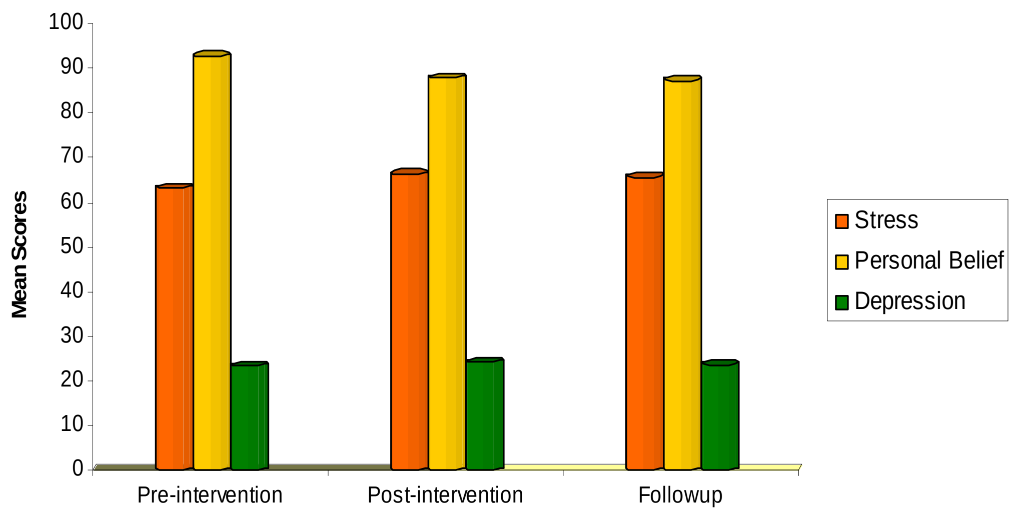


Figure 9

Diagrammatic representation of

depression of experimental and control group

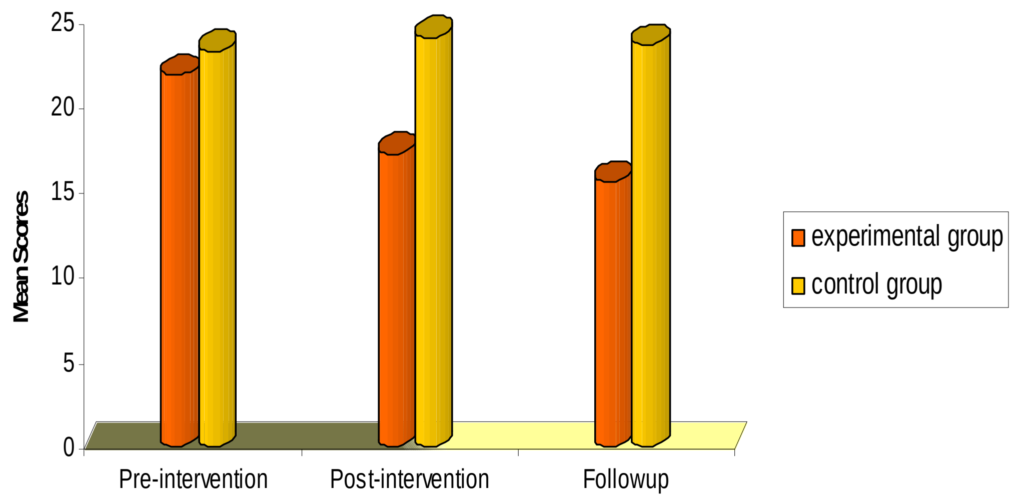


Figure 10

Diagrammatic representation of

stress of experimental and control group

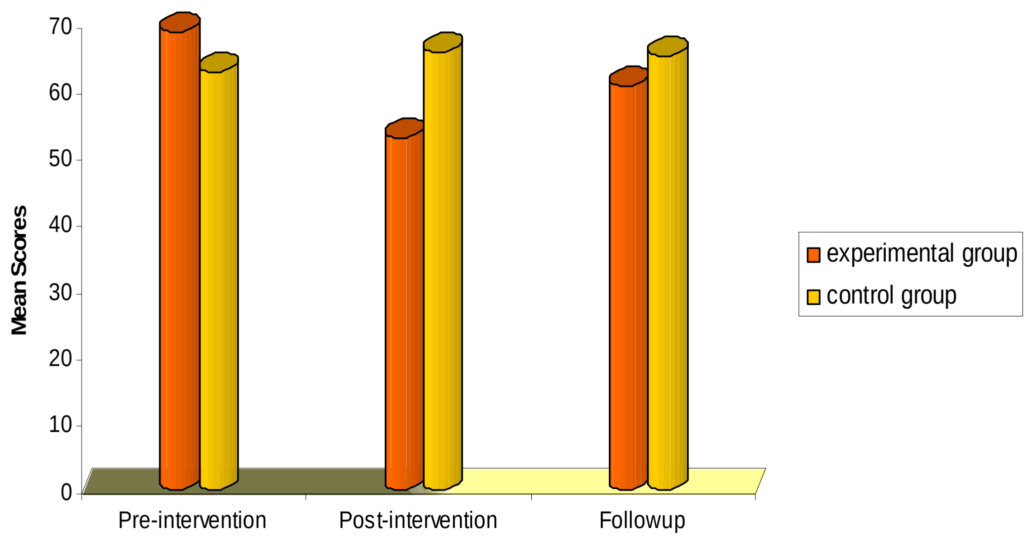
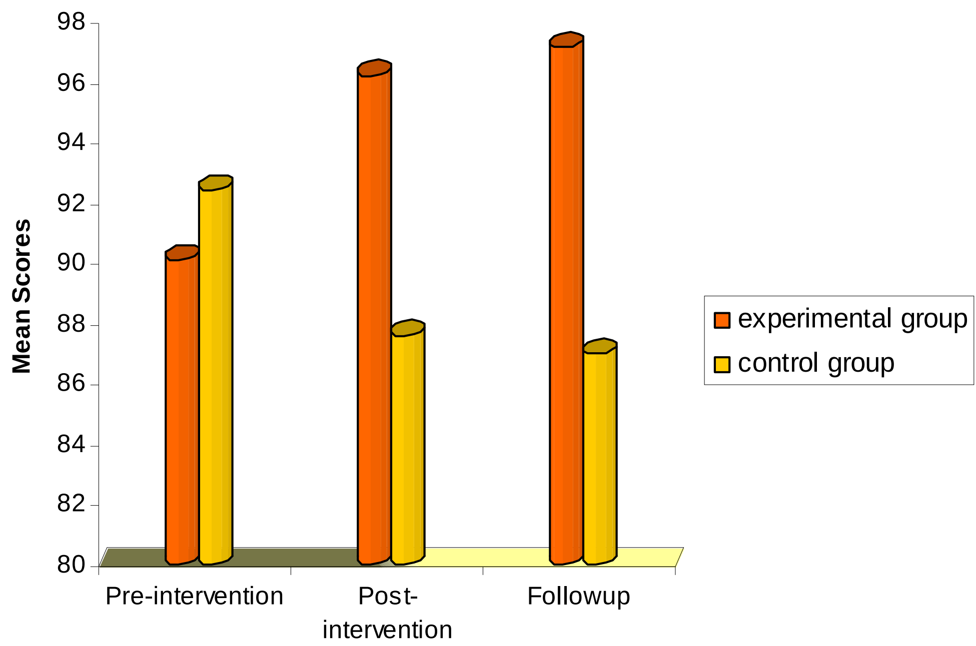


Figure 11

Diagrammatic representation of

personal belief of experimental and control group



To sum up the results, it is found that the package of intervention designed and used in the present investigation is effective in reducing stress, improving personal belief and thereby reducing the symptoms of depression among adolescent children at risk of depression.

SUMMARY AND CONCLUSIONS

The term depression has been used to designate a discrete nosological entity. The term is generally qualified by some adjective to indicate a particular type of form, as for example: reactive depression, agitated depression or psychotic depressive reaction. When conceptualised as a specific clinical entity depression is assumed to have certain consistent attributes in addition to the characteristic signs and symptoms. These attributes include a specifiable type of onset, course, duration and outcome.

Depression during adolescence has a negative impact on social, academic and family functioning, as well as being associated with an increased risk for recurrence and impairment in social-emotional functioning that extends into adult life. It is not simply a disorder of mood regulation but involves alterations in physiological and cognitive functioning. The study of depression requires careful attention to developmental issues especially the challenges of adolescence.

At the present time, the depressive illness appear to be occurring more commonly among adolescents. The National Institute of Mental Health (NIMH) report that 8.3% of adolescents experience depression. This trend very obviously contributes to the dramatic increase in suicide attempts and in death by suicide among adolescents and young adults.

Depressed adolescents can experience feelings of emptiness, anxiety, loneliness, helplessness, guilt, loss of confidence and self-esteem and changes in sleeping and eating habits. Such as adolescent is often manifested by episodes of impulsivity, irritability and loss of control alternating with periods of withdrawal.

Depression in adolescents can and should be treated, but unfortunately this treatable disorder typically goes unrecognized when it is assumed that such storminess is natural to adolescence. All too often the symptoms are simply chalked up to the normal adjustments of adolescence and as a result depressed young people do not get the help they need. Moreover adolescent people often don't ask for or get the right help because they fail to recognize the symptoms of depression in themselves or in people they care about.

Since adolescents are so noted for their quickly changing and behaviour, it may take careful watching to see differences between a depressive disorder and normal behaviour. The key to recognizing the depressive disorder is that the change in behaviour last for weeks or longer.

The present study investigates the role of cognitive factors in depression among adolescents. It is expected that the findings of the research may be used to help adolescents cope with the daily challenges of the society, be strong willed, competent and mentally healthy, that may aid their transition to a successful future life. The objective of the study was to

examine the role of selected cognitive factors namely, stress, coping styles, frustration tolerance, personal belief, creative thinking, ideational fluency and originality of ideas and its influence on depression and to plan and design a package of intervention and to test the efficacy of it to manage stress, to improve personal belief and reduce depression among adolescent children.

METHOD

Sample

Three higher secondary schools from Thrissur, Malappuram and Kozhikode Districts were selected for drawing the sample. Three hundred higher secondary school students of the age between 15-19 were included in the study. From among the 300 students 60 were selected for the intervention purpose. They were selected on the basis of their scores on the Malayalam version of Beck's Depression Inventory. After that 30 students were randomly assigned to the experimental group and 30 to the control group.

Description of the Tests Used

1) The Beck Depression Inventory (BDI) Malayalam Version (1996)

In adapting the Beck Depression Inventory for the present study the English version was translated into simple Malayalam language, without loosing the concept of items, by an expert in Malayalam language. This version of inventory is a 21 item self-report instrument for measuring the severity of depression in adults and adolescents aged 13 years and older.

Administration and Scoring

BDI consisting of 21 groups of statements was administered in groups. The subject were asked to read each group of statements carefully, and then pick out the one statement in each group that best describes the way they have been feeling during the past two weeks, including the day they answer the inventory.

It is scored by summing the ratings for the 21 items. Each item is rated on a 4-point scale ranging from 0 to 3. The maximum total score is 63.

The S.S. Inventory (Shibu and Dharmangadhan, 1992)

The S.S. Inventory measures the level of stress in an individual. It consists thirty items capable of assessing responses with regard to family stress, social stress and environmental stress.

Administration and Scoring

The subjects were instructed to read each statement carefully and then pick out the one statement that best describes the way you have been feeling. The inventory was administered to the subjects in groups.

It is scored by summing the rating of 30 statements. The highest score is considered as an indication of high stress and the low score shows a relaxed state.

Frustration Tolerance -FRTO (Rai, 1983)

Frustration tolerance scale measures the tolerance capacity of the individuals when frustrated. This test consist, of 4 different types of figures.

Administration and Scoring

The FRTO was administered in groups as per the instructions provided in the manual. Time and number of attempts are summed and mean time and mean number of attempts are calculated for each subject to know his/her frustration tolerance. The more the time taken and number of the attempts the more is the level of frustration tolerance.

AECOM Coping Style Scale (Plutclick, 1980)

The AECOM (Albert Einstein College of Medicine) Coping styles scale for the measurement of coping style is a questionnaire based on the psycho-evolutionary theory of emotion developed by Plutclik in 1980, which postulates systematic connection between 8 basic emotions and 8 coping styles. This consists of 87 items each rated by the subject on a 4 point scale ranging from ‘0’ to 3. It is based on the expressed opinions that the way each individual cope with successful life events in relatively independent on his or her emotional or psychopathological state and characteristic of his or her.

Administration and Scoring

AECOM coping style scale was administered in an open interview method. Each item listed in the scale was read out to the subject and the

response was entered in a 4-point scale. Scoring was done as per the direction in the manual.

Personal Belief Scale (Aniljose and Asha, 2005)

Personal Belief Scale is prepared and standardized in order to assess the strength and direction of person's belief about himself/herself and the way he/she feels about life in general. It consists of 28 positive and negative statements. The response to each item is to be marked in the categories of A B, C, D or E as required by the subject.

Administration

This self-report questionnaire consisting of 28 positive and negative statements was administered to the subjects in groups. They were instructed to read each statement carefully and then give a tick mark in the appropriate columns.

A high score indicates strong positive personal belief and a low score shows negative personal belief.

Scoring

A score of 5, 4, 3, 2, 1, was given to the category Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree respectively for positive items. The scoring was done in the reverse order for a negative item.

Tests of Creative Thinking Abilities-TCTA (Short-Form) (Asha, 1993)

The adapted version of Wallach and Kogan's Tests of Creative Thinking Abilities (TCTA) was used. It consists of five sub-tests. Three of them are verbal and two are non-verbal in nature. The verbal test are: Instances, Alternate uses and similarities. The non-verbal or visual stimuli tests are: pattern meanings and line meanings.

TCTA is used to assess creative thinking, ideational fluency and originality of ideas.

Administration

After giving the general informations regarding the nature of the tests, blank sheets of paper for writing the responses are distributed to the subjects. Then the texts are given one by one with the specific instructions needed for answering the items in each test, as directed in the manual.

Scoring

In the case of creativity instruments three types of scores viz., creativity index, ideational fluency and originality may be obtained. It was done as per the instructions provided in the manual. A high score indicates high levels of creativity, ideational fluency and originality and low score indicates poor levels of creativity, ideational fluency and originality. Corresponding to the aspect of thinking studied.

Analysis of Data

The data collected were analyzed using analysis of variance (2-way) and t-test for independent samples. The Statistical Package for Social Sciences (SPSS) was used for the purpose of data analysis.

The following are the major findings of the present study.

1) There is significant difference between adolescent children at high risk of depression and low risk of depression in the stress experienced.
2) Adolescent children at high risk of depression and low risk of depression do not differ with respect to the use of different coping styles. However, group profile analyses show that the high risk group predominantly use suppression, where as, those at low risk use replacement predominantly.
3) Children at high risk of depression do not differ from those at low risk of depression in frustration tolerance. Both groups are more or less homogenous with respect to their capacity to tolerate frustration.
4) Highly depressed adolescents differ from less depressed adolescent in their personal belief. Those at high risk of depression seem to have poor/negative personal belief but those minimally depressed seem to have positive belief about themselves.
5) No difference is seen between highly depressed and less depressed adolescents with respect to creative thinking.

6) Children at high risk of depression do not seem to differ from those at low risk of depression in ideational fluency.

7) Adolescent children at high risk of depression and those at low risk of depression do not differ significantly in their ability to generate original and innovative ideas.

8) The package of intervention (Relaxation, Assertiveness training, Brainstorming and General counseling) is effective in reducing stress, improving personal belief and reducing depression.

Conclusions

Based on the present study it is concluded that

i) High stress is a factor that leads to depression among adolescent children.

ii) Negative/poor personal belief results in depression among adolescent children.

iii) Intervention is an effective technique for managing stress, enhancing personal belief and reducing depression among adolescent children.

Implications

The understanding gained from the present study is expected to be useful in planning specific intervention programmes for adolescent children at risk of mental health problems. Interventions including counselling, if

properly planned, will help children to perceive and interpret stressful events in a healthy way, to have a positive attitude towards life and its never ending problems and to prevent possible maladjustments and other negative consequences that may interfere with their physical and mental development.

Suggestions for Further Research

i) A study can be conduct to understand the nature and extent of different provisions of support, provided to the adolescents, especially by family, schools and community etc in relation to depression. .

ii) A similar study can be conducted by using a larger sample, with proportional representation of age, sex and education of adolescents.

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