CHAPTER - 1

INTRODUCTION
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ADOLESCENCE

Adolescence is a transitional period and it is the bridge between childhood and adulthood. It is the time of rapid development of growing to sexual maturity, discovering one’s real self, defining personal value and finding one’s vocational and social direction. Age of adolescence is age of identity formation where occupational, educational and personal contexts develop. During this period social expectations of the individual are drastically under modification.

The National Council of Educational Research and Training (1999) defined adolescence as a period of physical, psychological and social maturity from childhood to adulthood. The idea of adolescence being a period of ‘storm and stress’ – was introduced by Hall (1904) and supported by the psychoanalytic tradition (Freud, 1958) and Erikson’s (1968). Definition of adolescence as a time of identity crisis – was popular for most of the 20th century. In this view, adolescence is characterized as an inevitably turbulent process; accompanied by negative moods, a problematic relationship with parents and risky behavior, including delinquency (Gecas & Seff, 1990; Deković & Buist, 2004; and Goossens, 2006).

It is the period extending from puberty to the attainment of full reproductive maturity. Physical changes occur during adolescence due to spurt in growth and development. Entire body goes through metamorphosis both externally and internally in structure as well as function. Adolescent reaches an important milestone of sexual development known as puberty and he/she is capable of reproduction. The physical changes of adolescents occur most rapidly from age 12 to 14 for the girls and between 13 and 15 for the boys. Perhaps because of their bodies’ rapid changes, adolescents tend to be extremely self-conscious and typically assume that everyone is always staring at them. Every pimple, unwanted curve or lack of curves, can be a
source of misery and stress. Changes in body proportions appear rather unevenly. As a result of such changes an adolescent feels embarrassed. Some mature early and some mature late. A delay may be perfectly normal and in some families sexual maturation tends to occur later. The adolescents are typically uncomfortable about being different from their peers, the boys in particular are likely to feel psychological stress and embarrassment from delayed puberty. In everybody’s life adolescence has been manifested with many qualities like vigorous energy, high aspirations, idealism, spirit of adventure, creative thinking and keenness to assume responsibility. Adolescents spend most part of their day attending school, engaging in extracurricular activities and doing homework. Though they are considered as a significant category in the population, but they are quiet often neglected and their families and society do not understand their special needs. They are very conscious of themselves, having wondering ideas and fluctuating emotions. It is therefore, very important that they have vital energy and should be taken care of. The adolescents express emotional tensions, suicidal thoughts, rebelliousness, destructiveness, non-conformity and defiance at marked degree.

Erickson (1980) has pointed out that adolescents are driven by a need to come to grip with their own individual identities and part of this process involves understanding their origins. This involves simply knowing their family history, where their parents grown up, how they met and so on. But the more difficult part of the task involves understanding their parents as human beings, who grew up in a particular place and time and who were shaped by complex emotions and relationships. This sort of understanding is difficult to come by. It is hard enough for an average teenager from a family with both parents living together but when parents live far apart or when one or both are unknown (due to abandonment or death) the task becomes even more stressful.

The nature of structure of family to a large extent has been associated with the causation of stress among adolescents. Kadapatti & Khadi (2006) asserted that the
family size was negatively and significantly related indicating that as the family size increased the academic stress decreased among adolescents and also type of family was significantly related to academic stress indicating that students from the joint family had more academic stress than nuclear families.

It is rightly indicated that the most part of the turbulent of adolescents is associated with stressful events, which are largely caused by family variables. Masten et al. (2006) recognized that disadvantaged children, with less positive family qualities were generally less competent and more likely to be disruptive with high stress levels. The cause of adolescent stress is centered on the reason that the parents still see the need to exert control over children as they regard them as dependent and immature. In this sense the adolescents feel that they are treated like a child and prefer to think themselves as adults in defense against their parent’s behaviour. This pattern of behavioural interaction between the adolescents and parents invariably leads to stressful experiences. The outcome of this stress, which gets perpetuated further would lead to the situations when parents interact with their children and the children are found to become every time argumentative and hostile. Any discrepancy in their feeling with that of parent’s behavior, of not considering their level of maturity and intelligence for acting independently, will lead to stress among adolescents as still they prefer to continue with childhood relationship of security. Decision making is another important area in which adolescents stress is very well associated. The adolescents who have no say in the family decision making process are bound to be rebellions and show negative importance to the decisions of the parents.

The academic pressures mount during high school, particularly the last two years. Although many parents recognize that academic struggle to avoid failing is an important course which can be quiet stressful. It may be the common experience that academically capable students feel the greatest pressure as they find themselves competing for scores. Tatar (1995) found that parents’ choice for high grades and desire to pursue higher education as major actual or potential source of stress among their adolescents.
School related stress is the most prevalent, untreated cause of academic failure in adolescents. It is believed to afflict an alarming 6 to 10 million children a year (Barker, 1987). In a classroom of 25 students, between one and three students are at high risk of developing stress related problems which would probably interfere with learning. Kapalan et al. (2005) found that for students in high stress school environments, an increase in academic expectations may serve to increase their school related stress and impede their academic performance. Academic achievement has become the sole yardstick of self-worth and success and students are made feel unworthy for performing low at school. Very high academic achievement is the need of day to secure desired course, otherwise one has to face frustration, humiliation and disappointment. Moderate classroom environment and low stress level yielded higher global achievement. Needlman (2009) affirmed that most academically capable students feel the greatest pressure as they find themselves competing for scores.

Adolescents’ success in their educational endeavors and their general socio-emotional adjustments are influenced by a variety of personal characteristics and environmental experiences. Peer relationship tends to be highest during middle school years, but adolescents who do not find at least a minimal degree of acceptance at that time in their lives are likely to suffer lasting consequences, isolation, low self-esteem and stress. One of the most powerful determinants of children’s developmental course is the social context in which they live. Since, Hall’s (1904) characterization of the adolescent period as one of storm and stress, many theorists have portrayed adolescence as a troubled and unique period of life cycle. It has been noted that at various points of life the individual experiences stressful events which cause distress and serious concern. The degree to which the individuals are able to cope with stress reflects on their sense of self. If he copes well, he seeds a positive light; on the other hand, if he fails to cope well, his self-esteem suffers and further feels incompetent and worthless. If individual fails to cope with stress repeatedly, his general sense of worthiness suffers.
Young people who fail to cope frequently describe home settings and school settings to be continuously stressful. It is worthwhile to note that the occurrence of major life transitions in adolescence is often source of stress for young people, their ability to cope with significant life events will reflect on their own sense of personal self worth and on their ability to cope with subsequent stress. However, not all stress is bad; stress can be an important motivation, if it operates best under moderate stress. Too much stress however is not good. It leads to physical and psychological distress.

Adolescents are highly prone to get strongly influenced by emotions. Anjali (2005) reports conflicts in family, unbalanced nutrition, separated father and mother, extreme protection and punishment, lack of proper sexual education and hormonal changes are responsible for the stress. Pastey & Aminbhavi (2006) concluded adolescents with high emotional maturity have significantly high stress and self-confidence. Nemith et al. (2008) indicated that stress and low self esteem are related to avoidant coping and depressive mood.

**STRESS RESISTANCE**

**CONCEPT AND DEFINITION OF STRESS**

Stress is a complex phenomenon. It is very subjective experience. What may be challenge for one could be a stressor for another. It depends largely on background experiences, temperament and environmental conditions. Stress is a part of life and is generated by constantly changing situations that a person must face. The term stress refers to an internal state, which results from frustrating or unsatisfying conditions. A certain level of stress is unavoidable. Because of its complex nature stress has been studied for many years by researchers in psychology, sociology and medicine.

Stress in moderation can be empowering because many individuals relate how they are only able to be productive when under stress. But generally, stress in excess
serves to hamper people’s abilities. According to Levy (1998), stress is a situation where the individual’s resources to cope with a given situation are appraised as being less than the demands of the situation.

Although, the adverse effects of stress on physical health and emotional well-being are increasingly recognized, there is little agreement among experts on the definition of stress.

According to Lazarus, & Launier, (1978) “stress occurs when there are demands on the person, which taxes or exceeds his adjustive resources.”

Spielberger (1979) used the term stress to refer to a complex psychobiological process that consists of three major elements. This process is initiated by a situation or stimulus that is potentially harmful or dangerous stressor. If a stressor is interpreted as dangerous or threatening, an anxiety reaction is likely to be elicited.

According to Steinberg & Ritzmann (1990), “stress can be defined as an under load or overload of matter, energy or information input to, or output from, a living system.”

According to Levine & Ursin (1991), “stress is a part of an adaptive biological system, where a state is created when a central processor registers an informational discrepancy”.

According to Humphrey (1992), “In essence, stress can be considered as any factor, acting internally or externally, that makes it difficult to adapt and that induces increased effort on the part of the person to maintain a state of equilibrium both internally and with the external environment.”

According to Levi & Lunde-Jensen (1996), “stress is caused by a multitude of demands (stressors) such as an inadequate fit between what we need and what we capable of, and what our environment offers and what it demands of us.”

According to Bowman et al. (1998), “stress is the body’s automatic response to any physical or mental demand placed upon it. When pressures are threatening, the
body rushes to supply protection by turning on ‘the juices’ and preparing to defend itself. It’s the ‘flight or fight’ response in action”. According to Bernik (1997), “stress designates the aggression itself leading to discomfort, or the consequences of it. It is our organism’s response to a challenge, be it right or wrong.”

According to Chrousos (2009), “a stressor is considered a stimulus that threatens homeostasis and the stress response is the reaction of the organism aimed to regain homeostasis”.

A general consensus can be reached about a definition of stress, which is centered around the idea of a perceived imbalance in the interface between an individual, the environment and other individuals. When people are faced with demands from others or demands from the physical or psycho-social environment to which they feel unable to adequately respond, a reaction of the organism is activated to cope with the situation. The nature of this response depends upon a combination of different elements, including the extent of the demand, the personal characteristics and coping resources of the person, the constraints on the person in trying to cope and the support received from other.

Stress has gained widespread public attention. It is fashionable to attribute it to rapid social change, to growing anomaly in an industrial society which they have lost some of their sense of identity and their traditional anchors and meaning, or to growing affluence which frees many people from concerns about survival and allows them to turn to a search for higher quality of life.

The fact is that even happy transitions like a honeymoon, birth of a baby, promotion, or vacation involve a kind of positive stress, known as eustress. However, unwanted events such as a job loss, serious illness, or death of a loved one can overwhelm our innate ability to cope, leading to distress.

Today’s hectic livelihood pace has made stress a way of life for many people. Everyone is bombarded by rapidly evolving technology, marathon workdays, and
seemingly constant change. Just when a person thinks he has things under control, suddenly he is faced with a major storm. Many of people learn to go through their daily routines in a state of hyper vigilance, calm on the outside, while their nervous systems are in overdrive.

Society subtly encourages people to take pride in the levels of stress they bear, as though the resulting furrows in their brows are badges of honor. Unfortunately, this pressure to live at a break-neck pace can seriously compromise their well-being. The growing numbers of people who rely on prescriptions for sleep, relief from depression, and anxiety attacks speak to the epidemic of chronic stress that has permeated the modern culture. Learning to understand and reduce one’s own stress levels can help a person escape such a fate. The sense of relief one feels will be more than a pleasant experience. Even a little stress reduction can restore one’s immune system, brain chemistry, and sense of vitality.

Secondary symptoms of stress like health issues or sleep disturbances may be the only alert one has to his own anxiety levels. Many people who suffer from such conditions swear up and down that they're actually very relaxed. Another person may completely deny his condition, believing that he is, in fact, very content. He couldn't possibly be suffering from stress. Those who are most likely to experience serious issues are the very people most practiced in the twin arts of denial and repression of emotions.

THE ORIGIN OF STRESS

The origins of stress may vary with the individual, but in general, stress arises from frustration, life changes, conflict, lack of control, and uncertainty.

FRUSTRATION

Frustration occurs when an individual is blocked or thwarted, whether by personal or environmental factors, in an attempt to reach a goal. Personal frustration and accompanying stress could result out of such a situation. For example, if an
individual who lacks adequate vocal skills repeatedly tries out for (perhaps because of certain parental pressures) but fails to be accepted by a happiness club. If such attempts are too intense or too prolonged, the stress can provoke bodily symptoms and illness. Environmental frustration and accompanying stress could result, for example, if an individual auditioning for a joy club has to deal with unfamiliar music, a poorly prepared accompanist, loud noises, or some other environmental annoyance. Traffic jams, difficult daily commutes and annoying drivers, for instance, are a routine source of frustration that can elicit anger and aggression (Hennessy & Wiesenthal, 1999; and Ramussen & Gillberg, 2000).

Frustration can motivate aggression. Experiment subjects (including humans, pigeons, monkeys, and rats) show an inclination to attack if they do not receive expected rewards, although aggression is less likely if other responses to frustration have been learned. Experimentally, it has also been shown that increased response vigor may occur in response to frustrating circumstances. If increased vigor does not produce desired results, a subject may then react with escape or avoidance responses. If these responses are not possible, a subject may enter, after prolonged frustration, into a psychological state of depression. More often than not, frustration appears to be the culprit at work when people feel troubled by environmental stress (Graig, 1993).

LIFE CHANGES

Life changes, both those perceived as “good” (such as marriage or the birth of a baby) or as “bad” (such as the death of a loved one, a tragic accident, or being fired) can produce stress and stress-related responses A study by Brown and McGill (1989) suggest that desirable life changes may be stressful for some people but not for others.

CONFLICT

Conflict occurs when two incompatible goals or possible behavioural responses are simultaneously present. When conflicts are unresolved, they cause stress. Miller
(1944, 1959), in a detailed analysis of the types of conflicts and strategies for resolving them, identified approach-approach, avoidance-avoidance, and approach-avoidance conflicts.

An approach-approach conflict occurs when an individual has to choose between two equally desirable goals, such as either chocolate cake or apple pie for dessert. These conflicts are usually the easiest to resolve.

Avoidance-avoidance conflict occurs when an individual has to choose between two equally undesirable goals or activities. A child who is dared to climb a steep hill and is afraid of being called a coward if the dare is refused but is also afraid of falling if the climb is attempted, is faced with an avoidance-avoidance conflict.

Approach-avoidance conflict is the result of having concomitant but incompatible goals. Such would be the case when a student does not want to fail in an examination but also wants to spend the evening watching television instead of studying.

The three types of conflicts can be depicted graphically as gradients of response strengths for approach and avoidance. Typically, the strength of the tendency to avoid or approach increases as one nears the goal. Where the gradients intersect, conflict occurs. Experimentally, response-strength gradients have been constructed by measuring how hard rats pull, at various distances from a goal, to approach the goal or to retreat from it (Hearst, 1962).

**SOURCES OF STRESS**

People can experience stress from four basic sources:

- **The Environment** – The environment can bombard a person with intense and competing demands to adjust. Examples of environmental stressors include weather, noise, crowding, pollution, traffic, unsafe and substandard housing, and crime.

- **Social Stressors** – People experience multiple stressors arising from the demands of the different social roles which they occupy, such as parent, spouse, and caregiver.
Some examples of social stressors include deadlines, financial problems, job interviews, presentations disagreements, demands for their time and attention, loss of a loved one, divorce and co-parenting.

**Physiological** – Situations and circumstances affecting ones body can be experienced as physiological stressors. Examples of physiological stressors include rapid growth of adolescence menopause, illness, aging, giving birth, accidents, lack of exercise, poor nutrition, and sleep disturbances.

**Thoughts** – An individual’s brain interprets and perceives situations as stressful, difficult, painful, or pleasant. Some situations in life are stress provoking, but it is ones thoughts which determine whether those situation’s pose a problem for them.

**BIOLOGICAL ASPECT OF STRESS**

Stress is a term in psychology and biology, borrowed from physics and engineering and first used in the biological context by Selye (1936) which has in more recent decades become commonly used in popular parlance. It refers to the consequence of the failure of an organism – human or other animal – to respond adequately to mental, emotional, or physical demands, whether actual or imagined. When the person perceives a threat, their nervous system responds by releasing a flood of stress hormones, including adrenaline and cortisol. These hormones arouse the body for emergency action. The stress response is the body’s way of protecting the person. When working properly, it helps in staying focused, energetic, and alert.

Biology primarily attempts to explain major concepts of stress in a stimulus-response manner, much like how a psychobiological sensory system operates. The central nervous system (brain and spinal cord) plays a crucial role in the body’s stress-related mechanisms. Whether these mechanisms ought to be interpreted as the body’s response to a stressor or embody the act of stress itself is part of the ambiguity in defining what exactly stress is. Nevertheless, the central nervous system
works closely with the body’s endocrine system to regulate these mechanisms. One branch of the central nervous system, the sympathetic nervous system, becomes primarily active during a stress response, regulating many of the body’s physiological functions in ways that ought to make an organism more adaptive to its environment.

PSYCHOLOGICAL ASPECT OF STRESS

The word stress is used in many different contexts. However, psychological stress is not as vague and all-encompassing as most people believe it to be. Stress is not directly created by external events, but instead by the internal perceptions that cause an individual to have anxiety/negative emotions surrounding a situation, such as pressure, discomfort, etc., which they then deem “stressful”. Humans experience stress, or perceive things as threatening, when they do not believe that their resources for coping with obstacles (stimuli, people, situations, etc.) are enough for what the circumstances demand. When people think the demands being placed on them exceed their ability to cope, they then perceive stress. The feelings often associated with experiencing stress are anxiety and being overwhelmed.

THEORIES OF STRESS

Theories that focus on the specific relationship between external demands (stressors) and bodily processes (stress) can be grouped in two different categories: approaches to ‘systemic stress’ based in physiology and psychobiology (Cannon, 1929, and Selye, 1976) and approaches to ‘psychological stress’ developed within the field of cognitive psychology (Lazarus, 1966, 1991; McGrath, 1982; Lazarus & Folkman, 1984).

FIGHT OR FLIGHT RESPONSE

Cannon (1929) describes the fight or flight response of the body after perceiving danger or stress. This response mobilizes the organism to respond quickly to danger but the state of higher arousal can be harmful to health if it is prolonged.
Cannon (1929) originally found this response in animals, but it was later found that it is also present in humans. The fight or flight response describes the way mammals respond to a threat. He asserted that when our ancestors were walking through the jungle, and they came across a threat they needed to decide very quickly if they should fight or run away. The fight or flight response prepares the body almost instantly for these actions.

In the human fight or flight response in prehistoric times, fight was manifested in aggressive, combative behaviour and flight was manifested by fleeing potentially threatening situations, such as being confronted by a predator. In current times, these responses persist, but fight and flight responses have assumed a wider range of behaviours. For example, the fight response may be manifested in angry, argumentative behaviour, and the flight response may be manifested through social withdrawal, substance abuse, and even television viewing (Friedman & Silver, 2007).

The first stage of the fight or flight response is activation of the sympathetic nervous system. This causes a system-wide response. Adrenaline and noradrenaline are released leading to increased alertness. Blood is diverted from the internal organs and the skin to skeletal muscles. The heart-rate, force of heart contractions, and respiratory rate are increased. The body begins to convert stored glycogen into glucose. All of these changes allow the body to exert a large amount of energy over a short period of time so that the individual may either fight effectively, or run away effectively.

**SYSTEMIC STRESS: SELYE'S THEORY**

The popularity of the stress concept in science and mass media stems largely from the work of the endocrinologist Selye (1936). In a series of animal studies he observed that a variety of stimulus events (e.g., heat, cold, toxic agents) applied intensely and long enough are capable of producing common effects, meaning not specific to either stimulus event. Besides these nonspecific changes in the body, each stimulus produces, of course, its specific effect, heat, for example, produces
vasodilatation, and cold vasoconstriction. According to Selye (1976), these non-specifically caused changes constitute the stereotypical, i.e., specific, response pattern of systemic stress. Selye (1976) defines this stress as ‘a state manifested by a syndrome which consists of all the nonspecifically induced changes in a biologic system’.

Selye (1976) described the stress response in terms of a General Adaptation Syndrome (GAS) whereby the individual responds and deals with a stressor in several stages: the alarm reaction, the stage of resistance, and the stage of exhaustion.

**Stage 1: Alarm**

Upon encountering a stressor, body reacts with “fight-or-flight” response and sympathetic nervous system is activated. Hormones such as cortisol and adrenaline are released into the bloodstream to meet the threat or danger.

Alarm is the first stage. When the threat or stressor is identified or realized, the body’s stress response is a state of alarm. During this stage, adrenaline will be produced in order to bring about the fight-or-flight response. There is also some activation of the HPA axis, producing cortisol. Alarm reaction is like the fight or flight response to an emergency. The body is mobilized. At the beginning of the arousal blood pressure drops below normal for a moment, but then quickly rises to above normal. This arousal is produced by the release of hormones by the endocrine system: the pituitary glands secrete ACTH, which causes a heightened release of adrenaline, noradrenaline, and cortisol by the adrenal glands into the bloodstream. The body cannot stay in this state for long without serious consequences.

**Stage 2: Resistance**

Resistance is the second stage. If the stressor persists, it becomes necessary to attempt some means of coping with the stress. Although the body begins to try to adapt to the strains or demands of the environment; the body cannot keep this up indefinitely, so its resources get gradually depleted.
Parasympathetic nervous system returns many physiological functions to normal levels while body focuses resources against the stressor. Blood glucose levels remain high, cortisol and adrenaline continue to circulate at elevated levels, but outward appearance of organism seems normal.

Stage 3: Exhaustion

Exhaustion is the third and final stage in the GAS model. At this point, all of the body's resources are eventually depleted and the body is unable to maintain normal function. The initial autonomic nervous system symptoms may reappear (sweating, raised heart rate, etc.). If stage three is extended, long-term damage may result, as the body's immune system becomes exhausted, and bodily functions become impaired, resulting in decomposition.

Not all stress, according to Selye, is perceived the same by humans. He invented the terms eustress and distress to differentiate between stress that helped or harmed. Eustress might make people more functional in stage two, and be received positively or it wouldn’t have an alarming effect on physicality because a person had good coping resources. Distress, on the other hand, can seriously affect behaviour and ultimately reduces functionality, instead of improving it. More specifically, people in eustress have greater ability to remain in the resistance stage, while those in distress may plummet quickly to the exhaustion stage.

The responsiveness of an individual to a perceived stressor is conceptualized by Page & Lindsey (2003) as a dose-response curve, whereby as the intensity of the stressor increases, the response to the stressor is also increased.

General adaptation syndrome suggests the very real physical results of exposure to stress, especially long term types. Fortunately people have many ways, and can learn many new methods for coping with stress. Interventions may exist to help people in all kinds of stressful situations.
PSYCHOLOGICAL APPRAISAL AND THE EXPERIENCE OF STRESS: THE LAZARUS THEORY

Cognitive Appraisal

Lazarus & Folkman (1984) proposed a model that emphasizes the transactional nature of stress. Stress is a two-way process; the environment produces stressors and the individual finds ways to deal with those.

Cognitive appraisal is a mental process by which people assess two factors:

1. Whether a demand threatens their well-being?
2. Whether a person considers that he has the resources to meet the demand of the stressor?

There are two types of appraisal:

1. Primary Appraisal
2. Secondary Appraisal

Primary Appraisal

During the primary appraisal stage a person will be seeking answers to the meaning of the situation with regard to their well-being. One of three types of appraisals can be made:

1. It is irrelevant
2. It is good (benign-positive)
3. It is stressful

Further appraisal is made with regard to three implications:

Harm-loss: Harm-loss refers to the amount of damage that has already occurred. There may have been an injury. The seriousness of this injury could be exaggerated producing a lot of stress.
**Threat:** Threat is the expectation of future harm, for example the fear of losing one's job and income. Much stress depends on appraisals which involve harm-loss and threat.

**Challenge:** Challenge is a way of viewing the stress in a positive way. The stress of a higher-level job could be seen as an opportunity to expand skills, demonstrate ability, and make more money.

**Secondary Appraisal**

Secondary appraisals occur at the same time as primary appraisals. A secondary appraisal can actually cause a primary appraisal. Secondary appraisals include feelings of not being able to deal with the problem such as:

- I can't do it-I know I'll fail.
- I will try, but my chances are slim.
- I can do it, if I get help.
- If this method fails, I can try a few others.
- I can do it, if I work hard.
- No problem-I can do it.

Stress can occur without appraisal such as when one's car is involved in an accident and he has not had time to think about what has happened. Accidents can often cause a person to be in shock. It is difficult for people to make appraisals whilst in shock as their cognitive functioning is impaired.

Events are stressful depending on two types of factors (Cohen & Lazarus, 1983):

- Those that relate to the person.
- Those that relate to the situation.
Personal factors include intellectual, motivational and personality characteristics. People who have high self-esteem are likely to believe they have the resources to meet demands. Stressful events are seen as challenges rather than as threats (Cohen & Lazarus, 1983).

Since its first presentation as a comprehensive theory (Lazarus, 1966), the Lazarus stress theory has undergone several essential revisions (Lazarus & Launier, 1978; Lazarus & Folkman, 1984; and Lazarus, 1991). In the latest version Lazarus (1991), stress is regarded as a relational concept i.e., stress is not defined as a specific kind of external stimulation pattern of physiological, behavioural, or subjective reactions. Instead, stress is viewed as a relationship (transaction) between individuals and their environment.

**RESOURCE THEORIES OF STRESS: A BRIDGE BETWEEN SYSTEMIC AND COGNITIVE VIEWPOINTS**

Unlike approaches discussed so far, resource theories of stress are not primarily concerned with factors which create stress, but with resources that preserve well-being in the face of stressful encounters. Several social and personal constructs have been proposed, such as social support (Schwarzer & Leppin, 1991), sense of coherence (Antonovsky, 1979), hardiness (Kobasa, 1979), self-efficacy (Bandura, 1977), or optimism (Scheier & Carver, 1992). Whereas self-efficacy and optimism are single protective factors, hardiness and sense of coherence represent tripartite approaches. Hardiness is an amalgam of three components: internal control, commitment, and a sense of challenge as opposed to threat. Similarly, sense of coherence consists of believing that the world is meaningful, predictable, and basically benevolent. Within the social support field, several types have been investigated such as instrumental, informational, appraisal and emotional support.

The recently offered conservation of resources (COR) theory (Hobfoll, 1989; and Hobfoll et al., 1996) assumes that stress occurs in either of these three contexts: when
people experience loss of resources, when resources are threatened, or when people invest their resources without subsequent gain. Four categories of resources are proposed: object resources (i.e., physical objects such as home, clothing, or access to transportation), condition resources (e.g., employment and personal relationships), personal resources (e.g., skills or self-efficacy), and energy resources (those means which facilitate the attainment of other resources, for example, money, credit, or knowledge).

Lilly et al. (1993) outlined a number of testable hypotheses (called principles) derived from basic assumptions of COR.

1. Loss of resources is the primary source of stress. This principle contradicts the fundamental assumption of approaches on critical life events (Holmes & Rahe, 1967) that stress occurs whenever individuals are forced to re-adjust themselves to situational circumstances, may those circumstances be positive (e.g., marriage) or negative (e.g., loss of a beloved person). In an empirical test of this basic principle, Lilly et al. (1993) found that only the loss of resources was related to distress.

2. Resources act to preserve and protect other resources. Self-esteem is an important resource that may be beneficial for other resources. Hobfoll & Leiberman (1987), for example, observed that women who were high in self-esteem made good use of social support when confronted with stress, whereas those who lacked self-esteem interpreted social support as an indication of personal inadequacy and consequently, misused support.

3. Following stressful circumstances, individuals have an increasingly depleted resource pool to combat further stress. This depletion impairs individuals' capability of coping with further stress, thus resulting in a loss spiral. This process view of resource investment requires focusing on how the interplay between resources and situational demands changes over time as stressor sequences unfold. In addition, this principle shows that it is important to investigate not only the effect of resources on outcome, but also of outcome on resources.
COPING WITH STRESS

Anxiety and stress are disturbing experiences, producing high levels of physiological arousal, which motivates the individual to try to reduce the stress level; this process is called ‘coping’.

Individuals deal with perceived threats, or stress, in different ways. There are different classifications for these coping, or “defense” mechanisms, however they all are variations on the same general idea: There are good/productive ways to handle stress and there are negative/counterproductive ways to do so. Because stress is perceived, the following mechanisms do not necessarily deal with the actual situation that is causing an individual stressed. However, often they do, but they are also considered coping mechanisms if they allow the individual to better cope with the negative feelings/anxiety that they are experiencing due to the perceived stressful situation, as opposed to actually fixing the concrete obstacle causing them stress.

Lazarus & Folkman (1984) suggest there are two main forms of coping: emotion-focused coping and problem-focused coping.

EMOTION-FOCUSED COPING

Emotion-focused coping involves an attempt to reduce the disturbing emotions which invariably accompany the experience of stress. Some examples are discussed below.

Social support – At home social support processes are the network of friends and relatives willing to provide psychological assistance, even if only a willing ear, in times of stress. A number of studies have shown that where social support networks are strong, even extreme stress can be mitigated. Women often seem to maintain stronger social support networks than men, probably because of their primary involvement in childcare, a task that is made easier if shared among family or friends.
**Traumatic events** – Traumatic events, such as wars or earthquakes, produce strong feelings of camaraderie among those trying to help the survivors, thereby helping to reduce the stressful experience to a bearable level. This is another form of social support.

**Defense mechanisms** – Defense mechanisms were suggested by Freud (1937) as methods people use to cope with anxiety and problems they do not wish to face directly. Inevitably they involve some distortion of reality. As such, these mechanisms prevent an individual from getting into the grip of a problem and solve it, and may give some temporary relief.

**PROBLEM-FOCUSED COPING**

Problem-focused coping involves trying to understand the problem situation better and taking action to deal with it. This kind of coping includes various forms of stress management.

**Cognitive appraisal** – This involves thinking about the stressful situation and trying to find ways of solving the problem. For example, driving to work down the market way may prove very stressful; however by leaving home five minutes earlier, one may be able to drive comfortably to work along the market roads which would be a much more pleasant way to start the day.

**Time management** – Not only trying to cram too much into a day, but also managing one's time ineffectively, can often be a source of stress. Individuals can be taught to look at what has to be accomplished in a day, or a week, and find efficient ways of working so that they are not constantly backtracking and thereby wasting time. Establishing priorities and working to those is an efficient method of time management.

**Assertiveness** – Assertiveness training helps people to learn to say ‘no’ when imposed upon. They learn to ask for what they want without being aggressive or self-effacing. It is often a highly effective technique to counteract low self-esteem.
This counteracts stress in several ways: by learning to say no, people are not overworked or imposed upon; by asking for what they want, they are more likely to be happy with their situation; by seeing themselves as effective, they become more comfortable with themselves.

**Relaxation and meditation** – There is nothing really ‘transcendental’ about this. It is a specific technique that enables people to focus attention on specific thoughts. If attention is focused, it cannot wander and continually mentally ‘rehearse’ worries and anxieties, which would raise autonomic arousal levels. During relaxation, breathing is controlled, and heart rate and blood pressure are lowered.

**Exercise** – Exercise has been shown to be a highly effective form of stress management; even the physically unfit can reap the benefits by taking walks. It is thought that exercise shows two kinds of benefit in terms of relieving stress. At the physiological level, it provides an outlet for the fight or flight responses, by providing physical activity. At the situational level, it has the advantage of removing the individual from the stress provoking situation.

**Biofeedback** – It has been suggested that by teaching people how to lower their blood pressure and reduce other bodily symptoms of stress, the harmful effects of stress may be counteracted.

**Direct action** – One stress-reducing tactic is facing a problem directly by identifying it and then developing a strategy to solve it. For example, for students who become highly anxious at examination times, recognizing that their studies have not been adequate and developing more efficient class-preparation procedures can be helpful.

**STRESS RESISTANCE FACTORS**

Stress is a subjective experience largely determined by focal person’s appraisals and interpretation of the potential stressors (Lazarus & Lunier, 1978; Lazours & Folkman, 1984; and Woffort et al., 1997).
Stress circumstances do not take their toll from a passive individual, as is implicitly assumed by the stimulus definitions of stress, but from an individual who is imbuing stressful situations with personal meaning and struggles to control or master those situations. Individual’s experience of stress is mediated and response and reaction to it are moderated by his personal attribute, cognitive sets and behaviour patterns. Since, person’s cognitions and behavioural patterns play major role in experience of stress, they can also help substantially in preventing, resisting and moderating stresses. Individual makes the appraisal of stressful situation in the framework of his psychological characteristics, traits, beliefs, expectations perspective, attributions and characteristics of cognitive sets. Early stress resistance was characterized by two profoundly influential exemplars that share a guiding assumption that all changes, whether positive or negative, involve adaptive risks that are predictably related to pathological outcomes. The first exemplar is the General Adaptation Syndrome (Selye, 1976) which describes a stereotypical pattern of physiological response elicited by any adaptive demand. The second exemplar is Social Readjustment Reality Scale (Home & Rahe, 1967) which uses weighted units to measure the amount of life change an individual experiences during a given period of time. These exemplars provided an investigative frame work that has fostered thousand of studies. Individual shows highly variable reactions to stressors, many persons remain healthy despite being exposed to stressful circumstances. Stress resistance resource also needs to be broadened conceptually to examine how life stress sometime can create an opportunity for psychological growth. Antonovsky (1979, 1987) has pointed out that stress resistance resource remain partially tied to a pathological orientation, because its focus is on not becoming sick. A next step in the stress resistance paradigm focus on health is to understand psychological growth under stress. In fact many people are remarkably resilient in the face of adversity. They may emerge from a crisis with more self confidence, new coping skills, closer relationships with family and friends and with a richer appreciation of life (Holahan et al., 1986; and Stewart et al., 1986) and being tender, humble and handy (Haan, 1982).
The last three decades have witnessed a growing societal concern with stress and its psychological toll. Researches on stress, has undergone a fundamental changes in conceptualization whereas traditional stress research envisioned stressors as resulting in pathology. Stress resistance researchers emphasize people’s capacity to remain healthy when stressors occur (Kobasa et al., 1982; Prince & Wortman, 1985; Holahan et al., 1997; and Conner & Armitage, 2002). Stress resistance research has focused on the adaptive value of effective coping strategies (Bolger, 1990, and Conner et al., 2007), social support (Cohen & Wills 1985, and Thoits, 1995), personal resources (Andrew & Brown, 1993; and Jang et al., 2002) and religious beliefs (Krause et al., 2002; and Koenig et al., 2001) during period of stress. Not all individuals are equally vulnerable to stressors (Conner et al., 2002) and resilient individuals have the ability to be well adjusted despite exposure to stressors (Gomez & Melaren, 2006). Stress resistance research examines the personal and social resources and types of coping strategies that help individual to maintain healthy functioning when stressors occur (Kesler et al., 1985; and Coyne & Smith, 1991).

By developing certain specific and desired personal attributes such as self-esteem, self-efficiency, optimism, resilience, positive affectivity, tolerance, patience etc. (Srivastava, 1995) along with the cognitive sets like daydream, guided imagery, the individual can, to a large extent, prevent or resist the experience of stress as well as tolerate or moderate the experienced stress and consequent strains of day to day life.

**SELF-ESTEEM AND STRESS RESISTANCE**

Stress is a factor that happens to affect everyone’s life. Daily events in life can be stressful, such as getting up and going to work everyday or going to the retail store to buy desirables. Stress can also be a factor in other areas in a person’s life. Stress can affect a person’s self-esteem in ways people would believe it would not. When a person is stressed, most of the time the person focuses so much on the stressor that he/she doesn’t realize that the stress they are having may be affecting other areas in life.
Self-esteem is defined as belief in oneself (Webster’s New World Dictionary, 1982). Self-esteem is a subject most people chose not to share with others, unless it is a person who perceives themselves very highly. A person cannot determine another person’s self-esteem. But how a person accepts another person can affect a person’s self-esteem. There are many factors that help determine a person’s self-esteem. Self-esteem is a large part of adolescents’ self-understanding and is likely to be a fluctuating and dynamic construct, susceptible to internal and external influences during adolescence (Baldwin & Hoffmann, 2002; and Abela et al., 2006). Self-esteem is widely recognized as a central aspect of psychological functioning during adolescence.

Some people perceive themselves as highly valuable and others may perceive themselves as worthless. A person’s self-esteem can effect their personality making them not able to cope with life factors such as stress. Crocker (2002) suggests that, the costs of seeking self-esteem extend beyond the self and those close to. In the mode of seeking self-esteem, life becomes a zero-sum game, with things that bolster a person’s self worth coming at the expense of another person’s self worth, and vice versa. Results from the Abouserie (1994) study showed that students with high self-esteem were less stressed than those with low self-esteem. Self-esteem would therefore appear to have an important influence on students’ stress levels.

However in another study results could not determine whether higher levels of stress lead to reduced esteem or whether the pattern worked in the opposite direction (Hudd et al., 2000). Lundgren (1978) suggests that it is assumed that an important determinant of stress involves certain types of disjunctions in interpersonal relationships specifically, discrepancies between the way in which individuals view themselves, the ways in which they perceive others as responding to them, and the ways in which others actually do evaluate them. These discrepancies are all characteristics of self-esteem.
Some researchers have found clear inverse associations between self-esteem and symptoms of depression (Orth et al., 2008, 2009) and anxiety (Kim et al., 2003, and Boden et al., 2008). Especially in the face of challenging life circumstances, individuals with high self-esteem are assumed to have better coping resources and are thus protected against the deleterious consequences of stressful life events and, conversely, individuals with relatively low self-esteem are more vulnerable to this effect (Orth et al., 2009). However, previous research testing the moderating effect of self-esteem has yielded inconsistent results, addressing a need for further investigation on this issue (Orth et al., 2008, 2009)

SELF-EFFICACY AND STRESS RESISTANCE

Self-efficacy is defined as a self-evaluation of one’s competence to successfully execute a course of action necessary to reach desired outcomes (Bandura, 1977, 1982, 1986). It is a multidimensional construct that varies according to the domain of demands (Zimmerman, 2000), and therefore it must be evaluated at a level that is specific to the outcome domain (Bandura, 1986; and Pajares, 1996).

According to Bandura’s (1977) theory of self-efficacy, all behavioural changes are mediated by a common cognitive mechanism – self-efficacy – the belief that one can successfully perform desired behaviours. Perceived efficacy mediates behaviour in various ways. People approach, explore and try to deal with situations within their self-perceived capabilities; but they avoid dealing with stressful aspects of their environment perceived as exceeding their abilities (Bandura, 1977, 1982). Several studies show that people with higher self-efficacy persist in difficult tasks longer than do people with lower self-efficacy (Brown & Inouye, 1978; Weinberg et al., 1979; and Schunk, 1981), and perceived efficacy is also an accurate predictor of performance (Bandura & Adams, 1977; and Bandura et al., 1982).

On one hand, self-efficacy is a good predictor of people's emotional arousal under stressful situations. Bandura (1978) indicated that low efficacy is generally
accompanied by high performance arousal, whereas a strong sense of efficacy is associated with low performance arousal. This notion has been supported by Bandura (1982) using both a self-report fear scale and actual physiological arousal measures.

Self-efficacy has been found to have a significant negative correlation to level of stress (Hackett et al., 1992; and Newby-Fraser & Schlebusch, 1997), suggesting that those who have a higher self-efficacy also report a lower level of stress. Therefore, it would appear that higher self-efficacy may act as a moderator of stress for university students.

**OPTIMISM AND STRESS RESISTANCE**

Optimism is characterized by positive expectations of the future and has been linked to the process of coping with stress (Scheier et al., 2001). Carver & Scheier (2003) suggest that a person’s level of optimism has a profound impact on their expectancies and therefore can serve as a useful predictor of behaviour. Optimistic students, for example, should be expected to assume that they are capable of handling the challenges of higher education, whereas pessimistic students should be less likely to do so. Chang (1998) found that optimism serves as a moderator between stress and psychological well-being and also has a direct impact on psychological adjustment. Furthermore, optimists and pessimists differ in secondary appraisal of stressful situations, and individuals who are more optimistic report low levels of perceived stress (Chang et al., 2000; Baldwin et al., 2003; and Robinson-Whelen et al., 1997). Due to these lower levels of perceived stress, optimists may be less likely to experience emotional exhaustion and physical symptoms related to burnout (Chang et al., 2000). Optimism also plays a role in the selection of coping strategies. Optimists are more likely to report using problem-focused coping, emotion-focused coping responses such as positive reinterpretation and seeking emotional support, and disengagement coping strategies such as acceptance and resignation (Scheier et al., 1986). They are less likely to use disengagement strategies such as denial and distancing (Carver et al., 1989, Brissette et al., 2002; and Hatchett & Park 2004).
Montgomery et al. (2003) have explored optimism and coping in the context of educational institutions. In a study of college students, optimism predicted better adjustment to college, higher self-esteem, and decreased loneliness. Moreover, a longitudinal study by Aspinwall & Taylor (1992) found that indirect benefits of optimism on adjustment to college were mediated by the type of coping strategy students used. Increased levels of optimism and desire for control were associated with increased use of active coping when dealing with the stress of college.

OPTIMISM

CONCEPT

‘Optimism’ is a rather ill-defined term that has been used to describe a range of different experiences, feelings and dispositions in various social and historical contexts. It appears, for example, as a theme in Voltaire (1759) where the character Dr. Pangloss exhibits an essentially flawed and naïve or ‘blind’ optimism. At the beginning of the twentieth century (1913), the American author Eleanor Hodgman Porter created another emblematically optimistic character in the guise of Pollyanna – a term now commonly used in the English language to refer to people of an overly positive and cheery disposition. More recently, Terry Jones ‘The Life of Brian’ (1979) has provided yet another – if slightly more ironic and surreal – example of how looking on the brighter side of life features ambiguously as both an admirable quality and as a source of personal failure. There are other examples from history, philosophy, politics, literature, film, music and popular culture where optimism serves as the principal theme.

The concepts of optimism and pessimism have been acknowledged for a long time. The roots of their use in contemporary psychology go back to the beginning of the modern period of philosophy in the 17th century (Domino & Conway, 2001). At that time, philosophers commonly maintained that the successful application of the
rationalization of the cosmos needed either an optimistic or a pessimistic philosophical outlook. These outlooks were seen as opposing positions with regard to the universe: as favorable to the aims and aspirations of human beings or as generally resistant to the flourishing of human beings and civilizations. Moving from the emergence of optimism and pessimism in the writings of Rene Descartes (1596-1650) (Descartes, 1628/1985) to 19th and 20th centuries and the work of psychologist-philosophers such as James (1902), the focus of the discussion shifted gradually from the cosmos to the subjective element of human experience (Domino & Conway, 2001). During the past thirty years, mainly as a legacy of Scheier & Carver’s (1985) pioneering research on generalized outcome expectancies, and Seligman’s (1975) influential work on learned helplessness, psychologists have actively examined optimism and pessimism in people’s lives. Even though most contemporary researchers agree with the general conceptualizations that optimism reflects an expectation that good things will happen, whereas pessimism reflects an expectation that bad things will happen, there are differences in operationalization. Most of the disagreement arises out of the theoretical frameworks from which these terms are derived.

Philosophers often link the concept of optimism with the name of Gottfried Wilhelm Leibniz, who held that we live in the best of all possible worlds, or that God created a physical universe that applies the laws of physics, which Voltaire famously mocked in his satirical novel 'Candide'. A modern manifestation of this approach is exemplified in artist Rina Krevat through her abstract art and tenor singing. The philosophical pessimism of William Godwin demonstrated perhaps even more optimism than Leibniz. He hoped that society would eventually reach the state where calm reason would replace all violence and force, that mind could eventually make matter subservient to it, and that intelligence could discover the secret of immortality. Much of this philosophy is exemplified in the Houyhnhnms of Jonathan Swift’s Gulliver's Travels.
OPTIMALISM

Optimalism, as defined by Rescher (2000) holds that this universe exists because it is better than the alternatives. While this philosophy does not exclude the possibility of a deity, it also doesn't require one, and is compatible with atheism. The positive psychologist Ben-Shahar (2009) used the term optimalism to mean willingness to accept failure while remaining confident that success will follow, a positive attitude he contrasts with negative perfectionism. Perfectionism can be defined as a persistent compulsive drive toward unattainable goals and valuation based solely in terms of accomplishment. Perfectionists reject the realities and constraints of human ability. They cannot accept failures, delaying any ambitious and productive behaviour in fear of failure again. This neuroticism can even lead to clinical depression and low productivity. As an alternative to negative perfectionism Ben-Shahar (2009) suggests the adoption of optimalism. Optimalism allows for failure in pursuit of a goal, and expects that while the trend of activity will tend towards the positive it is not necessary to always succeed while striving to attain goals. This basis in reality prevents the optimalist from being overwhelmed in the face of failure. Optimalists accept failures and also learn from them, which encourages further pursuit of achievement. Ben-Shahar (2009) believes that optimalists and perfectionists show distinct different motives. Optimalists tend to have more intrinsic, inward desires, with a motivation to learn, while perfectionists are highly motivated by a need to consistently prove themselves worthy.

OPTIMISM AS HUMAN NATURE

Discussions of optimism take two forms. In the first, it is posited to be an inherent part of human nature, to be either praised or decried. Early approaches to optimism as human nature were decidedly negative.

As psychodynamic ideas became popular, Freud's (1928) formula equating (religious) optimism and illusion had widespread impact, although no mental health
professional asserted that extreme pessimism should be the standard of health. Pessimism of this sort was presumably due to fixation at an early psychosexual stage. Most theorists pointed to the accurate perception of reality as the epitome of good psychological functioning: “The perception of reality is called mentally healthy when what the individual sees corresponds to what is actually there” (Jahoda, 1958). In the second-half of the twentieth century, in contrast, an increasingly large body of psychological research related to optimism and mental health began to move away from this negative perspective, instead focusing on the positive impact of optimism for well-being in many different aspects of life – from mental and physical health to job satisfaction and emotional balance. Psychologists began to argue that people are naturally inclined to think about life in a positive way, regardless of the objective evidence that might suggest otherwise. This, they suggested, was essentially a ‘good thing’ because it motivated people to achieve positive outcomes. They continue to think positively, for example, about the idea of marriage, despite the increasing rate of divorce. Similarly, people generally underplay the likelihood of contracting particular diseases despite the statistical probability of this occurring (Weinstein, 1989).

The Oxford English Dictionary defines optimism as having "hopefulness and confidence about the future or successful outcome of something; a tendency to take a favourable or hopeful view." The word is originally derived from the Latin optimum, meaning "best." Being optimistic, in the typical sense of the word, ultimately means one expects the best possible outcome from any given situation. This is usually referred to in psychology as dispositional optimism.

Optimism and pessimism are defined and operationalized, according to Scheier and Carver’s (Scheier & Carver, 1985; and Scheier et al., 1994) dispositional optimism and pessimism with its roots in the theory of the self-regulation of behaviour. In their seminal introductory article, Scheier & Carver (1985) defined dispositional optimism and pessimism as generalized outcome expectancies of good vs. bad outcomes in one’s life. Their definition stems from the more general model of the self-regulation of
behaviour that assumes that peoples’ actions are greatly influenced by their beliefs about the probability of those actions. Expectancies are seen as a major determinant of the disjunction between two general classes of behaviour: continued striving vs. giving up. Accordingly, individuals who hold positive expectations for the future are assumed to believe that good things will occur in their lives, and tend to see desired outcomes as attainable and to persist in their goal-directed efforts. In contrast individuals who hold negative outcome expectations for their future are assumed to expect bad things to happen, and tend to withdraw effort more easily, become passive and finally to give up on achieving their goals (Scheier & Carver, 1985). Scheier et al. (1985) also suggested that outcome expectancies per se are the best predictors of behaviour, rather than the basis from which the expectancies are derived. In other words, it is not important why people expect good things to happen in their lives (e.g., having good luck, being favored by God, working hard); what is important is the generalized optimistic or pessimistic orientation itself (Scheier & Carver, 1987). Further, Scheier & Carver (1987) suggest that these generalized expectancies are relatively stable across time and in different contexts, and that they form the basis of an important personality trait (Scheier & Carver, 1985; and Scheier et al., 1994)

Greenwald's (1980) statement likening human nature to a totalitarian regime was another turning point in how optimism was regarded by psychologists. According to Greenwald (1980), the self can be regarded as an organization of knowledge about one's history and identity. This organization is biased by information-control strategies analogous to those used by totalitarian political regimes. Everyone engages in an ongoing process of fabricating and revising his or her own personal history. The story each person tells about himself is necessarily egocentric. Every one is the central figure in his/her own narratives. They take credit for good events and eschews responsibility for bad events. They resist changes in how they think. In sum, the ego maintains itself in the most self-flattering way possible, and it has at its disposal all of the psychological mechanisms documented by Matlin & Stang (1978).
Another turning point in the view of optimism was Taylor & Brown's (1988) literature review of research on positive illusions. They described a variety of studies showing that people are biased toward the positive and that the only exceptions to this rule are those individuals who are anxious or depressed. Taylor (1989) elaborated on these ideas in her book “Positive Illusions”, where she proposed that people's pervasive tendency to see themselves in the best possible light is a sign of well-being. She distinguished optimism as an illusion from optimism as a delusion: Illusions are responsive, albeit reluctantly, to reality, whereas delusions are not.

Researchers sometimes operationalize the term differently depending on their research. However, for example, Seligman et al. (2001) define it in terms of explanatory style, which is based on the way one explains life events.

Optimism can be defined as the tendency to believe that one will generally experience good versus bad outcomes in life. It is generally accepted that this belief is a stable individual characteristic (Sheier & Carver, 1985). According to this view, optimists are people who expect future outcomes to be positive. Conversely, pessimists are those who display more negative expectations for the future (Scheier & Carver, 1992). Scheier & Carver (1985) define optimism "as a generalized expectancy that good, as opposed to bad, outcomes will generally occur when confronted with problems across important life domains". In general, optimism is used to denote a positive attitude or disposition that good things will happen independent of one's ability (Franken, 1994).

A useful definition of optimism was offered by anthropologist Tiger (1979), “a mood or attitude associated with an expectation about the social or material future—one which the evaluator regards as socially desirable, to his [or her] advantage, or for his [or her] pleasure”. An important implication of this definition, one drawn out by Tiger (1979) is that there can be no single or objective optimism, at least as characterized by its content, because what is considered optimism depends on what
the individual regards as desirable. Optimism is predicated on evaluation—on given affects and emotions, as it were.

Contemporary approaches usually treat optimism as a cognitive characteristic—a goal, an expectation, or a causal attribution—which is sensible so long as individuals remember that the belief in question concerns future occurrences about which they have strong feelings. Although at odds with conventional definitions, the possibility of free-floating optimism deserves scrutiny. Some people readily describe themselves as optimistic yet fail to endorse expectations consistent with this view of themselves. This phenomenon may merely be a style of self-presentation, but it may additionally reflect the emotional and motivational aspects of optimism without any of the cognitive aspects. Perhaps extraversion is related to this cognitively shorn version of optimism.

COMPONENTS OF OPTIMISM

BIOLOGICAL COMPONENT

One argument for a biological explanation of optimism comes from Lionel Tiger whose book, “Optimism: The Biology of Hope” was published in 1979. Tiger maintains that when early man left the forests and became hunters many of them suffered death and injury. He reasoned that since the principles of learning tell us that humans tend to abandon tasks associated with negative consequences it was biologically adaptive for humans to develop a sense of optimism. He further argues that when we are injured, our bodies release endorphins. Endorphins generally have two properties; they have an analgesic property (to reduce pain) and they produce feelings of euphoria. Tiger (1979) reasons that, it was biologically adaptive for our ancestors to experience positive emotions instead of negative emotions when they were injured because it would reinforce their tendency to hunt in the future. Therefore, Tiger (1979) reasons optimism to be a biologically induced state (Franken, 1994). In fact, many personality theorists consider optimism a personality trait and not an emotion. They believe that optimism may be an inborn temperament; some
people are, by nature, either optimistic or pessimistic. While the hereditability of optimism is largely debatable, most researchers agree that it seems to be a biological trait to some small degree, but it is also thought that optimism has more to do with environmental factors, making it a largely learned trait has also been suggested that optimism could appear to be a hereditary trait because it is actually a manifestation of combined traits that are mostly heritable, like intelligence and temperament. Optimism may also be linked to health.

**LEARNED COMPONENT**

Seligman (1990) comes to the conclusion that optimism is a thinking style that can be learned. He believes that hope and optimism can both be learned. He feels that self-efficacy, the belief that one has mastery over the events of one's life and can meet challenges as they come up, lead to hope and optimism. His method of teaching optimism relies heavily on active thought processes which are believed as more of a cognitive activity that optimism can be reinforced or stifled. Additionally, if optimism is biological then it would be very difficult to learn to have something that is inherent. Moreover biological basis of optimism is yet to be proved

**COGNITIVE COMPONENT**

Some researchers, such as Snyder (1994) feel that optimism differs from hope in that it contains a proactive component called planning (Franken, 1994). Additionally, optimistic statements are usually based on logical, concrete facts. Both of these concepts (planning and logic) imply some sort of cognitive activity (as opposed to rote learning or habit). People can all hope for anything at anytime. Optimistic claims are usually based on evidence that can be judged or evaluated in terms of rational criteria.

Like hope, optimism is also a great motivator. In the 1988 Seoul Summer Olympics, Matt Biondi lost the gold and silver medals in his first event, his best event, the 200-meter freestyle, by mere centimeters. Many sportscasters predicted that this
early defeat would dispirit Biondi and cost him any chance of winning gold medals in any successive events. But they were wrong. Biondi went on to win gold medals in five of his six remaining events and took the silver in his second event. According to Seligman, Biondi was able to make a successful comeback because of optimism. Seligman had tested Biondi, and his teammates, using the Attributional Style Questionnaire (ASQ) four months before the start of the 1988 Seoul Summer Olympics and Biondi had scored very high on the optimistic scale. Then Seligman had subjected Biondi and his less optimistic teammates to false feedback from their coach during a controlled study. Biondi, and others, were told that they had not swum very fast in a practice event while in fact they had done remarkably well. Each swimmer was told that they had swum 1.5 to 5 seconds slower (depending on the distance of the event) than they had actually covered. These timings were selected because they would be both believable and disheartening. Then the coach told each of the swimmers to "rest up and then try again" giving it their best. As predicted by Seligman the swimmers scoring high on the ASQ did as well or even better than the previous swim session. The swimmers scoring low on the ASQ (the pessimists) all did even worse on their second try. This group of swimmers had been dispirited and had just given up (Seligman, 1990; and Goleman, 1995).

In an adolescent sample, Nurmi (1989) found that optimism which is often assessed by the perceived probability that a given goal would be attained is described as the extent to which the adolescent feels that his or her goals will eventually be realized. Klaczynski & Fauth (1996) added that optimistic adolescents also possessed positive adaptive qualities. The more optimistic adolescents are, the more they will be motivated to pursue their goals and the more likely to plan how these goals can be realized.

**VIEWS ON OPTIMISM**

There are currently two main views on optimism, “the explanatory style” and “the dispositional optimism view,” also known as “the direct belief view”.
EXPLANATORY STYLE

The first view seeks to determine people's beliefs based on past experiences and is considered a more indirect approach to studying optimism. This view is based on a person’s attributional style (Scheier et al., 2000). Attributional styles are formed by the way people perceive or explain past life experiences. If these perceptions or explanations are negative and held onto, they will then expect negative outcomes for future events. A sense of helplessness takes over and they believe they are unable to change their viewpoint of the world.

Negative attributions can be reversed through various cognitive and/or behavioural methods (Gillham & Seligman, 1999). The problem with the use of attributional theory in understanding optimism is that it can be very complex and is subjectively based on self-report of past experiences (Scheier et al., 2000).

Explanatory style is the way people determine the outlook of his/her life based on past experiences. People who believe these past experiences were positive and that negative memories were out of their control (external factors) are said to have a positive explanatory style or are optimistic. In comparison, those who blame themselves for misfortunes (internal factors) and believe they will never amount to anything are said to have negative explanatory style or are pessimistic.

Seligman (1998) believes there are three major factors that determine what a person's explanatory style will be: permanence, pervasiveness, and personalization.

The idea of permanence is that people believe they are the cause of negative events and the bad experiences will always be with them. Their views are pessimistic in nature. For example, “I'm all washed up;” “Diets never work;” and, “You always nag.” Temporary/non-permanent (optimistic) styles of thinking are opposites of the above phrases such as "I'm exhausted", "Diets don't work when you eat out" and, "You nag when I don't clean my room." As stated, the way people interpret and cope with life events determine the way they let them interfere with their functioning.
Speaking in terms of "sometimes" and "under certain conditions" is healthier than using phrases such as "always" and "forever" (Seligman, 1998).

The second type of defining a person's explanatory style as described by Seligman is pervasiveness. Pervasiveness (specific vs. universal) is based on the way people allow unfortunate circumstances to affect their entire lives. People who look at disappointment such as getting a bad grade in a class as being a total failure in everything they do are describing their misfortune in "universal" terms. On the other hand, people who get a bad grade and can isolate the bad grade to just that grade are said to be making a "specific" explanation of the event. The following examples of phrases better illustrates the distinction between universal and specific pervasiveness about life events. A universal or pessimistic viewpoint would be: "All teachers are unfair;" "I'm repulsive;" or “Books are useless". Specific or optimistic pervasiveness may be: "Professor X is unfair;" "I’m repulsive to him;" or “This book is useless." As described, universal pervasiveness is very concrete with no room for distinctions between different life events or personal qualities. The specific pervasiveness style allows people to not explain things in black and white terms and view misfortunes as situation specific. Therefore, they are able to reinforce and enhance the positive qualities that they do have; even when they are faced with negative life events (Seligman, 1998).

The third and final part of a persons’ explanatory style is personalization (internal vs. external). Personalization deals with the way people describe the cause of bad events. They either blame themselves (internal), which causes low self-esteem, or they blame others (external), and tend to like themselves better. Specific examples of internal vs. external personalization are illustrated by the following phrases: Internal- "I'm stupid;" “I have no talent at poker;" or I'm insecure;" External- "You're stupid;" "I have no luck at poker;" or "I grew up in poverty." Seligman cautions people to be careful when making external statements because it is easy to fool yourself into believing other people are the causes of bad events. This is especially true for people
who are in denial or project their feelings of insecurity or apprehension about situations onto others. Having an external personalization style is healthy, as long as it is objective and truthful (Seligman, 1998).

Peterson & Bossio (2002) argue that individuals who have an optimistic explanatory style believe that what they do can change the outcome. A pessimistic explanatory style is one that attributes bad events to permanent, pervasive, and personal causes. In contrast to being an agent of change as an optimist can be, the pessimistic explanatory style is far more likely to render one inconsequential.

Explanatory style emerged from reformulated learned helplessness theory, which posited the three dimensions of stability, globalness, and of externality (Gillham et al., 2002). The reformulated learned helplessness theory (RLHT) predicts pessimistic explanations lead to negative expectations about the future while optimistic explanations lead to positive expectations (Gillham et al., 2002). RLHT is a diathesis-stress model and so incorporates the latest bio-psychosocial model of diathesis-stress. Gillham et al. (2002) measuring explanatory style may inform us about perceptions of pain in chronic pain patients and suggest potential interventions.

Explanatory optimism refers to individuals perceiving problems in their lives to be temporary, specific, and having external causes (Gillham et al., 2002).

Buchanan & Seligman (1995) have approached optimism in terms of an individual's characteristic explanatory style: how he or she explains the causes of bad events (Buchanan & Seligman, 1995). According to them, those who explain bad events in a circumscribed way, with external, unstable, and specific causes, are described as optimistic, whereas those who favour internal, stable, and global causes are described as pessimistic.

The notion of explanatory style emerged from the attributional reformulation of the learned helplessness model (Abramson et al., 1978). Briefly, the original learned
helplessness model proposed that after experiencing uncontrollable aversive events, animals and people become helpless – passive and unresponsive – presumably because they have “learned” that there is no contingency between actions and outcomes (Maier & Seligman, 1976). This learning is represented as a generalized expectancy that future outcomes will be unrelated to actions. It is this generalized expectation of response – outcome independence that produces later helplessness.

Explanatory style was added to the helplessness model to better account for the boundary conditions of human helplessness following uncontrollability. Their causal attribution determines how they respond to the event. If it is a stable (long-lasting) cause, helplessness is thought to be chronic. If it is a pervasive (global) cause, helplessness is thought to be widespread. If it is an internal cause, self-esteem is thought to suffer.

All things being equal, people have a habitual way of explaining bad events– an explanatory style– and this explanatory style is posited to be a distal influence on helplessness following adversity (Peterson & Seligman, 1984). Explanatory style based on bad events is usually independent of explanatory style for good events. Explanatory style based on bad events usually has more robust correlates than explanatory style based on good events, although correlations are typically in the opposite directions (Peterson, 1991).

As explanatory style research has progressed and theory has been modified, the internality dimension has become of less interest. It has more inconsistent correlates than do stability or globality, it is less reliably assessed, and there are theoretical grounds for doubting that it has a direct impact on expectations perse (Peterson, 1991). Indeed, internality may well conflate self-blame and self-efficacy, which would explain why it fares poorly in empirical research. In a modification of the helplessness reformulation, Abramson et al. (1989) emphasized only stability and globality.
DISPOSITIONAL OPTIMISM OR DIRECT BELIEF MODEL

This construct attempts to study optimism through the direct beliefs individuals have regarding future life events. This view is referred to in the literature as “dispositional optimism” or the “direct belief model.” These direct beliefs are measured directly by using measures such as the Life Orientation Test-Revised (Carver et al., 1994). This approach is more focused on optimistic beliefs about future events compared with the attributional theory, which looks to understand why people are optimistic or pessimistic and how they became this way. Its direct study of beliefs about optimism allows for optimism to be easily studied with other known variables that promote psychological and physical well-being (Scheier et al., 2000). However, only identifying the beliefs of optimism and not the cause does not allow for the origin of negative belief systems to be studied. Therefore, the use of an attributional style model appears to be a better way to understand why people are optimistic or pessimistic, while the direct belief model is more capable of just measuring if a person is an optimistic or pessimistic

Scheier & Carver (1992) have studied a personality variable they identify as dispositional optimism: the global expectation that good things will be plentiful in the future and bad things, scarce. Scheier & Carver’s (1992) overriding perspective is in terms of how people pursue goals, defined as desirable values. To them, virtually all realms of human activity can be cast in goal terms, and people’s behaviour entails the identification and adoption of goals and the regulation of actions vis-à-vis these goals.

Optimism enters into self-regulation when people ask themselves about impediments to achieving the goals they have adopted. In the face of difficulties, do people nonetheless believe that goals can be achieved? If so, they are optimistic; if not, they are pessimistic. Optimism leads to continued efforts to attain the goal, whereas pessimism leads to giving up.

Optimism is the belief that future life event will have positive outcomes. Unrealistic optimism is the belief that nothing bad will happen because the person
feels invincible to things such as accidents, diseases, etc. Although, it appears a bit inappropriate to believe this way, research has found unrealistic optimism and optimism to be highly related in improving psychological and physical well-being. In their study of the relationship between optimism and unrealistic optimism, Davidson & Prkachin (1997) conducted two studies in which participants completed both the Life Orientation Test (LOT) and the Unrealistic Optimism Measure (UOM) and a lifestyle questionnaire with the main focus on exercise behaviours. Participants were assessed at the beginning of the semester and again at six weeks. At six weeks, they were only given the exercise questions. Results showed that both optimism and unrealistic optimism were positively correlated. Also, those who were high in optimism but low in unrealistic optimism showed the greatest level of exercise over the six-week period. The overall finding for those high in unrealistic optimism was that they reported a lower risk of experiencing future health problems. The general criticism of unrealistic optimism is that these individuals may be negating or not actively participating in healthy behaviour or activities.

**REALISTIC OPTIMISM**

The combination of optimism and reality is realistic optimism. This view is based on the following three models which look at optimism in the past, present, and future (Schneider, 2001).

The first model is known as the "benefit of the doubt principle". These deals with the way people classify past experiences. Their experiences can be judged in either a realistic or unrealistic way. For a person to identify the situation in a realistic way, they need to be aware of any circumstances or biases that may influence their thinking. For example, if someone gives a speech and evaluates the performance as good, there are a number of factors that may have influenced the ratings. If the person can give an objective rating of the performance, then he/she would be experiencing realistic optimism about the performance and other future speeches.
However, if the person develops biases about the performance and feels it was a good presentation, even if it went poorly, then he/she would be engaging in unrealistic optimism.

The next form of realistic optimism is the "appreciate the moment principle." Appreciation is defined as the way everyday people, events, and experiences, are not taken for granted and are looked upon as giving meaning to a person's life. The use of appreciation in this type of optimism deals with the idea that if people can enjoy what they have then life will be more enjoyable. The basic notion described here is that individuals' perception and awareness of the way they interact in their lives is the key factor in determining if they are optimistic or pessimistic. For example, when faced with a half glass of water, a person can either say it is “half full” or “half empty.” A half full response would be appreciative of the amount of water he has, not the amount he does not have. In comparison, someone who views the glass as half empty would not appreciate the amount he does have and would perceive the less than full glass in a negative light. Looking at a glass of water to determine a person's way of looking at the world is simplistic and has been used anecdotally for a long time, however, the response of half full/half empty can provide valuable information about the way a person lives his life. It is important for people to examine the reasons for a response of half empty because this belief may be relevant to other parts of their life. For example, the person who states, “half empty” may be giving half an effort in their job or education because of their lack of motivation or appreciation of the skills and/or accomplishments they deserve credit for (Schneider, 2001).

The final type of optimism is described as "optimism-unrealistic expectation or adaptive motivation." This approach attempts to compare the unrealistic biases associated with optimism with the adaptive, motivational properties it provides. If people believe nothing will happen because they are immune to diseases such as cancer, AIDS, etc., then it could be said they are unrealistic about their future. This may be unrealistic optimism as described above, but in this context it is described as
unrealistic expectations. Conversely, adaptive motivation is based on the premise that people believe they can either avoid a disease or negative event because they have and are currently acting in ways to beat the odds. Also, these people have high spirits if confronted with a negative life situation. They are realistic about their condition, but are positive about their abilities to deal with what is happening (Schneider, 2001).

**DAYDREAMING**

Daydreaming is a short-term detachment from one's immediate surroundings, during which a person's contact with reality is blurred and partially substituted by a visionary fantasy, especially one of happy, pleasant thoughts, hopes or ambitions, imagined as coming to pass, and experienced while awake. A daydream is a fantasy that a person has while awake, often about spontaneous and fanciful thoughts not connected to the person's immediate situation (Klinger & Cox, 1987). There are so many different types of daydreaming that there is still no consensus definition amongst psychologists. While daydreams may include fantasies about future scenarios or plans, reminiscences about past experiences, or vivid dream-like images, they are often connected with some type of emotion.

Daydreaming may take the form of a train of thought, leading the daydreamer away from being aware of his immediate surroundings, and concentrating more and more on these new directions of thought. To an observer, they may appear to be affecting a blank stare into the distance, and only a sudden stimulus will startle the daydreamer out of their reverie.

While daydreaming has long been derived as a lazy, non-productive pastime, as can be seen in the use of the derogatory phrase "pipe dream," daydreaming can be constructive in some contexts. There are numerous examples of people in creative or artistic careers, such as composers, novelists, and filmmakers, developing new ideas through daydreaming. Similarly, research scientists, mathematicians, and physicists have developed new ideas by daydreaming about their subject areas.
Singer & Antrobus (1970) created a daydream questionnaire. The questionnaire, called the Imaginal Processes Inventory (IPI), has been used to investigate daydreams. Giambra (1980) used the IPI and found that daydreamers' imaginary images vary in three ways: how vivid or enjoyable the daydreams are, how many guilt- or fear-filled daydreams they have, and how "deeply" into the daydream people go.

Klinger (1980) showed that most daydreams are about ordinary, everyday events and help to remind us of mundane tasks. Klinger's research also showed that over 3/4 of workers in 'boring jobs,' such as lifeguards and truck drivers, use vivid daydreams to "ease the boredom" of their routine tasks. Klinger (1980) found that less than five percent of the workers' daydreams involved explicitly sexual thoughts and those violent daydreams were also uncommon.

Humanistic psychology on other hand, found numerous examples of people in creative or artistic careers, such as composers, novelists and filmmakers, developing new ideas through daydreaming. Similarly, research scientists, mathematicians have developed new ideas by daydreaming about their subject areas.

**DEFINITION OF DAYDREAMING**

In order to construct a computational theory of a particular phenomenon, it is necessary to have a precise definition of that phenomenon. People have different ideas about what the words and expressions, “daydreaming”, “fantasy”, “reverie”, “guided imagery”, “mind wandering” and “stream of consciousness” refer to.

Mind-wandering tends to occur during driving, reading and other activities where vigilance may be low. In these situations, people report having no memory of what happened in the surrounding environment while pre-occupied with their thoughts. This is known as the decoupling hypothesis (Smallwood et al., 2003). Studies using event-related potentials (ERPs) have quantified the extent that mind-wandering reduces the cortical processing of the external environment. When
thinking is not focused on the task in hand, the brain processes both task relevant and unrelated sensory information in a less detailed manner (Smallwood et al., 2008, and Kam et al., 2010).

It is common during mind-wandering to engage in mental time travel – the consideration of personally relevant events from the past and the anticipation of events in the future.

Studies have demonstrated a prospective bias to spontaneous thought because individuals tend to engage in more future than past related thoughts during mind-wandering (Smallwood et al., 2009).

Mind-wandering is important in understanding how the brain produces what William James called the train of thought and the stream of consciousness. This aspect of mind-wandering research is focused on understanding how the brain generates the spontaneous and relatively unconstrained thoughts that are experienced when the mind wanders (Mason et al., 2007). One neural mechanism for generating this aspect of experience is a network of regions in the frontal and parietal cortex known as the default network. This network of regions is highly active even when subjects are resting with their eyes closed suggesting a role in generating spontaneous internal thoughts (Bar et al., 2007). One relatively controversial result is that periods of mind wandering are associated with increased activation in both the default and executive system (Christoff et al., 2009), a result that implies that mind-wandering may often be goal oriented (Smallwood et al., 2009).

Though often denigrated and discouraged, daydreaming is a complex and necessary cognitive process with as many benefits as aspects. It may be triggered by anything from anger to boredom and function to engender results as varied as a mental hiatus or a new theorem for the function of subatomic particles. Ultimately, there is much to be learned from even the most cursory of glances of a mental function so entwined with the progression on our daily lives.
Daydreaming is a mental process that involves some kind of imaginal activity, but beyond that theorists have offered roughly three ways to define daydreaming.

One way, exemplified by Freud (1900, 1908) and adopted by innumerable writers since, indeed does overlap with fantasy. That is, daydreaming is mental activity that departs from reality, either as imagining fulfillment of wishes that may not ever be fulfilled or as imagining oneself or others acting in ways that unrealistically violate social norms or physical laws of nature.

One may label this kind of thought fanciful. Freud’s (1908) developmental paradigm for wish-fulfilling ideation was the hungry infant’s supposed hallucinations of suckling at the absent breast, which in Freud’s theory provided the infant with partial gratification.

A second way to define daydreaming is as thinking (or as any mental content) that is unrelated to an ongoing activity (Singer, 1966, 1975). The reader whose mind drifts away from the content of the reading illustrates this definition.

A third way defines daydreaming as unintended mental content, nonworking, non instrumental content that comes to mind unbidden and effortlessly – that is, spontaneously (Klinger, 1971). They stand in contrast to deliberate, directed thoughts that one has to serve some purpose, such as solving a problem. In most instances, spontaneous thoughts drift in and out of consciousness with little notice and no attempt to evaluate or harness them. Nevertheless, spontaneous thoughts often feature the same themes as deliberate thoughts. For example, one could think seriously and deliberately about whom to invite to a party, or one could entertain spontaneous images of the future party and its guests. What distinguish spontaneous thoughts from deliberate thoughts are how they come to be and the extent to which the thinker deliberately directs them. However, deliberate and spontaneous thoughts often intermix in that the person planning the party may slip into a spontaneous daydream of the guests interacting, or the daydreamer may visualize two guests
getting into a nasty argument, remember that these two do not get along, and resolve not to invite them both. At that point, the spontaneous thought has yielded an important insight and triggered a planning segment.

Consciousness can be defined as an awareness of ongoing cognitive processes. These ongoing cognitive processes include fantasies, dreams, thoughts, introspection, reasoning, reflection, and of course daydreaming to name a few. Consciousness is then divided into two states; waking consciousness and altered states of consciousness. Waking states include mental actions that occur while awake or alert such as attentive thought or perception; being defined largely and most importantly by the directive nature of stimuli. In contrast altered states of consciousness are defined by changes in the role of stimulus and response and thus marked changes in the mechanisms and direction of cognitive functions. This includes dreaming, hypnosis and drug or substance induced conditions. Daydreaming as an element of human consciousness is that it is an integral part of the larger stream of consciousness and exists in somewhat of a gray area in terms of conscious state. By all accounts, it is technically a form of an altered state of consciousness however; it can be triggered by and does to a degree rely upon attention to current external stimuli.

With this in mind, daydreaming is defined very simply as the spontaneous recall or imagination of personal or vicarious experiences past or present. Despite the relatively simple definition the technical terminology for the act of daydreaming, Stimulus-Independent Mentation (S.I.M) or Task Unrelated Images and Thoughts (T.U.I.T) betrays the underlying complexity of this cognitive function. It is widely recognised that daydreaming is one manifestation of the ‘ongoing stream of thought’ (Pope & Singer, 1978; and Kunzendorf & Wallace, 2000). The content of this stream ranges from static visual images to elaborate fantasy stories (Singer, 1974, 1981). It also comprises thoughts related to events in the external environment (Singer, 1992). Singer (1981) in his definition included awareness of emotions, as well as physiological sensations that accompany emotion. The content of the on-going
stream is difficult to suppress as thoughts compete, and sometimes merge, with one another for expression through conscious thought (Klinger, 1990; and Singer, 1992). Most definitions of daydreaming have referred to an inward focus of attention (Singer, 1981; Giambra & Stone, 1983; and Goldstein & Baskin, 1988). Daydreaming described as a shift from on-going tasks to thoughts unrelated to the immediate environment (Singer & Antrobus, 1963; Singer, 1992; and Derry et al., 1993). Klinger (1979, 1990) referred to this shift as an internal distraction from the ‘here and now’.

In addition to being removed from the ‘here and now’, Klinger & Cox (1987) argued that daydreams comprise two defining characteristics: spontaneity (versus deliberate) and realism (versus fanciful). They proposed that these characteristics (task distraction, spontaneity, and realism) are independent of each other. Spontaneity refers to the degree to which daydreaming is under deliberate, voluntary control (Klinger, 1971). In deliberate (directed) thought, one has the impression that the stream of thought is under conscious control, whereas in spontaneous (undirected) thought the stream of thought seems to steer itself. Realism refers to the likelihood or plausibility of depicted events or situations in the daydream and distinguishes regular thoughts from those that are more bizarre, dreamlike, or nonsensical which sometimes intrude into waking thought. Klinger (1971) also noted that daydreaming can be intermixed with task-related thought – in such cases there is no clear distraction (from on-going tasks) towards thoughts unrelated to the external environment. Thus, to Klinger (1979, 1990) daydreams are not exclusively irrelevant to a current task situation; they can occur at any given time and situation and can incorporate themes realistic or improbable in nature (or a combination of the two).

A defining property of daydreaming is that it is a ‘private thought process’: it is not an observable action. They are also autonomous in that they usually occur without the deliberate manipulation of a researcher (Klinger, 1971). The difficulties in defining daydreaming have been the catalyst of much debate in the psychological literature (Klinger, 1971, 1990, 1993). This debate has centered on whether a single
definition can encompass the wide array of imaginal activities reported to be examples of daydreaming (Klinger, 1971; and Starker, 1977). For example, it remains undecided whether (or not) it is practical to differentiate daydreams from the relieving of past memories (Starker, 1982). It is also contentious as to whether daydreams can be separated from intellectual thoughts comprising visual qualities (Klinger, 1990). These thoughts help develop solutions to problems, as well as prepare for future actions. It refers to sequences of thought reported in a verbal protocol where thoughts comprise self-attitude, goals, emotions, beliefs about the thoughts of others, beliefs about world states and events, hypothetical past, present, or future thoughts of varying degrees of realism and memories of the past.

Most dictionary definitions ‘simply’ refer to fanciful or wishful daydreams. The Collins Compact Dictionary (1995) referred to daydreams as positive fantasies indulged in while awake. The Oxford Dictionary (1994) suggested that daydreams are pleasant thoughts of something one would like to happen. The popular emphasis on fanciful phrases, such as ‘off with the fairies’, contribute further to the conjecture which constitutes a daydream. The diversity of opinion as to the composition of a daydream led Klinger (1993) to surmise that it is a multi-media presentation.

The absence of a uniform definition led some researchers to ask participants to use their own definitions when completing measures. Sutherland (1971) argued that most people when questioned about daydreaming acknowledged that it did exist, and were able to provide a definition. Green (1923) noted earlier that most people defined daydreaming as ‘thinking about other things’.

**TYPES OF DAYDREAMING**

On the basis of results of some 40 personality tests taken by college students and matched them with the subject’s daydreaming pattern, Singer (1961) discovered that there were seven categories of daydreaming.
1. General daydreaming reflected a predisposition to fantasy with great variety in content and often showed curiosity about other people rather than about the natural world.

2. Self-recriminating daydreaming was characterized by a high frequency of somewhat obsessional, verbally expressive but negatively-toned emotional reaction such as guilt and depression.

3. Objective, controlled, thoughtful daydream displayed a reflective, rather scientific and philosophically inclined content, and was associated with masculinity, emotional stability and curiosity about nature rather than about the human aspects of environment.

4. Poorly controlled, kaleidoscopic daydreaming reflected scattered thought and lack of systematic “story lines” in fantasy, as well as distractibility, boredom and self-abasement.

5. Autistic daydreaming represented the breakthrough into consciousness of material associated with nocturnal dreaming. It reflected the kind of dreamy, poorly controlled quality of inner experience often reported clinically by schizoid individuals.

6. Neurotic, self-conscious daydreaming revealed one of the clearest patterns-the one most closely associated with measures of neuroticism and emotional instability. It involved repetitive, egocentric and body-centered fantasies.

7. Enjoyment of daydreaming was characterized by a generally positive and healthy acceptance of daydreaming. An enjoyment of fantasy and the active use of it are for both pleasure and problem solving.

When people daydream, tons of thoughts and images race in their mind at any given second. Daydreams help people when they think positive but also hurt them when they think negative. Every daydream has its own uniqueness and is personal to
the individual. Most daydreams are never told to other people but held deep inside the person. Some daydreams are so bizarre or embarrassing that people usually never tell other people about them.

All the different types of daydreams that humans experience and what they mean are discussed below:

**Catastrophe** - These types of daydreams involve people’s downfall or natural disasters. Basically anything they can possibly feel is the worst case scenario to happen to them or others around, they will think of in the “Catastrophe Daydream”. In order to cure this negative behaviour they may want to meditate or think positive.

**Victory** – Victory dreams are fun and thrilling. Though the reason why a person has it is because he wants attention. If one is not the type of person that gets attention all the time he is more likely to have a daydream of this nature.

**Hiding** – Sometimes people “hide” in their daydreams they go to a deserted place or fantasy island. The reason is get away from the stress of life because it can become overwhelming at times. They may want to take a break and slow down.

**Sex** – Sex daydreams are usually the most fun and exciting. A person has the ability to put himself in situations or feelings that he never thought possible. Sex and love are usually the most common daydreams. People get these daydreams when they are not satisfied with their love life.

**Revenge** – When people daydream about revenge they usually think about hurting or harming somebody they don’t like. Revenge daydreams are not as bad as people think. If a person is daydreaming about killing he is releasing angry energy that he holds deep inside him. It is like hitting a punching bag or going to the shooting range.

**Aggressive Daydreams** – Using open-ended questions, Vice (2005) obtained data on the violent fantasies of 11 male and 45 female university students. Heroic/ambitious themes dominated the fantasy content among his sample of participants, making up
19.5% of the violent fantasies that were reported (Vice, 2005). This is consistent with Giambra’s (1974) finding that daydreams of heroic behaviour are of the most common amongst men. Vice (2005) also reported that themes of showdowns, revenge, relationship conflicts, road rage and criminal activity were present in the content of the adolescent boys’ aggressive daydreams. Vice (2005) explained that daydreams of showdowns, revenge and heroic/ambitious actions frequently included a face-off between two parties. Vice (2005) also clarifies that daydreams were categorized under the theme of relationship conflict when the person described as the enemy was actually a partner, lover, friend or family member.

In these fantasies of violent confrontations involving the daydreamer, the presence of weapons ranging from guns, knives and blunt objects to magic and hand-to-hand combat is reported (Vice, 2005). In addition, Vice (2005) found that two third of the daydreams included characters that the daydreamers interacted within their daily lives such as family, friends and acquaintances. A very small number of participants mentioned that celebrities were characters in their daydreams (Vice, 2005). A large proportion of Vice’s (2005) sample indicated that the other characters in their daydreams were fictional persons such as superhero’s and villains. Yet, very few settings in this study were fictional places such as deep space and other time periods. Finally, Vice (2005) reported that 80% of the participants in his sample indicated that their violent fantasies were set in the real world.

Sayer’s (2000) findings are predominantly representative of clinical interpretations of participants’ dreams as per their recall. He reported that more often than not, the boys in his study described dreams not of thuggish grandiosity but of grand sports success (Sayer, 2000). Being an American sample of adolescents, these daydreams included mostly idealizing images of themselves as football heroes (Sayer, 2000). Some of the more fantastical daydreams provided by the participants include descriptions of monsters, which, Sayer (2000) observed, to attack the daydreamers while alone.
Sayer (2000) also noted that the characters in the boys' daydreams tended to be strange, aggressive and had unknown figures who were the stereotypical persecuting tyrants. This is unlike the characters in the violent fantasies reported by the participants in Vice's (2005) study, who tended to be family, friends and acquaintances.

It is possible that the increased amount of fantastical content reported in Sayer's (2000) study is related to the fact that his is a study on dreams which are understood to express more deeply repressed and unconscious wishes. Consequently, these wishes are likely to be expressed in a symbolic form and are, therefore, also likely to be less obvious than the wishes expressed through daydreams.

In his research, Singer (1966) reported that jealousy and rivalry are themes that are commonly expressed in the content of adolescent boys' aggressive fantasies. Singer (1966) reported that content ranging from minor verbal reproach to robbery and murder characterized the participants' fantasies. He went on to cite daydreams in which there is competition between two boys, one larger, stronger or older, as evidence of the presence of these themes (Singer, 1966). This is consistent with the kind of face-off that is described in Vice's (2005) study with the additional yet underlying wish of being triumphant against all odds. Singer (1966) found that one of the most persistent themes in the content of the fantasies that his sample reported was the conflict between good and bad.

Adolescence is a time during which there is an observable intensification of instinctual drives (Culbertson et al., 2003). It is also expected to be a period during which daydreaming is notably increased (Weiten, 2001). In his own theories on adolescent development, Freud (1905) refers to the "efflorescence of the sexual instinct", which, in the context of the adolescence expanding and competitive social environment, present instinctual and developmental challenges and preoccupations.

**Libidinal Daydreams** - Williams' (2007) study on the daydreams of 146 adolescent girls and boys, reports that the predominant themes presented in the libidinal
daydreams of school-aged boys, are those of intimacy, affirmation and romance. These findings are similar to research conducted by Kirkendall & McBride (1990), which suggests that, themes of intimacy, affirmation and romance can be expected in the daydreams of adolescents.

In De Munck’s book on Romantic Love and Sexual Behaviour, Cramer and Howitt (1998) argue that the content of adolescent sexual fantasy life raises questions around the “idea that romance is [always] a characteristic feature of sexual love”. This assertion follows a review of a retrospective study on daydreams conducted by Kirkendall & McBride (1990). In this study, Kirkendall & McBride (1990) concluded that, 57% of the participants’ adolescent fantasies incorporated themes of romantic love. In the same study, Kirkendall & McBride (1990) found that, 36% of the young men reported fantasizing about being forced into having sex, while 25% had fantasized about forcing someone else into having sex. Content of this kind is more commonly referred to as a rape fantasy, and in most cases is not based on real life experiences, except when associated with PTSD (Post-Traumatic Stress Disorder). Cramer & Howitt (1998) subsequently conclude that, overall, romantic imagery dominates the content of adolescents’ libidinal fantasies. However, where daydreams are considered to be explicitly sexual, Howitt (2004) argues that having sex with two or more people is, seemingly, the most common and most commonly explored theme.

In Kirkendall & McBride’s (1990) study, 56% of the participants in their sample reported to have had adolescent fantasies involving sex with two or more people. This seems to be the case in Kirkendall & McBride’s (1990) findings and is a theme that is also reported in Ellis & Symons’ (1990) study. Out of multiple choice responses ranging from “none” to “more than eight” partners, the 125 male students from a University in the United States indicated that they were likely to have sexual fantasies or daydreams with an average of about two different partners at least once a day.

In the same study, Ellis & Symons (1990) also included a question aimed at determining the frequency of taboo-breaking amongst the participants’ daydreams.
The male participants indicated that they had taboo-breaking fantasies only “sometimes”, or “rarely”, out of responses ranging from “regularly” to “never”. In relation to the theme of sex with two or more partners, taboo-breaking appears to be a relatively uncommon theme in this sample of adults. The defiance and rule-breaking attitude of adolescence, in combination with instinctual wishes that are frustrated in reality, hints at the possibility that taboo-breaking daydreams would be far more frequent in a sample of adolescents.

Ultimately, even though having romantic daydreams is evidently a common occurrence during adolescence, the daydream content tends to include acts or events that the daydreamer is not likely to experience in their present reality. Relating the above findings on the content of libidinal daydreams and fantasies to the understanding that daydreams express wishes that are not permitted to be expressed openly or in any overt behaviour, suggests that adolescents libidinal wishes are most commonly wishes for romance, sex with two or more partners and, in some cases, wishes relating to seduction and the use of force in sexual encounters. These are, in accordance with the theory, considered to be the desires of these adolescent boys’ libidinal instinct and the kinds of experiences that are not likely to occur in their present realities.

ASPECTS OF DAYDREAMING

Daydreaming is said to be the key to open up hidden talents in people that they never thought possible. Now people who let their mind wonder should not be discouraged but excited. Though there are two different types of daydreamers, the optimistic or the pessimistic ones. The positive aspects of daydreams are described here below.

POSITIVE ASPECTS OF DAYDREAMING

• Provide ability to solve problems quicker.
• Generate new and improved ideas.
• Help remove the bad useless thoughts that sometimes cloud individual’s judgment.

• Explore new heights that are not possible to the human existence.

• Live out one’s own personal fantasy.

• Improve children’s language skills and performance at school.

• Some of the best ideas come from people’s daydreaming (e.g., man on the moon, Internet etc.).

• Help one’s mind, body and soul.

• Maintain good relationships and organize one’s thoughts.

• Boost productivity level in one’s life.

• Helps to focus and achieve one’s goals.

A new study Christoff et al. (2009) suggests that, a daydreaming is an indicator of a well-equipped brain. Psychological research is beginning to reveal that daydreaming is a strong indicator of an active and well-equipped brain.

In a study, Smallwood et al. (2009) sought to examine the relationship between people’s working memory capacity and their tendency to daydream. To accomplish this, they first asked participants to do one of two extremely easy tasks that might prompt them to daydream – either press a button in response to a letter appearing on a screen or tap their finger in time with their own breath – and periodically checked in to see if the subjects were paying attention or not. Then they measured each participant’s working memory by testing their ability to remember a series of letters interspersed with a set of easy math questions. There was a correlation between mind wandering during the first task and high scores on the working memory test. The participants who more frequently daydreamed were actually better at remembering the series of letters when distracted by the mathematic problems compared to those whose minds were less prone to wandering. This study seems to suggest that, when
circumstances for the task aren’t very difficult, people who have additional working memory resources deploy them to think about things other than what they’re doing” (Smallwood, 2009). In other words, daydreamers’ minds wander because they have too much extra capacity to merely concentrate on the task at hand.

These results, Smallwood (2009) believes, point to the fact that the mental processes underlying daydreaming may be quite similar to those of the brain’s working memory system. Previously, working memory had been correlated with measures of intelligence, such as I.Q. score. But this study shows how working memory is also closely tied to the tendency to think beyond our immediate surroundings at any given time. The results suggest that the sorts of planning that people do quite often in daily life – when they’re on the bus, when they’re cycling to work, when they are in the shower – are probably supported by working memory (Smallwood, 2009). He asserts that people with higher working memory capacities are naturally prone to daydreaming and have the ability to train themselves to focus their attention on what is in front of them, when necessary. However, mind wondering is not free, it takes resources. The person has to decode how he wants to use his resources. If his priority is to keep attention on task, he can use working memory to do that, too.

NEGATIVE ASPECTS OF DAYDREAMING

Too much of anything in life is considered bad. Even though the positive benefits of daydreaming weigh out the negative, there is still a fine line between a daydreamer and somebody who lacks motivation. People who are always pessimistic and think negativity will daydream negative thoughts. By nature this would keep the person in a downward spiral. Daydreaming is bad for people who suffer from constant negative thoughts. The list below provides all the negative aspects of daydreaming.

• Daydreaming has been identified as the cause for blames such as car crashes and burning one’s food on the stove.
• The daydreamer spaces out during important meetings or while attending classes in school and loses vital information.

• The daydreamer loses focus and forgets important information.

• Due to daydreaming an individual is unable to get out of depression.

Killingsworth & Gilbert (2010) also suggests that daydreaming, instead of focusing on the present, may impede happiness. Killingsworth & Gilbert (2010) found evidence to support the negative impact of daydreaming. 15000 people from around the world gave over 650000 reports (using an online application on their phones that requested data at random times). Killingsworth & Gilbert (2010) said that, people who reported daydreaming soon reported less happiness. He also warned that daydreaming was extremely common.

FUNCTIONS OF DAYDREAMING

It is often assumed that the function of daydreaming is to reduce boredom through the creation of novelty (Singer, 1975). They are also seen as providing a ‘peaceful sanctuary’ by allowing the individual to enjoy flights of improbable fantasy. The ability to imagine scenes of pleasant tranquility serves to maximize positive emotion and to minimize the effect of negative emotion (Singer, 1981). Segal (1985) argued that negative emotions often accompany life dilemmas that are of concern.

The ability to escape from upsetting emotion is possible because daydreams are not limited by the constraints of reality. They have the luxury of containing actions that cannot be undertaken in the real world as they violate natural laws or those enforced by society. This freedom encourages the daydreamer to modify reality as desired. This includes creating sequences of how the future may, or may not unfold (Derry et al., 1993). Klinger (1990) argued that the capacity to relieve memories makes daydreams ‘timeless’. Klinger (1990) also argued that the use of daydreams to escape from reality into flights of improbable fantasy is often temporary. Sutherland
(1971) reported earlier that, unmet emotional needs resurface through daydreams despite repeated efforts to focus on ‘fanciful imagery’. She implied that upsetting emotions materialize because of the inability of the individual to control the production of all thoughts.

Much research has suggested that not all daydreams are improbable (Singer, 1981; and Giambra, 1989). Singer & McCraven (1961) found that, fanciful daydreams serving a wish-fulfilling function were the least common form of daydream reported. Similarly, Klinger (1990) estimated that no more than 20 percent of daydreams contain actions that are ‘physically improbable’. He argued that most daydreams focus on realistic problem-solving, namely the planning of future actions that may or may not occur. Other researchers referred to these daydreams as practical role taking (Sarbin, 1972) in that they demonstrate the ability to anticipate future involvement in life events (Sutherland, 1971). This includes preparing alternative plans for possible events before mentally reviewing the possible outcomes of these plans. Klinger (1990) argued that, most daydreams combine fanciful actions that create wish-fulfilling situations and realistic actions that generate solutions to practical problems.

It has been argued that daydreams serve as safety valves to regulate the expression of intense emotion. Varendonck (1921), Giambra (1989), and Diespecker (1990) reported that, ‘affective daydreams’ arouse emotions that are similar to those that occur in response to actual events. Segal (1985) argued that these emotions trigger secondary daydreams that either enhance or lessen the experience of emotion. These affective daydreams influence the mood of the daydreamer both during and after the daydream (Gold et al. 1986). They are also the most intrusive of all daydreams (Varendonck, 1921; and Beck, 1970). It was emphasised that daydreamers were not always negative in affect. Some fostered positive feelings by imagining favourable outcomes to stressful situations.

Klinger (1990, 1993) argued that the cues that start a daydream are reminders of unresolved concerns. These cues can be of an internal origin (Klinger, 1993) or
objects in the external environment that act as a reminder of worrisome concerns that are yet to be resolved (Aylwin, 1990). The concerns requiring accommodation are ‘timeless’ (Varendonck, 1921) in that they represent unfinished business from the past or present (Langs, 1995). Freud (1900) observed that like the night-dream, events of the day seem to provide most of the material contained within a daydream. Klinger (1990) more recently argued that some daydreams represent concerns of potential outcomes to anticipated events that may, or may not transpire in reality.

Klinger (1990) defined current concerns as the pursuit of personal ambitions that have not yet been obtained or abandoned. Giambra (1982) included in his broad definition all the events in the life of the individual that are of present interest. He emphasised that current concerns can include imagining positive events, in addition to those that are worrisome. It has been estimated that two-thirds of daydreams reproduce current concerns in the life of the individual (Klinger, 1990).

The current concerns of an individual compete for attention in everyday thought with the most influential concerns governing the direction of daydreams. These concerns are those that arouse the most intense emotion (Klinger, 1990, 1993). Gold & Reilly (1986) found that, most daydreams recalled by college students (n = 62) represented their current concerns. The greatest percentage of recalled daydreams was for those containing concerns classified as ‘emotionally significant’. Those who reported the most current concerns also daydreamed the most often. Gold & Reilly (1986) argued that, daydreams do not occur as a random production; rather they are determined by the current concerns of the individual at the time of the daydream.

Cognitive psychology, which hinges on the most obvious element of daydreams, being that they transpire during periods of wakefulness, emphasises the implication that these forms of fantasy are accessible to the daydreamers’ conscious thinking and manipulation (Leitenberg & Henning, 1995). Embedded in the understanding that daydreams occur within a realm of conscious awareness, is the assumption that they allow for an element of control over the daydream content, and
thus the type of content manipulation, that an individual does not have in dreaming, or for that matter, in reality (Leitenberg & Henning, 1995; and Zurbriggen & Yost, 2004). In this respect, daydreams function as an inviting alternative to everyday life.

Beres (1960) focuses on much more transparent functions of fantasy, compared to those put forward by Freud (1908), and Person (1995). Beres’s (1960) article on “Perception, Imagination, and Reality” discusses the relation between fantasy and behaviour. From this article, Beres (1960) concludes that fantasies can provide a space in which scenes that may be preparatory for future occurrences, or an alternative to action can be played out. This provides for a kind of release for the emotional arousal relating to the events on which the imaginal scenes of the daydreams are based.

The fact that the imagination is an important part of daydreaming draws attention to the way in which daydreams provide a means of exploring alternative behavioural actions and their varying consequences (Halderman et al., 1985). Mueller (1990) describes, it as imaginative problem solving, and Kahr (2007) explains that these fantasies are often linked to real people, and situations in the daydreamers’ lives. This link makes it apparent that daydreams also function as forms of practice or mental rehearsals of imagined outcomes relating to real people and situations (Kahr, 2007).

Gee, et al. (2003) also argue that, fantasies provide a form of emotional release, a conclusion that arises out of a study that these researchers conducted on the sexual fantasies of sexual offenders., This study, reported a lower level of emotional arousal after they had fantasised, which lead these researchers to the conclusion that emotional arousal relating to the fantasy had been discharged, as a result of the fantasy.

The argument that permeates the literature on the functional nature of daydreams that is presented above, is that daydreams promote a sense of psychological well-being, whether it is for allowing unacceptable or unattainable
instinctual wishes to be fulfilled, experimenting with past, current and future events, or facilitating the release of emotions. This, in turn, releases emotional energy that has been building up as a result of the repression of these wishes.

Mueller & Dyer (1985) described the various functions of daydreaming:

1. Daydreaming supports planning for the future. The anticipation of possible future situations allows the formation of desirable responses to those situations in advance and thus improves efficiency. By assessing the consequences of alternative courses of action in advance, daydreaming assists in decision-making. Future daydreaming also provides a rehearsal function to increase accessibility of responses and the skill with which they can be performed.

2. Daydreaming supports learning from successes and failures. Examination of alternative actions in a success or failure experience allows one to learn planning strategies to be remembered for use in future similar situations. In addition, daydreaming allows the ongoing reinterpretation of past experiences in light of new information or if there was insufficient times to digest an experience when it occurred.

3. Daydreaming supports processes of creativity. The generation of fanciful possibilities can lead to the discovery of new and useful solutions to a problem. While daydreaming about one thing, it is possible to stumble into a solution to another problem i.e., fortuitous recognition of analogies among problems is possible. Daydreaming occurs in the context of an episodic memory which is constantly subject to revision. Each time a problem is examined, new information may be available that will enable a better, different, or more creative solution. Ideas generated while daydreaming often provide the initial inspiration for a creative work and further daydreaming e.g., of success or praise from others, may increase the motivation to realize it.

4. Daydreaming supports emotion regulation. For example, upon a failure experience, daydreaming enables one to feel better or feel worse depending
on success or failure in rationalizing that experience. Fear associated with a future event may be reduced if one daydreams about effective plans to succeed in that event, or increased if daydreams of likely failure result.

5. Daydreams serve many functions. They often fill a need for stimulation, when a person must perform a routine or monotonous task. They also improve the ability to delay immediate pleasures, so future goals can be achieved. Daydreams can help define future plans and aspirations by allowing the daydreamer to try out various roles, lifestyles and occupations.

Control goals are postulated to help direct daydreaming (Mueller & Dyer, 1985). There are four control goals which commonly appear in daydreaming:

I. **Rationalization**: generating reasons for why an outcome is satisfactory to the daydreamer in order to reduce negative emotions and maintain self-esteem.

II. **Revenge**: reducing negative emotions through imagined retaliations after a goal has been thwarted by another.

III. **Failure/Success Reversal**: altering reality by imagining scenarios in which failures were prevented or in which successes failed to come about in order to learn future planning strategies.

IV. **Preparation**: generating hypothetical future scenarios in order to learn planning strategies and/or specific actions to be used in possible future situations.

**THEORIES OF DAYDREAMING**

**ASSOCIATIONIST THEORIES OF THOUGHT**

The earliest theories of daydreaming are based on the principle of association first formulated by Aristotle (Beare, 1931) that ideas experienced together or in close succession tend to become linked, so that when one of those ideas is later thought of, the others are likely also to follow. Aristotle was concerned with the role of
association in memory. He proposed that when one wishes to recall a given experience, one first selects an experience associated with that experience (via continuity in space or time, similarity, or contrast) and then the desired experience follows automatically (Warren, 1921).

**JAMES’S STREAM OF THOUGHT**

It was James (1890) who introduced the phrases “stream of thought” and “stream of consciousness” in a chapter of his book ‘Principles of Psychology’ in order to convey two fundamental characteristics of consciousness.

- Within each personal consciousness the contents are always changing, yet, personal consciousness is continuous.
- Daydreams are predominant aspects of people’s stream of consciousness, in which they become absorbed in fantasies/narratives, and during which they engage in relatively little meta-cognition.

**BLEULER’S AUTISTIC THINKING**

Bleuler (1919/1951) discusses a form of thought similar to daydreaming called “autistic thinking.” Autistic thinking occurs in the thought processes of schizophrenics who have withdrawn into a dream world, ignore reality, and fulfill their wishes or believe themselves to be persecuted in their delusions. Bleuler (1951) characterizes autistic thinking which is present to some degree in every person. There characteristics are:

1. Autistic thinking is concerned with the fulfillment of wishes; it seeks pleasant ideas and avoids painful ones.

2. Affects strive to perpetuate themselves in autistic thinking; ideas which are in accord with a given affect are favoured over those which are not. For example, a depressed person tends to continue to have negative thoughts.
PSYCHOANALYTIC THEORIES

Much of what is known about the nature and function of daydreaming is rooted in psychoanalysis, and can be traced back to theories put forward by Freud (1900, 1908) in: “The Interpretation of Dreams” and “Creative Writers and Day-dreaming”.

He views that daydreaming is a continuation of childhood play and is central to understanding the ‘imaginary play’ children engage in, and the means it provides for fantastic thoughts and scenarios to be fulfilled. It is not lost, but instead is a more developed form of partial sublimation (Freud, 1908).

Unlike a child engaged in imaginary play, being in a daydream can be described as an unexpected and spontaneous shift of conscious attention. Attention is shifted to an internal process of imagining fantasy-like situations in thought. This usually distracts the daydreamer from the present reality (Giambra, 2000), and proceeds to fulfill a wish that is not necessarily conscious, but is nevertheless pressing for satisfaction (Freud, 1900). Young children are seen to use play to sublimate their impulsive wishes, and they, in some way, develop the capacity to play out these playful fantasies of wishes internally - in thought and imagination (Freud, 1908). They progress from using physical objects which act as props in their imaginary play, to daydreaming which is characterized by a withdrawn state of awareness, involving no physical props, in older children and adults (Freud, 1908). In the same way that imaginary play fulfils wishes that cannot be fulfilled in reality, daydreams provide a form of partial satisfaction for socially unacceptable wishes (Freud, 1908).

Freud (1908) asserts that “…every single fantasy is the fulfillment of an unsatisfied wish, a correction of unsatisfying reality.” Within the theoretical context of psychoanalysis, Freud (1900) implicitly defines the functions of fantasies, and thus conscious fantasies or daydreams, as manifestations of the ego’s attempts to resolve intra-psychic conflicts, by fulfilling the wishes of the id in a way that is acceptable to
the superego. According to Freud (1900), the id is the most primitive component of
the mind, containing basic human drives. These are the types of drives that Darwinian
thinking would relate to survival instincts. Freud’s (1900) focus is predominantly on
drives that are libidinal and aggressive in nature. He believes that the need for the
satisfaction of these drives provides the motives for all human behaviour. He
describes these drives as unconscious and instinctual, noting that they are particularly
evident in behaviour that elicits a sense of satisfaction (Freud, 1900). He further
explains that the resulting satisfaction serves to gratify these primal libidinal and
aggressive instincts.

Freud (1900) argues that, the libidinal and aggressive drives are not directly
observable through the behaviours and mental processes that serve to gratify them,
because of prohibitions set by the superego. The superego is the punitive component
of the mind. It prohibits the drives from obtaining any direct form of gratification,
given that they tend to represent wishes which are unacceptable according to the
social norms and values internalized by the superego. As a result, the ego is forced to
seek alternative means for gratifying the desires of the id.

One alternative means Freud (1905) puts forward as a mechanism used by the
ego to gratify the instinctual desires of the id with minimal conflict from the
superego, is the process of sublimation. Sublimation involves the capacity of the ego
to indirectly satisfy the instinctual desires of the id, by diverting them into another
activity which provides a form of partial satisfaction (Rycroft, 1995). Freud (1908)
proposes that daydreaming is the expression of the id’s wishes in a more or less
sublimated form.

Daydreams are an observably transparent medium of expression for instinctual
drives. Their transparency, as well as the daydreamer’s conscious awareness of their
content, in Freud’s (1909) view, suggests that the function of daydreams is to divert
the instinctual wishes from a direct means of satisfaction to the indirect means of
daydreaming, through which the ego can express the wishes in a form that is
acceptable to the superego, thus minimizing any intra-psychic conflict (Freud, 1900). According to Freud (1900), these wishes are derived from the most basic human drives of libido and aggression, and daydreams of sex and aggression can therefore be regarded as a partial form of wishfulfillment for the libidinal and aggressive drives that they are intended to satisfy.

Evidence of the wish-fulfilling function of daydreams is particularly apparent in studies that report findings on the content of libidinal daydreams. Sex, intimacy and romance are some of the overarching themes that are reported in the narrative content of the libidinal daydreams that have been recorded in the studies conducted by Rokach (1990).

**GREEN’S STUDY OF DAYDREAMING AND DEVELOPMENT**

Green (1923) explored the relationship of daydreaming to childhood development. He proposed several stages, each marked by daydreams of a particular theme: In the “age of imagination,” beginning around the third year, the play and daydreams of the child are concerned with an imaginary companion. By the next stage, beginning around the tenth year, daydreams are no longer accompanied by external action; the “gang or team fantasies” of this stage involve the daydreamer as the leader of a group engaged in some adventure or quest. In the “romantic fantasy” stage, beginning around the fourteenth year, the daydreamer imagines being with a companion of the opposite sex—sitting or walking together in beautiful surroundings.

**RESEARCHES ON DAYDREAMING**

The systematic observation and investigation of daydreaming began most clearly with one of Sigmund Freud’s disciples, Varendonck, whose 1921 book “The Psychology of Daydreams” laid out in exquisite detail his painstaking introspective observations, meticulously recorded over years, of his own daydream experiences. Varendonck (1921) arrived at conclusions about the properties of daydreaming that still appear quite valid:
(i) Daydreams are composed of behavioural fragments already in the daydreamer’s repertoire (Griffith’s, 1935);

(ii) Daydreams come in clear segmental units, such that one can delineate the beginning and end of a daydream and also of subunits within it (Klinger, 1971);

(iii) Their content may be playful but is more often a quite sober treatment of serious themes (Singer, 1966; Klinger, 1977, 1990; and Barta & Maxeiner, 1980);

(iv) Segments of fantasy are instigated by bursts of affective response, often to some secondary feature of the preceding thought segment;

(v) The contents of daydreaming tend to drift, distinguishing it from working thought;

(vi) Although daydreaming is directly or indirectly about daydreamers’ serious goal pursuits, it lacks a disciplined focus on working toward a goal – the intervention of “will” – and is more an affectively toned reaction to preceding cues than a proactive attempt at goal attainment (i.e., operant activity);

(vii) Daydream segments are free of evaluations of how well they are advancing daydreamers toward their goals and free of attempts to direct the daydreamer’s attention back to a problem (Klinger, 1974).

The first substantial research program on daydreaming in the modern scientific-psychological tradition was conducted by Singer (1966), the initial stages of which are brought together in his book, “Daydreaming: An Introduction to the Experimental Study of Inner Experience”. It is worth noting here about the two key contributions among several of Antrobus et al. (1970). First, they delineated conditions governing the frequency of daydream (“task-irrelevant”) episodes, these declined with greater task-related stimulation, with more complex tasks, and with greater incentives for good task performance, and they increased after emotionally arousing, threatening news (Antrobus, et al., 1966; and Mason et al., 2007). Second, their research produced a major questionnaire to assess individual daydreaming tendencies – the Imaginal Processes Inventory (Singer & Antrobus, 1970; and Huba et
al., 1983) and established three reasonably replicable second-order factors underlying individual differences in these tendencies: positive-constructive daydreaming, guilt and fear of failure daydreaming, and attention control (Huba et al., 1977; Huba, et al., 1982; and Huba & Tanaka, 1983). Moreover, these scales have been shown to be related to participants’ broad personality traits (Zhiyan & Singer, 1997). Thus, it can be said that daydreaming is an integral part of each person, and its emotional tone and tempo reflect each person’s personal traits.

Israeli high school students who scored high on the Daydreaming Scale of the IPI had more empathy than students who scored low. Some psychologists, such as Shorr (1979) use the mental imagery created during their clients’ daydreaming to help gain insight into their mental state and make diagnoses.

Other research has (Christoff et al., 2009) also shown that daydreaming, much like night time dreaming, is a time when the brain consolidates learning. Daydreaming may also help people to sort through problems and achieve success. Research with FMRI shows that brain areas associated with complex problem-solving become activated during daydreaming episodes.

Nowadays, it is understood that visualization or guided imagery is the same state of mind as daydreaming. Another research Honeycutt et al. (1990) also shows that daydreaming may lead the daydreamer to get internally calm and to over the tensions he has gotten recently.

It is now believed that a daydreamer may come to know the fact that after getting tension if a daydream comes to his mind he will be able to achieve calmness, he at his own will repeat the process of daydreaming to overcome the tension.

Barrett (2001) has found that people who experience vivid dream-like mental images reserve the word for these, whereas many other people when they talk about "daydreaming" refer to milder imagery, realistic future planning, review of past memories, or just "spacing out".
When reading a book, driving to work, or performing other common daily tasks, people’s mind frequently drifts away from their current activity and focuses instead on internal thoughts and images that are unrelated to the present situation (e.g., remembrances of the past or thoughts about future events). This particular kind of thought, often referred to as mind-wandering or daydreaming, can be defined as stimulus-independent and task-unrelated thoughts (SITUTs), in the sense that their content (i) is not the direct reflection of current sensory input, and (ii) is unrelated to the task being performed at the moment of their occurrence (Stawarczyk et al., 2011). Experience sampling studies have shown that SITUTs are ubiquitous phenomenon experienced by virtually everyone (Singer & McCraven, 1961), and cover 30–50% of their daily thinking time (Kane et al., 2007; and Killingsworth & Gilbert, 2010). This frequent occurrence of SITUTs in daily life has led to the suggestion that these thoughts serve a purpose in terms of ongoing cognitive processes (Smallwood & Schooler, 2006). Research focusing on the content of SITUTs has demonstrated that most of these thoughts are self-related (Baird et al., 2011; and Smallwood et al., 2011), temporally oriented toward the future (Smallwood et al., 2009), and directed toward planning and preparing for impending events (Baird et al., 2011; and Stawarczyk et al., 2011). It has therefore been proposed that SITUTs play an important role in the processing of personal goals and concerns (Smallwood & Schooler, 2006; and Klinger, 2009). SITUTs may allow an individual to manipulate and organize internal information, to solve problems that require computation over long periods of time, and to create effective plans governing his future behaviours in concordance with his personal aims and aspirations (Binder et al., 1999). While SITUTs may support specific cognitive processes, a growing body of research also indicates that the occurrence of SITUTs is not without deleterious consequences (Klinger, 2009; McVay and Kane, 2010; Christoff et al., 2011; and Smallwood et al., 2012). SITUTs have been associated with decreased performance on a wide array of activities, including reading (Smallwood, 2011; and McVay & Kane, 2010), car driving (He et al., 2011),
paying attention during lectures (Lindquist and McLean. (2011). and Risko et al., 2012),
reaction time tasks (Smallwood et al., 2004; and McVay & Kane, 2012), and memory
tasks (Smallwood et al., 2003). Furthermore, recent electro-physiological studies
have shown that, sentry evoked potentials to both task-related and task-unrelated
stimuli were decreased while people were experiencing SITUTs in comparison to
when their attention was fully focused on task (Barron et al., 2011; and Kam et al.,
2011). Together, these findings suggest that SITUTs are a resource-consuming
phenomenon in which attention to sensory information is reduced in favour of
internally generated cognitions, resulting in a state of perceptual decoupling from
the here and now (Smallwood & Schooler, 2006; Smallwood, 2010, 2011; and
Schooler et al., 2011).

Specifically, daydreaming helps a person in various ways:

I. **Relax.** Like meditation, daydreaming allows people’s mind to take a break, a
mini-vacation in which to release tension and anxiety and "return" refreshed. It's
also very useful for controlling anxiety and phobias. Say, for example, that one is
afraid of flying, which he has to do for an upcoming trip. By mentally rehearsing
the various steps involved – driving to the airport, getting on the plane, taking
off, etc. – he will be better able to handle the actual events. It also helps to
practice deep breathing anytime a certain thought makes him tense.

II. **Manage conflict.** The same kind of organized daydreaming – or visualization –
used to curb anxiety is also useful for personal conflicts. As one reviews in his
mind an argument he had with someone, he goes back and imagines
responding differently than he did. Trying this a few times, responding
differently each time, and he will begin to figure out better ways of dealing
with the person in the future.

III. **Maintain relationships.** Honeycutt (2003) asserts that, absence makes the heart
grow fonder, especially among daydreamers. Happy couples tend to think about
one another when they're apart, which has the effect of psychologically
maintaining the relationship; unhappy couples daydream about arguments and rumin ate about conflict while happy individuals think positively ahead.

IV. **Boost productivity.** Allowing oneself a few minutes for daydreaming can help an individual to be more productive in the long run.

**INDIVIDUAL DIFFERENCES IN DAYDREAMING**

The capacity to daydream has long been recognized as a widespread phenomenon that occurs frequently in the course of everyday life (Freud, 1908; Green, 1923; Gordon, 1972; and Bagley, 1987). Singer & McCraven (1961) reported that, at least 95 percent of adults daydream daily. A more recent estimate by Klinger (1990) suggested that daydreams account for about half of all daily thoughts. He also reported that a third of all thoughts are daydreams removed from the ‘here and now’.

The ‘fantasy-prone’ individual has been of interest to some researchers (Wilson & Barber, 1983). These individuals spend more than half their waking hours absorbed in an elaborate fantasy world (Wilson & Barber, 1983). Singer (1977) also referred to ‘practiced daydreamers’, who frequently redirect their attention towards imaginal activities. He reported that these individuals have deliberate daydreams regardless of external demands for attention: they daydream even when demands from the outside world are extreme. Wilson & Barber (1983) reported that, the fantasy-prone individual considers daydreaming as a necessary activity of life since it provides meaning to their daily living. They wrote that most of these individuals have enjoyed an enriched fantasy life since early childhood, and continue to do so into old age. These findings were supported by later research (Lynn & Rhue, 1986; 1988; and Rhue & Lynn, 1987).

**GENDER DIFFERENCES IN DAYDREAMING**

There are reports that males and females do not differ in how often they daydream (Gold et al., 1981 and Goldstein & Baskin, 1988). There is some evidence
suggesting, nevertheless, that females are more frequent daydreamers (Sutherland, 1971). Giambra (1980) argued that, females are more bored with their external environment, which provides them more opportunities for mind wandering. Similarly, Sutherland (1971) wrote that, females are more inclined to daydream, as they are more dissatisfied with their immediate lives. She argued that activities like household chores offer females ‘little intellectual stimulation’. On the other hand, daydreams allow females to fantasize about ‘imaginary situations’ not available to them in the real world. This includes daydreams containing memories of better times. Giambra (1980) found females to be so often absorbed by their daydreams that they were oblivious to happenings in the immediate environment, regardless of external demands.

There are important differences in patterns of daydreaming, between males and females. Males are more likely than females to report unpleasant daydreams that serve to heighten the experience of upsetting emotion (Giambra & Traynor, 1978 and Giambra, 1980). These daydreams tend to depict situations of hostility and aggression such as ‘imagining ways of getting even with someone disliked’. (Goldstein & Baskin, 1988). Brannigan et al. (1991) found that, the daydreams of males mirrored the need to be successful in career choices and sporting pursuits. These daydreams included the themes of heroism and achievement. Males also reported having more sexual daydreams than females (Wagman, 1967, 1969).

Goldstein and Baskin (1988) argued that, daydreams of males resemble traditional stereotypes of masculinity and are determined by ‘aggressive drives and active lifestyles’. These stereotypes include the pressure to achieve, generated by a culture of ambition and competition. This intense competition can lead to worry of under-achievement with the reporting of daydreams like ‘not being able to finish a job’ or ‘failing loved ones’ not uncommon (Brannigan et al., 1991). Hence, males are also more likely to report frightened reactions to daydreams. Even so, Giambra (1980) argued that the daydreams of males represent an endeavor to enhance self-concept of ‘what it is’ to be male by satisfying their masculine strivings.
Starker (1982) argued that, the daydreams of females are more passive than those of males, and are often oriented towards improving personal relationships. This is particularly evident when there has been a disagreement with a loved one (Sutherland, 1971). The daydreams of females are also more likely than those of males to involve planning for future events, as well as ‘offering useful clues to tricky situations’ (Giambra & Traynor, 1978; and Brannigan et al. 1991). It is not surprising, therefore, that females consider daydreaming as more useful to them than do males (Henderson et al., 1984). They are more likely than males to refer to daydreaming as a ‘stimulating and rewarding’ experience that provides ‘a warm and happy feeling’. Hence, females are more likely to enjoy their daydreams (Giambra, 1980). Giambra (1980) argued that, because the daydreams of females are more comforting, they are also more accepting of them than are males. They are also more willing than males to provide honest accounts of their daydream experiences (Goldstein & Baskin, 1988). Giambra (1980) argued that, the daydreams of females differed from males because their everyday concerns were different. He suggested that reported sex differences in daydreaming mirror current concerns appropriate to each sex. In support of Giambra (1980), Goldstein & Baskin (1988) argued that female daydreams were determined by maternal instincts that encompassed passive, nurturing, and protective qualities.

Giambra (1980) found that, females over 40 years of age (n = 477) reported more achievement daydreams. He argued that this increase was due to females re-entering the workforce following the early years of motherhood. This argument is consistent with the finding of Yanico (1981) that, the content of the daydreams of females (n = 50) was determined by their occupation. Females in ‘masculine occupations’ reported more non-traditional female daydreams focused on career achievement including ambition and competition, but also the worry of under-achievement as reflected in more fear of failure daydreams. Yanico (1981) argued that, the daydreams of females were more likely to mirror males as more of them seek employment or further career opportunities.
There is a small volume of research suggesting that males and females do not differ in patterns of daydreams (Starker, 1985; and Goldstein & Baskin, 1988). Gold & Gold (1982) found no sex differences in the content of daydreams recorded by college students (n = 52) over a two-week period. These daydreams were categorized into content themes such as aggression, heroism, sexuality, and recreation. Contrary to previous studies, Gold & Reily (1986) found that males (not females) reported more positive reactions to their daydreams.

There are noteworthy sex differences in patterns of daydreaming. Males report more unpleasant daydreams that contain situations of hostility and aggression such as ‘getting even with someone disliked’. The daydreams of females are more oriented towards personal relationships, and often involve planning for potential future events. This includes daydreams that provide ‘clues to tricky situations’. It has been argued that these sex differences reflect traditional stereotypes of masculinity and femininity.

AGE DIFFERENCES IN DAYDREAMING

At some ill-defined point, children’s imaginative play becomes interiorized and takes the form of daydreams. In the conventional meaning of daydreams, their frequency and vividness peak during the teens and early twenties and then gradually become less frequent and less vivid (Giambra, 2000). This has been demonstrated repeatedly using both questionnaires and a laboratory procedure in which participants are assigned tasks and report task-unrelated images and thoughts (TUITs) as they occur or within brief time intervals. It has been found using both cross-sectional and longitudinal designs in participants ranging in age from 17 to 95. Contrary to common belief, old age is not associated with more thoughts about the past or distant past; time frames for daydreams remain fairly constant over the life span (Giambra, 1977). Sexual daydreaming gradually declines with age, especially after age 65. It is particularly elevated for young men (Giambra & Martin, 1977; and Giambra, 2000). Problem-solving daydreams become proportionately more common with advancing age (Giambra, 1974).
Daydreaming is a widespread phenomenon that occurs frequently in the course of everyday life. It has been defined as a shift of attention from on-going tasks to thoughts apparently unrelated to the external environment. This shift occurs most often when there are minimal demands for attention such as when undertaking routine tasks in familiar surroundings. They are also more likely to occur when there are fewer social demands to interact with others. The capacity to daydream is said to peak in early adulthood before declining through middle adulthood and rapidly thereafter.

Most daydreams comprise continuous sequences of images that evolve like elaborate fantasy stories. These images depict everyday objects or events not present in the external environment at the time of the daydream. An internal monologue accompanies most daydreams and comments on events contained within the daydream. This monologue includes recall of conversations with or between others.

**THE SIGNIFICANCE OF DAYDREAMING DURING ADOLESCENCE**

In the midst of the adolescents’ instinctual and developmental challenges, daydreaming not only provides a source of psychic release, but also a mental state in which desires and frustrations during the transition into adulthood can be expressed. A large proportion of what is known about fantasy life comes from studies based on populations which clearly exhibit some form of pathology. All these studies and investigations observe adolescence as the point of origin for the sexually deviant and/or violent daydreams that are associated with offending behaviour (Burgess et al., 1988; and Marshall et al., 1991). Various analyses in the psychology of serial rapists reveal that the majority of these individuals committed their first sexually aggressive offence during adolescence and, furthermore, that this was most often accompanied by the onset of rape fantasies (Burgess et al., 1988). Marshall, et al. (1991) came across similar findings in their research on adult sex offenders, 29% of whom reportedly developed deviant sexual fantasies before they were 20 years old.
Between 1974 and 2000, Giambra published four papers on various quantitative aspects of daydreaming across the human lifespan. Giambra (1974) research highlighted the fact that even though daydreaming occurs across the human lifespan, it varies in frequency across the different stages of development. Giambra (1974) noted that the 17 to 20 year old participants in his sample tended to exhibit the highest frequency of daydreaming. Subsequent studies on the extent and frequency of daydreaming during adolescence in non-clinical populations has continued to provide support for Giambra’s (1974) findings. Studies such as Knoth et al. (1988), and Sánchez-Barnados & Avia's (2004) research, reported particularly high frequencies of daydreaming amongst their samples of adolescents.

From birth until death human beings are subject to ongoing psychological development, progressing through a series of age-related stages, each of which present different instinctual and developmental challenges (Weiten, 2001). These challenges influence development in a way that determines how an individual will go on to negotiate tasks, meet demands and deal with frustrations as an adult. In light of the rapid biological, physiological and social changes that occur during adolescence, the instinctual and developmental challenges that the adolescent faces are thought to be particularly intense. The findings suggest that adolescence is a time during which instinctual drives intensify in association with physiological changes in the body.

It seems that for adolescents, imaginative fantasies become a source of release, a form of compromise between desires and reality that allows for some form of instinctual gratification to be achieved in spite of the internal and external constraints that frustrate them. As a result of the unique instinctual and developmental challenges that individuals face during adolescence, key themes specific to the psychology of adolescents will facilitate an understanding of why daydreaming is significant during adolescence and is therefore a particularly relevant basis for an exploration of the extent, conditions and characteristic narrative features of daydreams in the fantasy lives of adolescents.
However, it is important to remember, the majority of adolescents are unable to experiment freely with sexual involvement and intimate encounters in their day-to-day realities. As a result, the adolescents’ libidinal wishes are frustrated and left pressing for some form of satisfaction. Fantasy allows for the kind of experimental freedom of the imagination that is not possible in an adolescent’s everyday life. As a result of external constraints such as authority figures and social norms, the increased desire for sexual gratification and intimacy are those desires that are most often frustrated and will thus be those that find satisfaction through fantasy and daydreaming.

Key developmental theorists such as Piaget (1952), Kohlberg (1958), and Erikson (1968), argue that, because adolescence involves challenges related not only to sexual maturation but also to identity development which are defining aspects of the personality in terms of the transition from child to adult, it is a particularly tumultuous stage of development in the human lifespan. Radzik et al. (2008) describes daydreaming as an essential constituent in adolescent development, in terms of the opportunity for exploring, experimenting, enacting and problem-solving that it provides.

Building on Freud’s (1905) extensive theories on psychosexual development, Erikson (1968) proposed a model describing eight progressive stages, which map psychosocial development across the lifespan. During adolescence, Erikson (1968) proposes that the psychosocial challenge revolves around the conflict between identity formation and role confusion and that the resolution of this conflict facilitates the adolescents’ successful progression from childhood into adulthood.

In the context of Erikson’s (1963) theory, Hook (2002) describes one of the challenges of the stage of identity formation versus role confusion as a struggle to integrate previous stages of psychosocial development into the developing self, the aim being to achieve a stable sense of self. Erikson (1963) describes the outcome of this phase of development as a well-integrated individual with an established and unique set of values and purpose.
Erikson (1963) draws attention to the fact that this is not an easy process and his thoughts on the magnitude of this struggle are expressed in his statement that: “The integration now taking place in the form of ego identity is, as pointed out, more than the sum of the childhood identifications. It is the accrued experience of the ego’s ability to integrate all identifications with the vicissitudes of the libido, with the aptitudes developed out of endowment and the opportunities offered in social roles” (Erikson, 1963). When an adolescent experiences role confusion, it is Erikson’s (1950) understanding that, it is based on uncertainty – doubt around sexual identity, occupational identity, or both.

Questions of “Who am I?” and “Where am I going in life?”, which are characteristic of adolescents’ psychological state, are testament to this struggle between identity formation and role confusion. Adolescents are observed to suffer from extreme variations in mood as well as behavioural difficulties, most of which can be explained as the individual’s attempt to express the intense, internal struggle between trying to establish an identity and the threat of role confusion. Simultaneous to this developmental struggle, adolescents are developing the cognitive and reasoning abilities which actually prove to facilitate the process of identity development.

Adolescent cognitive development, in line with the questions of “Who am I?” and “Where am I going?” is characterized by an increasing ability to engage in what Piaget (1962) called pre-conventional thinking. Pre-conventional thinking is exemplified by the emergent capacity to engage in hypothetical and abstract reasoning. These cognitive abilities allow for the kind of imaginative thought and fantasizing that facilitates experimentation with various skills, talents and social roles. Thoughts about future vocations, careers and opportunities are noted to become more and more common place amongst adolescent children (Culbertson et al., 2003). The development of pre-conventional thinking is also portrayed by the ability to reason deductively. Moreover, Culbertson et al. (2003) argue that adolescents show a growing capacity to
monitor their own thoughts and feelings. This internal focus could be the cause of the egocentrism, which so often typifies adolescent perceptions and attitudes.

In conjunction with the biological and physiological changes of this time, it is perhaps also the cause of the self-consciousness depicted in adolescents’ careful and deliberate attention to the ways in which they are perceived by others, often relating to further feelings that they are the focus of everyone else’s attention and concern (Culbertson et al. 2003).

In the context of identity development, adolescents are subject to an expanding social environment and significant cognitive developments that now enable them to reflect on their social environment. It is with this in mind that Kohlberg (1958) brings into question the influence that adolescents’ judgments of others has on identity development. In “Childhood and Society”, Erikson (1963) states that: “The adolescent mind is essentially a mind of moratorium, a psychosocial stage between childhood and adulthood, and between that morality learned by the child, and the ethics to be developed by the adult”. Erikson (1963) suggests that, a significant influence on identity development is moral development which is understood predominantly due to the work of Kohlberg (1958), who proposes an interactional stage theory of moral development. He distinguishes between three levels, each of which consists of two stages (Kohlberg, 1958). According to Kohlberg’s (1958) theory, adolescence is characterized by the conventional level of moral development, which is the second of the three levels. At the conventional level of moral development, moral reasoning is dominated by external restrictions. In early adolescence the change from moral reasoning that is motivated by self-interest to moral reasoning that is based on the approval of others (Kroger, 1996) is evident in the concept of peer pressure, which comes to the fore during early adolescence. As much as the adolescents’ strong identification with peer groups can facilitate identity development, it can also promote role confusion, just like any social interaction with the environment.
Kroger (1996) argues that it is only during late adolescence that an individual’s moral reasoning begins to reflect internalized principles that transcend society’s definitions of right and wrong. It is most likely that these principles are the result of adolescents’ successful negotiation of identity development and the newly defined set of values and principles that arise.

As a transitional period between childhood and adulthood, adolescence involves the fundamental challenge of identity formation (Erikson, 1963). The concurrent development of cognitive and moral abilities, which also occurs during adolescence, compliments the process of identity formation. These newly developed abilities to engage in hypothetical and deductive thought, as well as conventional moral reasoning, facilitate the adolescents’ ability to experiment with ways of integrating the self. This satisfies the instinctual desire to try out different talents, skills, social roles and vocations that cannot be tested in reality. Daydreaming provides the medium for this satisfaction to be achieved and therefore plays a potentially significant role in the critical period of identity development that occurs during adolescence.

Adolescents ultimately face a series of instinctual and developmental challenges, the most notable of these challenges being the final organization of the sexual instinct and identity versus role confusion. With the final organization of the sexual instinct, the adolescent’s shift into a state of genital primacy greatly increases the desires for intimacy and sexual involvement.

The simultaneous challenge to establish a sense of identity involves the successful integration of numerous aspects of the self and, as such, presents an immense amount of struggle for the developing adolescent. The moodiness and behavioural difficulties that characterize adolescence are most likely to be the result of these two sexual and developmental challenges. Although developments in cognitive thinking and moral reasoning facilitate the process, the fact that the adolescent is no longer a child and not yet an adult leads to frustrations that make the period of adolescence difficult to negotiate.
DAYDREAMING AND STRESS RESISTANCE

Positive daydreaming provides an escape from stressor by reducing stress and channeling one’s thoughts towards a positive visualization, thereby removing his mind from his immediate attendant situations (Skouholt, 1977; Muller & Dyer, 1985; and Carbonell et al., 1999). Muller & Dyer (1985) also asserted that positive daydreamers develop an intuitive set of control goals, which interact with scenario generation, an emotion processing, and leads to better stress resistance.

Most daydreams concentrate on realistic problem solving (Singer, 1981; Starker, 1982; and Klinger, 1990). This problem solving includes the ability to foresee future events that may, or may not, occur and to plan for them. It also includes the capacity to invent ‘new things’. These daydreams maximize positive emotions by imagining, for example, satisfying outcomes to concerns that are of present worry (Klinger, 1993). They can also provide temporary relief from the emotional stress of harsh realities by encouraging more comforting thoughts that foster relaxation (Lang, 1995; Novey, 2000).

Dantes (1995), in “The Daydream Workbook”, argued that though daydreaming is the most unappreciated form of mental activity, understanding the meaning of daydreams is crucial for personal growth. They are guardians of people’s health, they cure, or at least lessen the experience of physical symptoms, if harnessed, the power of daydreams also resolves symptoms of mental illness by alleviating the stress of painful realities.

Segal (1985) argued that ‘self-satisfying daydreams’ often serve to provide relief from emotional stress. Singer (1975) asserts that the inner experience serves to buffer the stress of adolescence. Beck (1970), and Klinger (1990) believed that individuals who were affected by depression had negative fantasies that contributed to the depression, although, both allow for the possibility that fantasy can be used in a therapeutic way to help alleviate depression. It is likely that negative thoughts reinforce (and arouse more) negative emotions (Waller & Scheidt, 2004). These negative thoughts are associated with impaired mental health.
Milne & Lancaster (2001) found that adolescent females were more vulnerable to symptoms of depression when they perceived low levels of maternal care, experienced feelings of dependency, experienced self-criticism, experience feelings of guilt, had poor attachments to parents or had poor attachments to peers. Baron & Campbell (1993) and Stoppard (2000) argued that gender stereotypes influenced the manifestation of depression. Singer (1975) and Klinger (1990) support the potential for fantasy to be a powerful tool for coping.

The use of imagery and guided imagery (GI) in psychotherapy to induce relaxation is widely adopted and accepted (Shames, 1996; Bazzo & Oeller, 1999; Eller, 1999; Ackerman & Turhoski, 2000; Johnston, 2000; Hudetz et al.; 2000; Rossman, 2000; Varlas, 2001; Gruzelier, 2002; Syrjala & Brams, 2002; Peck et al., 2003; and Complementary & Alternative Medicine : Guided Imagery, 2004). Guided Imagery is a therapeutic technique allowing individuals to use their own imagination to connect body and mind to achieve desirable outcomes (Ackerman & Turkoski, 2000; and Carter, 2006). Guided Imagery induces a relaxed state and facilitates cognitive restructuring when ‘suggestion’ is included as part of the therapy (Syrjala & Abrams, 2002).

Guided imagery has been found to be very effective for the treatment of stress. Guided imagery is at the center of relaxation techniques designed to release brain chemicals which also acts as ones body’s natural brain techniques. Guided Imagery techniques are used for relaxation and mental visualization to improve mood and/or physical well-being. It can also be used to promote relaxation which can lower blood pressure and reduce other problems related to stress. Nightingale (1998) suggested three ways guided imagery can be used in counseling:

- relaxation for stress reduction
- motivation by imagining a positive future
- insight through exploration of possibilities and problem solving
A great advantage is that guided imagery is quite flexibly used by itself or in conjunction with other techniques, depending on the needs of the client and setting as well as the counselor's training, experience, and comfort with the approach.

Guided Affective Image (also known as Katathym Imaginative Psychotherapy) is a method of Psychotherapy. It is a therapeutic technique in which facilitators use descriptive language intending to psychologically benefit mental imagery often involving several or all sense in mind of listener. In this method the imagination place an important role together with discussion with the client.

Various studies (Rossman, 2000; Varlas, 2001; Gruzelier, 2002; and Syrjala & Brams, 2002) have shown that Guided Imagery may be able to

- Temporarily increase numbers of immune system cells to keep the rest of ones body healthy.
- Help reduce feelings of depression.
- Increase feeling of well-being.

Today, there is ample evidence suggesting that when people are deprived of daydreaming, their emotional balance is rendered precarious. Excessive daydreaming may impair one's mental health, but the lack of it is even more perilous. Prolonged daydream deprivation results in mounting anxiety and tension, and many people find that day-dreaming will erupt spontaneously. Especially during times of stress, it creates a temporary shelter for the nervous systems to shield people from the cold winds of reality. No sane person wants to spend his or her life in an unrelieved battle for survival, and they are all entitled to occasional strategic withdrawals to re-group impacting forces (Maltz, 1973).

Daydreaming has beneficial effects which go beyond relaxation. For example, it was found that patients who easily engaged in fantasies usually responded more quickly to treatment as they were better able to cope with their illnesses.
Wishful thinking about future stressors is linked to neuroticism (Bolger, 1990), sadness, and anger (Spirito et al., 1994), and impedes the mastery of impending problems. Students who reported to habitually deny stressful events felt more threatened by an upcoming exam than students who used less denial (Carver & Scheier, 1994).

People use fantasies to anticipate affective consequences of future events (Gilbert & Wilson, 2007), and when the future is depicted as positive, this depiction can have immediate affective benefits.

Imagining the successful pursuit and achievement of one’s wishes has been shown to reduce feelings of anxiety and negative affect. For instance, images of successful performance were effective at decreasing the symptoms of competitive anxiety in rugby players (Mellalieu et al., 2009), and simulations that depicted a smooth, logical, and confident process of arriving at a hospital on time to give birth were linked to reduced anxiety and stress about the delivery process (Brown et al., 2002). Indeed, specific cognitive strategies like guided imagery actively employ imagery of positive futures as a means of decreasing stress and anxiety (Eller, 1999; and Jallo et al., 2008). In a study by Wang & Gan (2010), it has been found that positive daydreamer adolescents were truly more stress resistant than negative daydreamers.

Looking at all these studies, it can easily be reasoned that daydreaming enables a person to enhance his stress resistance as during stress daydreams serve a shield, though for a shorter time till one realizes the reality and able to cope effectively. Apart of it, daydreams nurture a fertile ground for positive attitude to face stressful situations and raising stress resistance of people.

**DAYDREAMING AND OPTIMISM**

A small volume of ‘daydream research’ has focused on life orientation in an attempt to determine if optimism and pessimism interact with affective daydreams. Schoenfend (1970) developed a daydream inventory that was to include daydreaming
that measures an optimistic or pessimistic outlook on life events. Starker (1982) in a review of previous research argued that optimism and pessimism are affective dispositions that should ‘taint’ the affective orientation of daydreams. He implied a reciprocal relationship in which positive daydreams foster an optimistic outlook by interpreting life experiences in a positive manner, which in turn might lead to more positive daydreams. Cundiff & Gold (1979) argued earlier that, negative daydreams were central to maintaining a pessimistic cognitive orientation that served to heighten the experience of negative emotion at the expense of positive emotion.

Giambra & Traynor (1978) found that, college students (n = 91) reporting more pessimism daydreamed the most often. These students also reported a reduced capacity to maintain concentration on concrete tasks, as indicated by more boredom, distractibility, and mind wandering. Students who were more pessimistic reported more guilt and fear of failure daydreams, as well as more bizarre-improbable daydreams. These students were more frightened and bothered by the negative content of their daydreams. They reported fewer positive daydreams, including less realistic problem solving. It was not surprising, therefore that these students were least likely to report positive reactions to their daydreams. It is possible that positive daydreams help maintain an optimistic outlook on life events by interpreting them (and reframing negative events) in a positive fashion, which in turn might encourage more positive daydreams. On the other hand, negative daydreams could be central to maintaining a pessimistic cognitive orientation by heightening the experience of negative emotions (at the expense of positive emotions). People who are pessimistic may also report a reduced capacity to maintain sufficient mental control. Streissguth et al. (1969) found that women tend to have concrete, passive and practical day dreams that were unimaginative. Most of the literature found that women’s daydream might be a pleasant experience and they are more optimistic (Singer, 1975; and Taylor et al., 1978).

Positive thinking can be detrimental to effort and success if it comes in the form of fantasies (free thoughts and images about the desired future) rather than
beliefs (expectations). Fantasy realization theory (FRT) specifies how fantasies can be used to wisely self-regulate goal pursuit. The self-help literature and the coaching industry (McWilliams, 1995; Hill & Stone, 1997; and Peale, 2003) persistently tries to persuade people that “to think positive” is an effective means of getting what they want. While empirical research reliably finds that high expectations of success and optimistic beliefs indeed foster motivation and successful performance (Taylor & Brown, 1988; Heckhausen, 1991; Seligman, 1991; and Bandura, 1997), recent research reveals that alternate forms of thinking positively about the future (e.g., positive fantasies, Oettingen & Mayer, 2002; wishful thinking and other avoidant coping styles, Lengua & Sandler, 1996; Holahan et al., 2005; and Connor-Smith & Flachsbart, 2007) are less beneficial for effortful action, performance, and well-being. At first glance it seems contradictory that optimistic beliefs and positive thoughts should lead to such disparate motivational outcomes. However, whether one judges a desired future as within reach (i.e., has positive expectations about a desired future) or mentally indulges in free thoughts about a desired future (i.e., has positive fantasies about a desired future) may have very different implications for effortful action and successful performance.

In line with these considerations, Oettingen & Mayer (2002) distinguish between two ways of thinking about the future: expectations (beliefs) and fantasies (free thoughts). As outlined above, expectations are judgments of how likely it is that certain events or behaviours will occur in the future (Mischel, 1973; Bandura, 1977; and Olson et al., 1996). Based on experiences in the past and thus on a person’s performance history, expectations specify the probability of whether an event or behaviour will actually happen or not. These expectancy judgments may be conceptualized in several ways: as self-efficacy expectations (i.e., whether one can perform a certain behaviour in its relative context; Bandura, 1997), as outcome expectations (i.e., whether performing the behaviour will produce the desired outcome; Bandura, 1997), as general expectations (i.e., whether a certain event will occur; Heckhausen, 1991; and Oettingen & Wadden, 1991), or as generalized
expectations (i.e., whether the future in general will be positive or negative; Scheier & Carver, 1992). Conversely, free fantasies are future events or behaviours that appear in the mind regardless of whether it is deemed likely or unlikely that they will occur. For example, despite having minimal chances of getting an A in a course, an undergraduate student can indulge in positive fantasies about receiving the best possible grade. Positive fantasies reflect one’s wishes for the future, which embellish the future regardless of past performance and the probability of future occurrences (Singer, 1966; and Klinger, 1990).

Oettingen & Mayer (2002) hypothesized that positive fantasies depicting a desired future in an idealized way would lead people to react as though they had already attained the imagined desired future. Experimental findings supported these hypotheses through valid indicators of implicit affect (Kappes et al., 2012).

GENDER

GENDER DIFFERENCES IN STRESS RESISTANCE

Society expects different type of behaviour from the males and females. While females are supposed to be submissive, well mannered and docile, males are supposed to be aggressive and independent. Those who cannot conform to their respective roles are looked down upon by parents and peers and may get isolated. Males in general have more problems especially during adolescents because very rigid demands are placed on them regarding their career and expectation, as he would be the overall supporter for a family in future. On the other hand, they are restless owing to higher metabolic rate and cannot adjust to school/college routine. All these high expectations from family and low performance of the adolescent lead to stressful experience.

Lindquis et al. (1997), McDonough & Walters (2001), Tamers et al. (2002), Torkelson & Muhonen (2004), and Mathney et al. (2005), found that women tended to use social support and help seeking behaviours to cope with stress, which may be protective factors against the incidence of depression and anxiety disorders. In
contrast, males are more likely to use maladaptive coping strategies, such as consuming alcohol and following unhealthy eating patterns.

Taylor, 2000; and Taylor et al., (2006) asserts that women under stress are more likely to tend to the kids or “interface” with family and friends than to flight or flee. Males and females tend to deal with stressful situations differently. Males are more likely to respond to an emergency situation with aggression (fight), while females are more likely to flee (flight), turn to others for help, or attempt to defuse the situation. During stressful times, a mother is especially likely to show protective responses toward her offspring and affiliate with others for shared social responses to threat (Taylor, 2010).

Nolen-Hoeksema, 2007 also observed that, females were especially vulnerable to depression during adolescence and such emotional swings can reflect serious problems (Nolen-Hoeksema, 2007). Researches have discovered that pubertal change is associated with an increase in negative emotions (Brooks-Gunn et al., 1994; Dorn et al., 2002; and Archibald et al., 2003). However, most researchers conclude that hormonal influences are small and when they occur, they usually are associated with other factors, such as stress, eating patterns, sexual activity, and social relationships (Susman et al., 2003; and Sushman & Rogol, 2004). In another study, social factors are accounted for two to four times as much variance as hormonal factors in young adolescent girls’ depression and anger (Brooks-Gunn & Warren, 1989). Robins et al. (2002) have also shown that females are of poorer self-esteem than males, which can also be thought playing its key role in lowered stress resistance in female adolescents than males, who are found to possess higher self-esteem.

In a study Masih & Gulrez (2006) verified role of “age and gender differences in Stress”. The Sample consisted of 346 students of 180 females and 166 males. Students Stress Inventory (SSI) was used. Results revealed that there was no significant difference in terms of gender, so far as student’s stress was concerned.

In a study (Guszkowska, 2005), sample consisted of 253 High School students (82 the boys and 171 the girls; mean age = -15.4). The International Physical Fitness Test,
Profiles of Mood States Questionnaire, Self-assessed Psychological Well-being and Physical health were used. The results revealed significant interactions between physical fitness and gender. Females not only less favorably assessed their health, experience more somatic complaints but also manifest more marked negative mood states.

In another study, Latha & Reddy (2006), sample comprised of 100 students that is 50 males and 50 females with the age ranged between 16-19 years from Mangalore. Adolescents Stress Scale and semi structured interview and a Self Report Coping Scale was used. The results indicated that female students had greater stress scores related to college attendance, uncertainty about the future and the total score than males. The common coping strategies reported by males were praying to God and thinking of alternatives and by females were praying, consulting relatives, friends and counselors.

In a study (Mathew, 2006), sample consisted of 55 boys and 55 girls of age group 12-15 years from Kerala. Mohsin Parent Children Inventory, PGI General Wellbeing Measures and Student Academic Stress Scale were used. Results suggested that parent disciplinary practice was not significantly related to academic stress in both the males and females, whereas it was related to mental health of females but not of males. Females experienced significantly more academic stress than the boys.

In a study (Pastey & Aminbhavi, 2006) the sample consisted of 105 adolescents studying in XI and XII class from Dharwad. Emotional maturity, Self Confidence Inventory and Students Stress Scale were administered. The findings revealed that the adolescent boys tended to have significantly higher stress than the girls and the girls tended to have significantly higher self-confidence.

In another study, Mathew & Jayan (2006), the sample consisted of 50 males and 50 females of age group 15-17 years. Student Academic Stress Scale and AECOM Coping Scale were used for data collection. The results revealed that both males and females were experiencing same kind of academic stress but there were no significant differences between them and they were using similar kinds of coping mechanism to deal with their academic stress.
In another study of Shih et al. (2006), the samples consisted of 414 boys and 402 girls with the mean age of 15 years, 2 months. Semi structured Interview was carried out. Findings indicated that adolescent girls experienced higher levels of total and interpersonal episodic stress, whereas the boys experienced higher levels of chronic stress.

A sample of 180 intermediate students was selected and survey method was adopted. The findings showed that male students had more stress when compared to female students (Vijayalakshmi & Lavanya, 2006).

In another study Nielsen et al. (2007), sample consisted of 3258 adolescents. Self-reported illness and symptoms and a questionnaire were used. The results revealed that the females with a low sense of coherence, who were exposed to stress, reported recent illness twice as often as unstressed females did. For the males, there was no such significant interaction. For both females and males, there were no significant interactions on symptoms.

Grour et al. (2007) had collected data in a longitudinal study from 167 subjects through Adolescents Life Change Event Scale (ALCES) and open ended questionnaire for ways of coping was used. The results revealed that females generally reported more life events associated with interpersonal and family relationships. Both females and males reported coping with stress mostly through active distraction techniques such as exercise.

Huan et al. (2008) used the Adolescent Concerns Measure and the Academic Expectations Stress Inventory. Results obtained showed that only the scores on the personal concerns sub-scale were positively associated with the academic stress arising from self and other expectations, in both adolescent males and females. For females, school related concerns were also predictive of academic stress arising from other expectations. They also obtained significantly higher scores on the Academic Expectations Stress Inventory than the boys did.

Studies on psychological distress have consistently reported gender differences: women experience more distress than men (Gove & Tudor, 1973; Mirowsky & Ross,
Researchers have explored the gender-distress relationship from cognitive-behavioural and gender role perspectives. According to the gender role perspective, women are more distressed than men because women’s roles expose them to more stressors (Gove & Tudor, 1973; Mirowsky & Ross, 1989; Davis & Windle, 1997; and McDonough & Walters, 2001). According to Pomerantz et al. (2002), women see themselves more negatively than do men when it comes to global self-worth. Women are also more prone than men to internal distress. They are more likely to evaluate themselves negatively and to experience symptoms such as anxiety and depression in academic settings (Pomerantz et al., 2002). Fagot & Hamilton (1988), Galankis et al. (2009), and Ajawani et al. (2010) also found that female adolescents were more stress resistant than male adolescents.

**GENDER DIFFERENCES IN OPTIMISM**

The literature and research on the interaction between daydreaming and optimism is extremely limited and there has been a limited research on the interaction of these two factors during adolescents in male and female. A number of studies have examined whether optimism differ as a function of gender. Whereas many have found that optimism does not vary by gender (Fisher & Leitenberg, 1986; Scheier, 1994; and Pukaset, 1999) other have found gender difference, but the patterns of gender difference has been inconsistent. A study with a random sample of adults found that female was less pessimistic and more optimistic than males (Bosompra et al., 2000-2001). A study with Russian and American adolescents found that girls were more optimistic than boys, though this difference was small and probably not practically meaningful (Kassinova & Sukhodolsky, 1995). In children, second grade boys were more optimistic than girls (Stipek et al., 1981). Another study with third to sixth grade students found that girls were more optimistic than boys and boys were more pessimistic than girls (Ey et al., 2005).

It is believed that women, in general, are more risk averse (Bajtelsmit et al., 1999), more pessimistic (Jacobsen et al., 2008), and have less investment confidence.
than men (Barber & Odean, 2001; and Jacobsen et al., 2008). Studies were conducted on groups of people from 18 different countries and optimism levels of men and women resulting from individual confidence was examined. They found that men were more optimistic than women, suggesting that the severity of risk aversion may be influenced by the differences in optimism level between men and women. Generally speaking, social mood affects investors’ level of optimism and perspective on risky investments, and, in turn, influences individuals’ decision making. Women react more intensely when they feel threatened or frightened; when emotions are heightened by social pressure, attitude about and actions associated with risky decisions are more conservative than those of men in similar situations.

Even though no systematic gender differences have been found in levels of dispositional optimism and pessimism (Chang, 1998; and Räikkönen et al., 1999), they may exist in its developmental paths.

Puskar et al. (2008) studied self esteem and optimism in rural youth and found that female scored lower than male in both self esteem and optimism.

In a study, which assessed the level of optimism in first-year high school students in relation to a school setting, Boman et al. (2003) found that both male and female students did not differ in their levels of dispositional optimism, although male students with lower optimism scores tended to report higher levels of school hostility. Likewise in an Asian sample from Hong Kong, Lai & Cheng (2004) examined the effect of dispositional optimism of both adults and adolescents on their intention to take vaccines for prevention purposes. No significant difference was observed between gender and level of optimism in both adults and adolescents. In a separate study which examined the importance of optimism on health in both American and Chinese college students, Song (2003) also found no significant difference in levels of optimism between genders in both samples.