CHAPTER TWO
LITERATURE REVIEW
Psychology, as the eminent German psychologist Herman Ebbinghaus described it, has a long past but a short history. Over the past approximately 120 years the focus in psychology was on so-called negative psychology topics, such as anxiety, depression, maladjustment, deviation, aberration and psychopathology in general. In the past two decades, however, positive psychology has burgeoned (Gillham, 2000; Seligman, 2000). In particular, the effects of positive thinking have received growing attention by psychologists and health professionals (Snyder & McCullough, 2000). Wilkinson and O’Connor (1982) defined mental health as a congruent relationship between a person and his/her surrounding environments.

Young people diagnosed with mental illness are vulnerable to many challenges. Firstly, young people who have mental problems are at risk of doing things that could affect their wellbeing such as an increase in alcohol and substance abuse and/or suicide (Australian Bureau of Statistics, 2008; Clark & Bukstein, 1998). Second, it is hard for them to obtain and maintain a trustworthy and dependable social network of family and friends for better mental and socio-cultural development (Clark & Bukstein, 1998; Hawkins, 2009). And lastly, they are ashamed to seek professional help for treatment and recovery because of the public stigma (Hawkins, 2009; Moses, 2009).

Young people who suffer from mental illness struggle to feel ‘belonged’ because the majority of them are ignored and/or discriminated against in the community (Hawkins, 2009; Norman, et al., 2008) where they should get support and equal rights. Hence, the understanding of the underlying mechanisms behind each mental disorder is essential to change and eradicate the social stigma and negative beliefs towards young people with mental disorders. Furthermore, understanding a disorder helps increase awareness, knowledge and empathy in the community. This in
turn could help the young mental health sufferers to live a quality and healthy lifestyle and prevent them from risk-taking behaviours or developing severe mental illness in the future.

Cheng and Chan’s (2007) study indicated that stress-induced depression increases the likelihood of adolescents to death by 44%. More importantly, they have indicated that an increase of support from family and friends has reduced the effects of stress-induced depression and suicidal thoughts by 33%. Kelly and Jorm (2007) conducted a study to look at the intentions behind the assistance offered and given by friends to their colleagues suffering from depression or conduct disorder. These groups of students are most likely to give neither unhelpful response nor support to a colleague who suffers with mental health problems. Even if the reason behind their response is undetermined, the most likely reason for this approach is caused by the stigmatizing attitudes to their colleagues with mental health problems (Kelly & Jorm, 2007; Moses, 2009).

Hyun and Jenny (2006) examined mental health of graduate student. The results showed that almost half of graduate student respondents reported having had an emotional or stress-related problem over the past year, and over half reported knowing a colleague who had had an emotional or stress-related problem over the past year. Self-reported mental health needs were significantly and negatively related to confidence about one’s financial status, higher functional relationship with one’s advisor, regular contact with friends, and being married. Utilization of counseling services was positively associated with an index of depression symptoms, the number of semesters in school, and identifying as female. Those students who had experienced a significant mental health event in the past year and had higher functional relationships with their advisors were significantly more likely to utilize counseling services.
Abdulghani (2008) revealed that there was a prevalence of stress among tertiary students and it was also found that there was severe stress among medical students, 57% and 19.6% respectively. The medical students in the study were from the College of Medicine at the King Saud University. The researcher used different kinds of tools to assess the stress level of respondents. The tools used were Beck’s Depression Inventory, General Health Questionnaire and Kessler10 Psychological Distress (K10).

Mental healths are issues of everyday life: in families, in schools, on streets and in workplaces. Therefore they should be of interest to every citizen, to every politician and to every employee as well as to all sectors of society. This includes sectors such as education, employment, environment, housing and transport as well as health and social welfare. Mental health, social integration and productivity are linked: well-functioning groups, societies, organizations and workplaces are not only healthier but also more effective and productive. However, the main reason for promoting good mental health is its great intrinsic value.

WHO has included mental well-being in the definition of health. WHO famously defines health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (WHO, 2001b, p.1). WHO has recently proposed that mental health is a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community (WHO, 2001d, p.1).

Mental, physical and social health, are vital strands of life that are closely interwoven and deeply interdependent. Mental health is crucial to the overall well-being of individuals, societies and countries. Mental health includes subjective well-
being, perceived self-efficacy, autonomy, competence, intergenerational dependence, and self-actualization of one’s intellectual and emotional potential, etc.

Safi-Abadi and Naseri (1986) in a conclusion of different theories in counseling and psychotherapy field say: “mental health is to have a humane in life, try to solve the problem wisely, come to terms with social environment on the basis of moral and scientific standards and finally belief in work and responsibility and following the charity”.

Mental wellness is generally viewed as a positive attribute, such that a person can reach enhanced levels of mental health, even if they do not have any diagnosable mental health condition. This definition of mental health highlights emotional well-being, the capacity to live a full and creative life, and the flexibility to deal with life's inevitable challenges. Many therapeutic systems and self-help books offer methods and philosophies espousing strategies and techniques vaunted as effective for further improving the mental wellness of healthy people. Positive psychology is increasingly prominent in mental health.

A holistic model of mental health generally includes concepts based upon anthropological, educational, psychological, religious and sociological perspectives, as well as theoretical perspectives from personality, social, clinical, health and developmental psychology.

Mental and emotional health problems can be due to traumas and serious losses in early phases of life. Social conditions in which a person lives are the most important characteristic for good mental and emotional health. Feelings of disgust are usually developed due to negative thoughts and even sometimes because of side effects of medications. There are various genetic and bio-medical causes which are responsible for emotional stresses.
A person with good mental health must have the following characteristics:

- A healthy person always possesses a sense of contentment and well-being. One must have the ability to enjoy life and have fun. A mentally healthy person always has a zest of living to laugh and enjoy along with others.

- You should keep up the spirits high and must be capable to deal with stresses of life. The ability to fight back even in adverse conditions is must.

- With the help of positive relationships and meaningful activities, a mentally healthy person participates in experiences of life to complete extent. The feeling of self-realization is must in person.

- Presence of good mental health means ability to grow, change and experiences different aspects as one faces different circumstances in life. You must make your self flexible in order to deal with or deals of life.

- Another important characteristic of good mental health is the ability to strike balance in different aspects of life. You must be social as well as remain in solitude with your loved ones. One must have the ability to work and play simultaneously. Similarly catering all your daily physical and emotional needs of exercising, rest and sleep.

- There should be an intellectual development of your health, spirit, body, mind and soul. A sense of well-roundedness and creativity is a must.

- The person who is mentally healthy always shows concerns for other. He or she has the ability to take care of his own and other closed ones. A person must have good self-esteem and self-confidence in order to remain physically and mentally active.
2-1-1- Community Mental Health

Community care is about providing good care and the empowerment of people with mental illness. Community care implies the development of a wide range of services within local settings. This process aims to ensure that some of the protective functions of the asylum are fully provided and the negative aspects of these institutions are not perpetuated. The characteristics of community care include:

- Services that are close to home, including general hospital care for acute admissions, and long-term residential facilities in the community
- Interventions related to disabilities as well as symptoms
- Treatment and care specific to the diagnosis and needs of each individual
- A wide range of services that address the needs of the people with mental and behavioural disorders mental health professionals and community
- Services that are coordinated between agencies
- Ambulatory rather than static services, including those that can offer home treatment
- Legislation to support the above aspects of care

Psychiatric Diseases Hospitals should not be closed without community alternatives, and, conversely, creating community alternatives without closing mental hospitals. Both have to occur simultaneously, in a well-coordinated, incremented way.

In many developing countries, mental health care programmes have a low priority. Provision is limited to small number of institutions that are usually overcrowded, understaffed and inefficient. Services reflect understanding of the needs of the ill or the range of approaches available for treatment and care. There is no adequate psychiatric care for the majority of the population. The only services are in
large psychiatrics diseases hospitals that operate under legislation which is often more penal than therapeutic. They are not easily accessible.

Moreover, those who could benefit do not take advantage of available psychiatric services because of the stigma attached to individuals with mental disorder and to the inappropriateness of the services provide.

2-1-2-Mental Health of Women

There is evidence that the course of mental and behavioural disorders is determined by the socioeconomic status of the individual. Across socioeconomic levels, the multiple roles that women fulfill in society put them at greater risk of experiencing mental and behavioural disorders than others in the community. Women continue to bear the burden of responsibility associated with being wives, mothers, educators, and careers of others, while they are increasingly becoming an essential part of the labour force and in one quarter to one-third of households they are the prime source of income. Moreover to the pressures placed on women because of their expanding and often conflicting roles, they face significant sex discrimination and associated poverty, hunger, malnutrition, overwork and domestic and sexual violence. Therefore, women have to be shown to be more likely than men to be prescribed psychotropic drugs. Violence against women constitutes a major social and public health problem, affecting women of all ages, cultural backgrounds, and income levels.

Approximately one in four adults will experience some form of mental health problem at any one time with one in six experiencing ‘significant’ problems (Office of National Statistics, 2001). A major mental health problem such as depression not only has a major impact on the lives of sufferers and their families, but also results in a massive financial burden to society through demand for healthcare services and lost workdays. However, the failure to consider the positive as well as negative aspects of
Mental health has contributed to several interrelated problems, including: the stigmatization of language and ideas surrounding mental health as a whole, as well as people with mental health problems; a reluctance to accept that elements of positive mental health (PMH) and mental health problems can be present at the same time and are related experiences; and inadequate efforts to promote mental health and well-being. The individualistic focus of the biomedical model has been challenged by an approach that highlights psychosocial and environmental conditions that increase vulnerability at the individual level (MacDonald & O’Hara, 1998; Rutter, 1985; Secker, 1998). Neither mental nor physical health can exist alone. Mental, physical and social functioning are interdependent. Furthermore, health and illness may co-exist. They are mutually exclusive only if health is defined in a restrictive way as the absence of disease (Sartorius, 1990).

Mental health and mental illness are not opposite ends of a single measurement continuum. In view of this fact, Keyes (2002) operationalizes mental health as a syndrome of symptoms of both positive feelings (emotional well-being) and positive functioning (psychological and social well-being) in life. In his comprehensive model, the presence of mental health is described as flourishing in life, and the absence of mental health is characterized as languishing in life. Syme (1996) noted the importance of distinguishing between individual risk factors and environmental causes of disease. Rose (1992) suggested that the causes of individual differences in disease may not be the same as the causes of differences between populations. These population determinants are the focus of much of the new public health and health promotion work.

Mental health for each person is affected by individual factors and experiences, social interaction, societal structures and resources and cultural values. It is influenced
by experiences in everyday life, in families and schools, on streets and at work (Lahtinen et al., 1999; Lahtinen, Riikonen & Lahtinen, 1997). A study demonstrate that healthy people who are optimistic have lower death rates from heart disease than those who are pessimistic, even taking other risk factors into account (Giltay et al., 2004).

Physical ill-health is detrimental to mental health as much as poor mental health contributes to poor physical health (Herrman & Jane-Llopis, in press). For example, malnourishment in infants can increase the risks of cognitive and motor deficits, and heart disease and cancer can increase the risk of depression (Blane et al., 1996; Marmot & Wilkinson, 1999). Strong evidence establishes depression as a risk factor for heart disease, and some national health policies now assert that the causal link is undeniable. The importance of short-term mental stress as a trigger for the development of myocardial infarction and sudden death in people with heart disease is no longer questioned. The notion that hypertension may arise through psychological stress, in turn related to occupational and other adverse factors in the environment, remains contentious, but the idea is an old one (Esler & Parati, 2004). Low controls at work and poor social support have important influences on both physical health (e.g. cardiovascular morbidity) and psychological health (e.g. depression) (Kopp, Skrabski & Szedmak, 2000). Many of the people living with HIV/AIDS and their families experience stigma and discrimination as well as depression and anxiety and other mental illnesses (WHO, 2001c). Persistent pain is linked with suffering and lost productivity around the world. A WHO study across 15 centers in Asia, Africa, Europe and America examined the relationship between pain and well-being in over 5000 individuals. Those with persistent pain were over four times more likely to have an anxiety or depressive disorder than those without pain (Gureje et al., 1998).
In an integrated and evidence-based model of health, mental health (including emotions and thought patterns) emerges as a key determinant of overall health. Anxious and depressed moods, for example, initiate a cascade of adverse changes in endocrine and immune functioning and increase susceptibility to a range of physical illnesses. For instance, stress is related to the development of the common cold (Cohen, Tyrrell & Smith, 1991) and delays wound healing (Kielcot-Glaser et al., 1999).

Jahoda (1958) elaborated on this by separating mental health into three domains. First, mental health involves “self-realization” in that individuals are allowed to fully exploit their potential. Second, mental health includes “a sense of mastery” by the individual over their environment and, thirdly, positive mental health means “autonomy”, as in individuals having the ability to identify, confront and solve problems. In the 1960s, Bradburn, building on the earlier conceptual work of Gurin, viewed psychological well-being as the balance between two independent dimensions which he termed positive and negative affect. In his view, an individual will experience a high degree of psychological well-being if positive affect dominates. Likewise, a low degree of well-being is characterized by negative affect (Bradburn, 1969).

Antonovsky (1979) proposed the “salutogenic approach”, which focused on coping rather than stressors and “salutary” factors rather than risk factors. He hypothesized that a sense of coherence, which is the degree to which a person views their own experience as comprehensible, manageable and meaningful, is a major explanatory construct and contributes to health. He rejected the notion that stressors always have pathogenic consequences, since people have to survive transitions and stress in their daily lives.

Rutter (1985, p. 598) remarked: “Even with the most severe stressors and most glaring difficulties more than half of ... children will not succumb”. This view was
supported by Paykel's work on life events, which found that most people did not become depressed in spite of stressful experiences (in Rutter, 1985). More recently, Cederblad et al. (1995) followed up 148 peoples selected from an earlier study (the Lund by study) as being at risk of developing mental disorders. They found that the great majority of them were doing well. Quality of life has to be added to any conceptual framework of positive mental health. Early attempts to bring “quality of life” and “social well-being” to a discussion about the value of population life were made not by health practitioners but by social scientists and philosophers in the 1960s and 1970s (Campbell, Converse & Rodgers, 1976; Erickson, 1974; Katschnig, 1997).

Mental health is an indivisible part of general health and well-being. In principle, mental health refers to the characteristics of individuals, but we can also speak about the mental health of families, groups, communities and even societies. Mental health as a concept reflects the equilibrium between the individual and the environment in a broad sense.

Mental health can be described in two dimensions:

- Positive mental health considers mental health as a resource. It is essential to subjective wellbeing and to our ability to perceive, comprehend and interpret our surroundings, to adapt to them or to change them if necessary, and to communicate with each other and have successful social interactions. Healthy human abilities and functions enable us to experience life as meaningful; helping us to be, among other things, creative and productive members of the society.

- Mental ill-health is about mental disorders, symptoms and problems. Mental disorders are defined in the current diagnostic classifications mainly by the existence of symptoms. Mental symptoms and problems also exist without the
criteria for clinical disorders being met. These sub-clinical conditions are often a consequence of persistent or temporary distress. They, too, can be a marked burden to individuals, families and societies (Lavikainen et al., 2001).

2-1-3- Links between Mental and Physical Health and Illness

Mental health is a set of key domains encompassing well-being and positive states of mind. It is an integral part of health, including positive physical health. It can co-occur with and influence the onset, nature and outcomes of physical and mental illnesses. Similarly, positive physical health can influence the onset, nature and outcomes of mental and physical illnesses. These interrelationships are encompassed in holistic concepts of health, such as are held by many indigenous populations. Systematic studies are increasingly identifying these influences and correlations. The relationship between physical and mental health and between the social, biological and psychological determinants of these positive states is complex.

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Advances in neurosciences and behavioural medicine have shown that, like any physiological illnesses, mental and behavioral disorders are the result of a complex interaction between biological, psychological and social factors. Scientific evidence from the field of behavioural medicine has demonstrated a fundamental connection between mental and physical health. Research has pointed to two main pathways through which mental and physical health mutually influence each other over time. The
first key pathway is directly through physiological systems, such as neuro-endocrine and immune functioning.

The second primary pathway is through health behaviour (such as eating sensibly, getting regular exercise and adequate sleep, avoiding smoking, engaging in safe sexual practices, wearing safety belts in vehicles, and adhering to medical therapies).

Health behaviour can affect physiology, while physiological functioning can influence health behaviour, resulting in a comprehensive model of physical and mental health, in which the various components are related and mutually influential over time.

The health behaviour of an individual is highly dependent on mental health.

2-1-4- Research studies of students’ in further and higher education

There are substantial limitations to the research literature on mental health problems among student populations. Most have depended on student self report data, in some cases complemented by use of well-validated questionnaire measures. A few studies have been methodologically sound, have attracted a large number of respondents, and (e.g. Leicester University, 2002) have been repeated. Both British and international studies have focused on mental health symptoms rather than on mental health disorders.

2-1-4-1- Mental disorders

At one university in Dublin, approximately 1% of students present to the student health service with major psychiatric disorders (O’Brien, personal communication, 2002).

2-1-4-1-1- Schizophrenia

In a survey of approximately 14,600 students registered with the Leeds Student Medical Practice, two students were recorded as having a diagnosis of schizophrenia.
(Mahmood, personal communication, 2002). In general, a small number of students will present with schizophrenia because adolescence and young adulthood is the age of maximum risk of onset.

2-1-4-1-2- Affective disorders

In a study of over 3000 students at ten universities (Webb et al, 1996), Hospital Anxiety and Depression (HAD) questionnaire scores identified 12% of male and 15% of female students with measurable levels of depression. The University of Leicester’s Student Psychological Health Project (Leicester University, 2002) surveyed more than a thousand second-year students in 1998 and 2001 using the Brief Symptom Inventory (BSI) and found in both years that 13% of undergraduates recorded scores suggesting they were moderately distressed by feelings of depression. Women scored significantly higher than men. Using the Beck Depression Inventory (BDI), 14% of students in a South African study were found to be moderately or severely depressed (Mkize et al, 1998).

In an earlier phase of the student survey in Leeds, 0.7% of students had a recorded diagnosis of 'recurrent depression' (Mahmood, personal communication, 2001). In this survey, between 1995 and 2000, the proportion of students being prescribed antidepressant medication was 3–5%. Clinical information from Oxford suggests that the rate of increase in GP prescribing of antidepressant medication to students has greatly exceeded the increase in antidepressant prescribing for non-students (Burke, personal communication, 2002). However, in a recent large community survey, students were found to be at significantly lower risk of depression than the whole population sample, 3.2% v. 7.1% (Ostler et al, 2001).
2-1-4-1-3- Anxiety disorders

Webb’s questionnaire survey (Webb et al, 1996) indicated that 17% of male and 25% of female students had scores on the HAD scale suggesting moderate to severe levels of anxiety. In the Leeds diagnostic survey, 0.3% of students had ‘chronic anxiety’, 0.1% had phobic disorder and 0.3% had obsessive–compulsive disorder (Mahmood, personal communication, 2001). The Leicester University, (2002) study showed 12–14% of undergraduates recorded BSI sub-scale scores suggestive of moderate obsessive–compulsive distress (trouble remembering things, trouble concentrating, difficulty making decisions, checking).

2-1-4-1-4- Eating disorders

In a survey of Oxford students, Sell and Robson (1998) found that 10% of women reported a current eating disorder. Also in the UK, Doll et al (2000) found that 6% of all students (9% of female students) had a ‘probable DSM–IV lifetime eating disorder.’ The Leicester study found that 4% of undergraduates reported self-induced vomiting, and 2% use of laxatives and diuretics, to control weight (Leicester University, 2002). Concealed binge eating was reported in 7%. In the Leeds survey, the prevalence’s of anorexia nervosa and bulimia nervosa were 0.4% and 0.5%, respectively (Mahmood, personal communication, 2001).

2-1-4-1-5- Alcohol and substance use

Data are increasingly available on the prevalence of alcohol dependence within student populations. In Oxford, Sell and Robson (1998) found that 24% of women and 40% of men were exceeding safe limits for alcohol consumption and among medical students’ half exceeded World Health Organization guidelines (Pickard et al, 2000). In a survey of ten British Universities, Webb et al (1996) found that 15% of students were drinking at a hazardous level. In Cambridge, Surtees et al (2000) found that 10% of
students consumed alcohol at levels suggestive of problem use. In Leicester (Grant, 2002), 14% male and 31% female undergraduates admitted harmful levels of alcohol consumption; but 50% and 25% respectively also admitted binge drinking at least once per week. However, (Mahmood personal communication, 2001) reported that only 0.1% of students had a recorded diagnosis of alcohol dependence. This difference might be explained by the distinction between problem use and dependence, but also because the widespread acceptance or normalization of heavy drinking in younger people results in reluctance to make a formal diagnosis.

Students who drink excessively have not been demonstrated to have higher levels of depressive or anxiety symptoms (Grant, 2002; Pickard et al, 2000; Webb et al, 1996), although this has been shown to be the case in the general population. This discrepancy might be explained by the effect of alcohol in masking mood and anxiety disorders, but Grant’s study did find that undergraduates reporting frequent binge drinking recorded higher levels of subjective concern about alcohol usage. This suggests that some students might be receptive to advice and help.

Current cannabis use was reported by 20–30% of Students (Sell & Robson, 1998; Surtees et al, 2000; Webb et al, 1996). Current amphetamine use was reported by 3% of students (Sell & Robson, 1998). The majority of students who have used drugs first did so prior to entering University (Webb et al, 1996).

Mohan et al (2002) assessed 10,312 urban people in India, with an instrument based on DSM-III R criteria at two points of time one year apart. The prevalence of tobacco, alcohol, cannabis and opioids use among males was 27.6%, 12.6%, 0.3% and 0.4%, respectively. The annual incidence rates among males for any drug use and use of alcohol, tobacco, cannabis and opioids were 5.9%, 4.2%, 4.9%, 0.02% and 0.04%, respectively. Among females, the incidence of any drug use was 1.2%. Kartikeyan et al
(1992) assessed 9,863 people from an urban slum in India. The prevalence of drug
dependence was 11% (83.7% for heroin, 10.7% for cannabis and 5.8% for opium).

According to Hawkins (2009), substance use disorder (SUD) among youth is
often the result of existing mental health problems that they are diagnosed with. In a
study by Libby, Orton, Stover & Riggs (2005), 70% of their adolescent sample had
major depression before the beginnings of a SUD. The presence of a mental health
disorder, in reference to the bidirectional model of Mueser, Drake & Wallach (1998),
increases vulnerability for developing another disorder, such as SUD. Adolescents with
conduct disorder are more likely to have uncontrollable behavioural inhibition and
would frequently seek new experiences (Clark & Bukenstein, 1998). Hence,
adolescents with conduct disorder may develop drinking at an early age and may
eventually be diagnosed with alcohol use disorder (AUD) (Clark & Bukenstein, 1998).
Young people who have negative-affect disorders are also more likely to become
dependent in alcohol or substance use as their form of quick and effective therapeutic
medication to forget unwanted and unpleasant experiences in the home and/or in the
community and to fill an emotional need (Mainous, Martin, Oler, Richardwon, &
Haney, 1996). An example would be young females who have had post-traumatic stress
disorders that arose from physical or sexual abuse tend to develop AUD or SUD
(Libby, et al., 2005). In the same way, depressed adolescents who experienced lack of
parental supervision or neglect or those living in broken families also tend to engage in
AUD or SUD at an early age (Clark & Bukenstein, 1998; Libby, et al., 2005). Based
on the following factors that have caused substance abuse amongst mentally ill young
people, the treatment strategies put forward by studies mainly involves psychological
therapies and/or medication (Clark & Buckstein, 1998). Adolescents seeking treatment
for AUD or SUD are usually given cognitive behaviour therapy where the underlying
co-morbid disorder is explored (Clark & Buckstein, 1998). When therapy does not seem to be successful, medication is prescribed. For example, for adolescents with depression, antidepressants such as Fluoxetine (Prozac®) and stimulants like methylphenidate (Ritalin®) for adolescents that suffers from conduct disorder with Attention Deficit Hyperactivity Disorder (ADHD) are both effective (Clark & Buckstein, 1998). However, the use of medications as treatment still needs to be investigated if these drugs can potentially cure adolescents with AUD and/or SUD because drug abuse might come out as a result.

2-1-4-1-6- Attention Deficit Hyperactivity Disorder (ADHD)

The hesitation of young people to seek for help is more evident in children and adolescents with ADHD who come from ethnic minority backgrounds with fears of stigma (Eiraldi, Mazzuca, Clarke & Power, 2006). ADHD is a common disorder found in children and adolescents. The underlying mechanisms in the development of this disorder are many and varied. According to Gupta (2008), ADHD is caused by the slow development in some regions of the brain such as areas important for control, action, planning and attention. Some children suffering from epilepsy also have ADHD caused by an epileptic seizure in the brain (Sherman, Slick, Connolly & Eyrl, 2007). Other studies have also indicated that children and adolescents also tend to develop ADHD after experiencing a traumatic brain injury at some point during their developmental years (Max, Lansing, Koele, Castillo, et al., 2004).

Despite the prevalence of the number of services offered for children with ADHD, ethnic minority children are less likely to utilise these services (Eiraldi, et al., 2006). The ADHD Help-Seeking Behaviour model (HSB) is proposed by Eiraldi, et al. (2006), where education is given to the family members and the rest of the community, such as the school teachers, to encourage ethnic minority children and adolescents with
ADHD to seek for professional help. A 14-month observation of children in America with ADHD who participated in a combination of treatment for ADHD with medication management, behavioural therapy and community care have shown to have better response to treatment (Eugene, Elliott, Sachs, Bird, et al., 2003). This result is the same across different ethnicities, even if Caucasian children are shown to have less symptoms of ADHD compared to the African Americans or the Latino/Hispanic children (Eugene, et al., 2003). The positive outcome of this study came from proper education of the parents, particularly the mother, and public assistance. This therefore states that the increase in trust towards mental health professionals and the education and awareness given to the public and to the family members helps to minimize the effects of stigma and increase utilization of mental health services (Eiraldi, et al., 2006; Eugene, et al., 2003).

2-1-5- Suicide, deliberate self-harm and suicidal ideation:

The most significant change in the pattern of suicides in the United Kingdom (UK) has been the marked increase in suicide in young males (Hawton, 1992). This phenomenon is not confined to the UK, as similar increases have also been reported from other developed countries such as the USA, Canada, Australia and New Zealand. Between 1980 and 1992, the suicide rate for males aged 15–24 in England and Wales increased by 81.1% (Charlton et al, 1992), and although the rates have declined a little in the past few years (Kelly & Bunting, 1998), they are still much higher than previously. The rates of deliberate self-harm is higher in females than males especially in teenagers (Houston et al, 2001). However, suicide following attempted suicide in the young is not uncommon (Hawton et al, 1993).

Since the great majority of university students are in their late teens and early twenties, a similar increase in the rates of suicide might be expected among students in
higher education. Fortunately this is not the case, as is shown by a number of studies in the UK and other countries.

2-1-5-1-Suicide

In Cambridge from 1970 to 1996, the suicide rate in students was 11.3 per 1,00,000 and was not significantly elevated when compared with an age-matched general population (Collins & Paykell, 2000). Although the suicide rate in Oxford University students between 1976 and 1990 appeared to be elevated, Hawton et al (1995a) demonstrated that it was no higher than the general population when open verdicts were included. Longitudinal studies of completed suicide appear to show a marked reduction in the rates of suicide in students at Oxford and Cambridge Universities over recent decades. Rates at other British universities also appear to be lower than in the general population (Hawton et al, 1995a).

Kelly and Jorm (2007) conducted a study to look at the intentions behind the assistance offered and given by friends to their colleagues suffering from depression or conduct disorder. A large proportion of their sample of 12-17 year old students had indicated a greater desire to distance oneself from someone who is experiencing either depression (11.9%) or conduct disorder (15.6%). These groups of students are most likely to give neither unhelpful response nor support to a colleague who suffers with mental health problems. Even if the reason behind their response is undetermined, the most likely reason for this approach is caused by the stigmatizing attitudes to their colleagues with mental health problems (Kelly & Jorm, 2007; Moses, 2009). Discrimination is evident against young people with mental illness particularly those who have the severe forms of mental illness. College students’ personal values have indicated that they prefer to have greater social distance towards a person suffering from schizophrenia than depression (Norman, et al., 2008). In connection to the
previous reasons mentioned previously as to why several of the young people with mental illness do not seek for help is because they are worried on what other people might think (Youth Beyond Blue, 2009). And this is backed up by 14% of young people with depression who responded to the survey. Adolescents with mental illness who have become an object of scrutiny and victims of cold treatment from public stigma tend to self-pity and have lower self esteem, social isolation and unwilling to seek for help (Corrigan, Watson & Barr, 2006; Link & Phelan, 2001). In a large study in the United States Of America (USA), Silverman et al (1997) found that students were at reduced risk of suicide. The observed suicide rate was half that which would have been expected in a matched population. Similarly, a Finnish study found a significantly reduced rate of suicide among male students (Niemi & Lonnqvist, 1993).

Lester et al (1999) reported that in 1991, the national suicide rate was 9.2 per 1,00,000 per year (males: 10.6 and females: 7.9). The most common methods for suicide were poisoning and hanging. Mayer and Ziaian (2002) reported that there was an increase in the rate of suicide over six years. The incidence of suicides was highest in the 30-44 year-old category. Suicide rates were nearly equal for young women and men. Organ phosphorus poisoning and hanging were the commonest methods of attempting suicide. A number of studies (e.g. Shenoy et al, 1998) have evaluated large samples of children and adolescents (n=348 to 1535) with standardized instruments (e.g. Children’s Behavior Questionnaire, Child Behavior Checklist) using a two stage procedure. The prevalence of psychiatric morbidity was in the range of 14.4% to 31.7%. Nandi et al (2000) reported that psychiatric morbidity decreased from 11.7% to 10.5% over 20 years in a rural setting.
Deliberate self-harm

Rates of deliberate self-harm (DSH) hospital attendances among Oxford students were found to be lower than age-matched controls, but the marked differences in social class may be one explanatory factor (Hawton, 1995b). A slight increase in numbers in the past decade is possibly due to the increasing numbers of students at university. Lower rates were also found among higher education students in Edinburgh (Platt, 1986). In a survey of UK students, Doll (2000) found that 2% reported ‘harming themselves’ and 0.2% reported ‘attempting suicide’ in the preceding term. The Leicester study found that 4% of undergraduates admitted a history of deliberate self-harm or dangerous risk-taking behaviour (Leicester University, 2002).

In the USA and Switzerland, 2–3% of students reported self-harm over the preceding 12 months (Meehan et al, 1992; Rudd, 1989). Schweitzer et al (1995) found that 7% of Australian students reported that they had attempted to kill themselves in the 12 months before questionnaire completion.

The marked variation in reported rates of ‘attempted suicide’ reflects problems in terminology, for this term may be used to cover non-suicidal self-harm and other actions.

Suicidal ideation

In two recent studies of UK students, the proportion reporting suicidal ideation during the past term was 7–9% (Doll, 2000; Sell & Robson, 1998). Internationally, rates of suicidal ideation among students have been much higher than those found in the UK. In the USA between 26% and 43% reported suicidal ideation within the preceding year (Meehan et al, 1992; Rudd, 1989). Brenner et al (1999) found that 10% of students reported ‘serious suicidal ideation’ over the preceding 12 months. In Switzerland, 45% reported suicidal ideation in the past year (Rey et al, 1998), and rates
were as high as 61% among Australian students (Schweitzer et al, 1995). This marked variation in rates of suicidal ideation has not been explained.

It is not yet clear whether these worryingly high rates of suicidal ideation might be associated with the growing evidence that frequent cannabis use predisposes to anxiety, depression and suicidal ideation (Rey & Tennant, 2002). The significance of reported suicidal ideation requires urgent elucidation. Such thoughts may reflect distress and age-consistent nihilistic ideation rather than true suicidal cognition. Certainly, there is very limited association between reported suicidal ideation and suicidal acts, but Grant (2002) reported a correlation between suicidal ideation and deliberate self-harm in a student population. Working fewer hours (Tyssen et al, 2001) has also been associated with increased risk of suicide (Barrios et al, 2000). No association was found with examination times (Collins & Paykel, 2000; Hawton et al, 1995a), which was an unexpected finding. Interestingly, affiliation with organised religion appears to be a protective factor against suicide (Jensen et al, 1993; King et al, 1996).

2-1-6- Risk factors and protective factors

2-1-6-1- Gender

As in the general population, suicide is more common in male students than female students, both nationally and internationally (Collins & Paykell, 2000; Hawton et al, 1995a; Niemi & Lonnqvist, 1993; Silverman et al, 1997). However, studies of suicide have found that the female-to-male ratio was higher among students than that seen in the age-matched population. In his study of deliberate self-harm, Hawton et al (1995b) found that females presented 2.6 times more frequently than males. Suicidal ideation was found to be unrelated to gender within student populations in the USA and Australia (Rudd, 1989; Schweitzer et al, 1995). Pickard et al (2000) and Webb et al
(1996) found similar levels of drug misuse among males and females. Females are more likely to show increased evidence of emotional problems during the course of higher education (Fisher & Hood, 1988; Surtees & Miller, 1990). Fisher & Hood (1998) found that female students demonstrated increased levels of depression, anxiety and phobias compared with their male counterparts, but homesickness was unrelated to gender. In the UK and elsewhere, female students have been found to be more likely to demonstrate increased levels of psychological symptoms using a range of measures compared with their male colleagues (Grant, 2002; Hong et al, 1993; Rosal et al, 1997; Surtees et al, 2000; Tyrell, 1992; Watanabe, 1999).

2-1-6-2- Age

Hawton et al (1995b) found increased rates of DSH among undergraduates relative to postgraduates. In the USA, Silverman et al (1997) found increased rates of suicide among those over 25 years old. Students over the age of 30 were overrepresented among referrals to a student psychiatric service (O'Mahony & O'Brien, 1980).

2-1-6-3- Socio-economic group

Data are lacking regarding the influence of socio-economic group on psychiatric illness and psychological symptoms among students. Roberts et al (1999) demonstrated that financial problems are associated with poorer mental health in student populations. Stewart-Brown et al (2000) reported increased rates of financial worries among students compared with age-matched populations. Although Hawton et al (1995b) did not identify financial concerns as a frequent worry in their Oxford DSH study; others have identified such concerns as a frequent source of stress (Fisher & Hood, 1987; Tyrell, 1992).
2-1-6-4- Living arrangements and social contacts

The increase in psychological symptoms following transition to higher education was found to be unrelated to whether students were residential or living with parents. Those who had previous experience of being away from parents and/or home were less likely to experience homesickness (Fisher & Hood, 1988). Those living alone reported increased rates of suicide attempts (Schweitzer et al, 1995). Increased frequency of participating in activities with others was found to be associated with better mental health (Reifman & Dunkel-Schetter, 1990). Interpersonal problems emerged as the most frequent precipitant of DSH in Oxford (Hawton et al, 1995a).

2-1-6-5- Ethnicity

The University of Leicester study (Grant, 2002) showed that students from ethnic minorities scored significantly higher on all six sub-scales of the BSI. In a large Australian study examining suicidal ideation among students, Asian students reported increased rates of suicide attempts (Schweitzer et al, 1995).

2-1-6-6- Religious affiliation

In the USA, Jensen et al (1993) found that increased ‘religiosity’ was associated with better mental health. There is evidence of increased suicidal ideation and behaviour among those without religious affiliation (King et al, 1996; Schweitzer et al, 1995). International students. There is some evidence of increased mental health symptoms among international students in Britain (Javed, 1989). A Scandinavian study found that foreign students were at increased risk of mental health problems (Sam & Eide, 1991). Those at greatest risk of mental health problems included single students, married students living away from their spouses, young students, female students, undergraduates and those of Asian or Arabic origin.
2-1-6-7- Course of study

Those studying the arts have increased rates of DSH (Hawton et al, 1995b) and higher GHQ scores (Springett & Szulecka Lekarz, 1986; Watanabe, 1999). Surtees and Miller (1990) demonstrated high rates of psychological distress among medical students, particularly at the commencement of their course. O’Mahony and O’Brien (1980) found that medical (and dental) students were overrepresented among referrals to a student health psychiatrist. In Canada, medical students were found to be no more stressed than either other students or the general population (Helmers et al, 1997).

2-1-6-8- Student-related factors

Students with pre-existing mental health problems are entering universities in greater numbers. They often arrive without any prior warning of their needs, resulting in discontinuity of treatment and follow-up. This, added to the well-known stresses of university life (e.g. pressure for academic achievement, time management, financial constraints, social relationships, loneliness and homesickness), increase the likelihood of their breakdown.

As many as, 60% of first-year students report homesickness and of all university students they are at the greatest risk of developing mental health problems (Adalf et al, 2001). This can be compounded by the lack of a confiding relationship, and a subjective feeling of loneliness, which has shown to be correlated with symptoms of anxiety, depression, alcohol and drug misuse, and suicidal ideation (Curtona, 1982, Perlman & Peplau, 1984).

A larger number of students from less privileged backgrounds now attend university, are less protected from the vagaries of life and are therefore more likely to suffer mental ill health. Roberts et al (1999) have shown that financial problems are associated with poorer mental health in student populations.
Women, who have higher rates of psychiatric disorders in general, particularly depression and anxiety (Horwath & Weissman, 1995), now account for half or more of the university student population and show increased evidence of psychological disturbance during the transition to higher education (Adalf et al, 2001, Fisher & Hood, 1988, Surtees et al, 2000).

More students from ethnic minorities are entering universities, who might be at greater risk of developing mental health problems (Schweitzer et al, 1995). More international students are studying at British universities, and are more vulnerable to mental health problems (Sam & Eide, 1991).

There is an increase in use of alcohol and drugs among students in higher education, both reflecting and causing increased mental health problems. Students tend to confide in and seek help from peers, and yet students have been shown to be poor at recognizing the presence and severity of psychological symptoms in others (Broadbridge, 1996; Malla & Shaw, 1987; Sell & Robson, 1998). Some students cite stigma as a reason not to access counselling services. Peer support training may be of value in this respect; and continuing education and anti-stigma campaigns are needed to improve perceptions of mental health issues (Royal College of Psychiatrists et al, 2001). When students do try to access the university counselling services, these are often oversubscribed, and they might have to wait up to 2–3 weeks for an appointment, despite evidence that seeking help early is beneficial.

Individual resilience to the pressures of student life is mediated by factors internal and external to the student. Students with higher intellect, higher self-esteem, an internal locus of control and good problem-solving skills, and who have secure attachments to supportive, stable parents and communities, are better equipped to manage student life. It is likely that the increased intake of students from less privileged
and more disrupted families and communities (who are less prepared to meet these pressures) will be associated with an increase in the prevalence of mental disorder.

2-1-6-9- Other academic issues

Examinations time was not associated with increased rates of suicide (Collins & Paykel, 2000; Hawton et al, 1995a). Although Hawton et al (1995b) did not identify an increase in DSH during exam time nor during the final year, did they find that academic issues were the second most common source of problems for students, after interpersonal concerns. Stewart-Brown et al (2000) found that study problems were a major source of emotional distress.

Dahlin, Joneberg and Runeson (2005) indicated that there was a significant difference in pressures experienced among first year, third year and sixth year medical students in Karolinska Institute Medical University, Stockholm. The analysis of the study found that first year students reported a highest degree of pressure compared to third year and sixth year students. Besides that, the study also found that women experienced higher levels of stress than men. The study also compared the differences of pressures experienced between medical students and the general student population in the university. The results revealed that medical students had higher depression levels compared to the general population.

Tyrell (1992) found that academic concerns were the most frequently reported source of stress among Irish students. Two earlier studies did not identify lower levels of intelligence as a significant contributor to mental health problems in Oxford students (Davidson & Hutt, 1964; Kelvin et al, 1965). Interestingly, in a British study from the 1960s, Kelvin et al (1965) noted that those who obtained first class honours were at increased risk of mental health problems, as were those who dropped out of university. Hamilton and Schweitzer (2000) found that perfectionism is associated with increased
suicidal ideation among students. Consequently, institutions should not assume that high academic achievers are free from mental health problems.

2-1-7- Principles of good practice in student mental health

Good practice in student mental health should be based on the following principles:

• The importance of early identification and intervention for young people at risk of developing severe mental illness (given this commonly emerges in late adolescence or early adulthood) is recognized.

• There is recognition of pressures specific to students in higher education, i.e. academic, financial difficulties, parental expectations, unstructured time, frequent transitions (geographical and emotional).

• Treatment plans are tailored to the personal and contextual needs and the academic requirements of the student.

• Practice is based on evidence, and there is ongoing research and evaluation of service provision.

• Consideration is given to the fact that late-adolescent students are likely to be struggling with issues of dependence and independence and may be ambivalent about seeking help: therefore, rapid and easy access to non-stigmatizing and flexible psychiatric, medical and counselling services is provided.

• There is a need for training to raise general levels of mental health awareness among staff and students, so they can recognize signs of psychological disturbance and know when and where to refer for specialist help.

2-1-8- Mental health symptoms and measures of psychopathology

Different facets of subjective well-being are considered as the symptoms of mental health based on Keyes’ model. Subjective well-being reflects individuals’
perceptions and evaluations of their own lives in terms of their affective states, psychological functioning, and social functioning (Keyes & Lopez 2002). Below is a brief introduction to three facets of subjective well-being.

2-1-8-1- Emotional Well-being

Emotional well-being is generally operationalized as both a predominance of positive over negative affect (happiness) and a global satisfaction with life (Diener 1984); while the former is affective, the latter is cognitive in essence. In other words, if a person reports that her life is satisfying, that she is experiencing frequent pleasant affect, that she is infrequently experiencing unpleasant affect, she is said to have high emotional well-being (Diener & Lucas 1999).

Although each of the components of emotional well-being (life satisfaction, presence of positive affect, and absence of negative affect) reflects people’s evaluation of what is happening in their lives, they show some degree of independence, i.e., the empirical evidence suggests that the three components of emotional well-being are empirically distinct constructs (Diener & Scollon, 2003; Diener et al, 2004).

This aspect of subjective well-being reflects the hedonic tradition of well-being, which has been advocated from the ancient times. Despite the criticisms of some of the mental health theoreticians who think that emotional well-being lacks theoretical and philosophical foundation (e.g. Ryff & Singer 1996, 1998), Diener et al. (1998) believe that if we examine the history of philosophy and religion, we will find a strong emphasis on the importance of emotional well-being. Some of the most renowned scholars who have advocated such a tradition in defining the good life are Epicure, Hobbs, Stuart Mill, Aquinas, Jeremy Bentham (Diener et al. 1998; Ng et al. 2003; Waterman 1993). Despite the closeness of this tradition of well-being to the mind of ordinary people and the appealing nature of it, it should not be forgotten that emotional
well-being is a necessary ingredient of a healthy life but not a sufficient one (Diener et al. 1998; Diener & Scollon 2003).

2-1-8-2- Psychological Well-being

As an answer to the basic question of what constitutes positive psychological functioning, and with the purpose of introducing an alternative perspective to the hedonic tradition, Ryff (1989) suggests a model of psychological well-being. Her model stems from extensive literature aimed at defining positive psychological functioning (from the mental health, clinical and lifespan developmental theories). She tries to integrate these scattered formulations into a multidimensional model of positive psychological functioning, which encompasses the points of convergence in the previous formulations. Providing an operationalization of six theory-guided dimensions of psychological well-being and developing the measures to assess them, she challenges the problems of “loose conceptualization” and “lack of valid measures” which characterize the previous formulations (Ryff 1989).

Included dimensions are positive evaluations of one’s self and one’s past life (self acceptance), a sense of continued growth and development as a person (personal growth), the belief that one’s life is purposeful and meaningful (purpose in life), the possession of quality relations with others (positive relations with others), the capacity to manage effectively one’s life and surrounding world (environmental mastery), and the sense of self-determination (autonomy) (Ryff & Keyes 1995).

Dimensions of psychological well-being indicate the challenges that individuals encounter as they strive to function fully and realize their unique talents (Keyes 2006).

2-1-8-3- Social Well-being

Keyes (1998) believes that despite the distinctions between public and private life, the leading conceptions of adult functioning (emotional and psychological) portray
well-being as a primarily private phenomenon. Nevertheless, individuals remain embedded in social structures and communities, and face countless social tasks and challenges. To understand optimal functioning and mental health, social scientists should also investigate adults’ social well-being.

To fill the above-mentioned gap, Keyes operationalizes a multidimensional model of social well-being at the level of the individual, consisting of five dimensions that indicate whether and to what degree individuals are functioning well in their social world.

The included dimensions are Social integration which is the evaluation of the quality of one’s relationship to society and community. Integration is therefore the extent to which people feel they have something in common with others who constitute their social reality (e.g., their neighborhood), as well as the degree to which they feel that they belong to their communities and society. Social contribution is the evaluation of one’s value to society. It includes the belief that one is a vital member of society, with something of value to give to the world. Social coherence is the perception of the quality, organization, and operation of the social world and it includes a concern for knowing about the world. Social coherence is analogous to meaningfulness in life, and involves appraisals that society is discernable, sensible, and predictable. Social actualization is the evaluation of the potential and the trajectory of society. This is the belief in the evolution of society and the sense that society has potential that is being realized through its institutions and citizens. Social acceptance is the construal of society through the character and qualities of other people as a generalized category. Individuals who illustrate social acceptance trust others, think that others are capable of kindness, and believe that people can be industrious. Socially accepting people hold
favorable views of human nature and feel comfortable with others (Keyes 1998, 2005a; Keyes & Shapiro 2004).

These new measures are distinct from extant measures of social well-being that reflects the interpersonal (e.g., aggression; social support) and the societal levels (e.g., poverty; social capital) of analysis (Keyes & Shapiro 2004).

Psychological and social aspects of subjective well-being reflect eudaimonic tradition to the good life (Keyes et al. 2002, Ng et al. 2003; Ryan & Deci 2001; Ryff & Singer 1998; Waterman 1993). Many thinkers in the East and West have voiced their disagreement with hedonic conception of the good life. Instead, they believe living well involves a striving for perfection that represents the realization of one’s true potential (Ng et al. 2003). Eudaimonism animates human concerns with developing nascent abilities and capacities toward becoming a more fully functioning person and citizen (Keyes 2006). Aristotle is one of the most well-known advocates of this tradition.

In the UK, the transition into higher education is associated with an increase in measures of emotional distress (Fisher & Hood, 1987; Rosal et al, 1997; Surtees & Miller, 1990). Homesickness was identified in 31% of first-year residential students in Dundee (Fisher & Hood, 1988). Doll (2000) found that 30% of UK students experienced ‘emotional or psychological problems’ in the past term. Using well-validated instruments, Ashton & Kamali (1995) showed that second year students suffer high levels of anxiety, depression and alcohol use. Leicester (2001) found that 20% undergraduates reported concerns about anxiety symptoms and 35% about feelings of sadness and depression. Seven percent reported that psychological symptoms had adversely affected their studies. Stewart-Brown et al (2000) found that UK students had poorer scores across all eight dimensions of the Short Form 36, with emotional problems being particularly evident, compared with age-matched population
only slightly correlated with pleasant affect (Diener & Lucas 1999). Neuroticism and Extraversion influence life satisfaction indirectly through their influence on happiness (=hedonic balance) (Schimmack et al. 2002a, 2002b). Openness to experience leads the person to experience both more positive emotional states and more negative ones.

The Big Five Factor is the five extensive factors, which compose the structure of extensive human traits (Goldberg, 1993). Costa and McCrae (1992) have composed a research team for which the questionnaire scale has been introduced into this research domain. Through the adjective based self-evaluated scale and third party measurement, the stability of the five factors in the course of human development is measured. The NEO personality inventory (NEO-PI-R) developed by Costa and McCrae (1992) has reflected the intension of these five major factors. These five major factors include: Extraversion, Neuroticism, Openness, Agreeableness and Conscientiousness.

A trait is a temporally stable, cross-situational individual difference. Currently the most popular approach among psychologists for studying personality traits is the five-factor model or Big Five dimensions of personality. The five factors were derived from factor analyses of a large number of self- and peer reports on personality-relevant adjectives and questionnaire items.

The following are some of the important characteristics of the five factors. First, the factors are dimensions, not types, so people vary continuously on them, with most people falling in between the extremes. Second, the factors are stable over a 45-year period beginning in young adulthood (Soldz & Vaillant, 1999). Third, the factors and their specific facetts are heritable (i.e., genetic), at least in part (Jang, McCrae, Angleitner, Riemann, & Livesley, 1998; Loehlin, McCrae, Costa, & John, 1998). Fourth, the factors probably had adaptive value in a prehistoric environment (Buss, 1996). Fifth, the factors are considered universal, having been recovered in languages
as diverse as German and Chinese (McCrae & Costa, 1997). Sixth, knowing one's placement on the factors is useful for insight and improvement through therapy (Costa & McCrae, 1992).

Saucier and Goldberg (1998) presented evidence that nearly all clusters of personality-relevant adjectives can be subsumed under the Big Five. Paunonen and Jackson (2000), however, argued that this study used too loose a criterion for inclusion in the Big Five--namely that the Big Five account for at least 9% of the variance in the adjective cluster. Reanalyzing the same data using a stricter criterion of 20% explained variance resulted in nine clusters of traits that fell outside of the Big Five: Religiosity, Honesty, Deceptiveness, Conservativeness, Conceit, Thrift, Humorousness, Sensuality, and Masculinity-Femininity. These analyses do not imply that the clusters are unrelated; for example, Honesty and Deceptiveness may be highly (negatively) related as opposite sides of the same dimension. Nevertheless, these results suggest that several important personality traits lie beyond the Big Five.

In addition, theoretical reasons suggest the importance of other personality traits that are poorly captured by terms in the natural language, such as impulsive sensation-seeking (Paunonen & Jackson, 2000). Moreover, traits may be only a limited means of studying a "psychology of the stranger" that is, they may include only the personality-relevant information that would be apparent about someone about whom one knew very little else leaving uncovered other important constructs such as the narrative life-story (McAdams, 1992).

Scheier and Carver (1985) proposed the optimism/pessimism dimension, which they described as a tendency to believe that one will generally experience either good or bad outcomes in life. Working on the effect of expectations on actions and affects,
they discovered that global expectancies were relatively stable across time and context and formed the basis of an important characteristic of personality.

A personality trait is a consistent and long-lasting tendency in behaviour. There are different personality traits that people normally exhibit. The Big five personality factors as proposed by Goldberg (1990) are used widely to classify personality traits and are used as the basis for the assessment model in section 4. The Big five personality factors consist of Neuroticism, Extraversion, Agreeableness, Conscientiousness and Openness to experience. SE is a technical and complex activity that requires a high level of cognitive ability. The success and otherwise of software development depends on cognitive factors such as mindset, abstract thinking, analytic, visualization capability, and so on. Consequently, the big five personality factors cannot be adequately used to assess personality trait in SE. In this work, we have introduced an additional factor called Cognitive Ability, to the Big five factors.

2-2-1- Neuroticism

People with neuroticism are primarily influenced by negative experience of their past, such as fear, grief, embarrassment, anger, sense of guilt, et al. These individuals generally find it difficult to control their impulses and emotions, and are less capable of dealing with pressure. According to Costa and McCrae (1992), they often demonstrate character traits such as anxiety, hostility, depression, self-consciousness, impulsiveness and vulnerability.

Highly neurotic individuals are very much incapable of facing frustrations. When under pressure, they choose to remain in situations that generate negative effects (Emmons et al., 1985). For the reason that they show preferential attention to negative stimuli (Rusting & Larsen, 1998),
This is the tendency to experience unpleasant emotions relatively easily. Its components are anxiety, hostility, depression, self-consciousness, and impulsiveness. The opposite is emotional stability or self-control. People who are high in this factor have the following features:

- They are faced with effect of decreasing cognitive and performance capacities (Mathews et al., 1991)
- They have increasing probability of errors
- They are more distracted from the task at hand (Hansen, 1989)
- They have tendency to experience greater stress symptoms
- They tend to be pre-occupied with their anxieties and worries
- There is also evidence that they do not seek active control of the environment (Judge, 1993).

2-2-2- Extraversion

This trait implies the propensity of being highly sociable. However, this is only one facet among many factors to be measured. Individuals who are extrovert are more interested in being amongst people and taking the initiative to approach them. They are also more self-confident, self-initiated and talkative, as well as more inclined to exciting activities and be more active (Costa & McCrae, 1992).

Extroverts hold a more optimistic perspective towards matters of life, are more involved in social activities, and do not hold back when offering their abilities and passion as they immerse themselves in the past-paced, busy and fulfilling lifestyle in their respective expertise pursuing fun for themselves, while they do not let themselves ruled by negative emotions. For the very reason of pursuing fun and happiness in life, these people always show smile and vitality on their faces.
According to Costa McCrae's viewpoints, extroverts are more inclined to be amongst people, and are more confident, self-initiated, talkative and passionate. It is our belief that extrovert students can enhance their mental health and satisfaction with life by maintaining such positive emotions. This is the tendency to seek simulation and enjoy the company of other people. Its components include warmth, sociable, assertive, energetic, adventurous, and enthusiastic. People who are high in this factor have the following features:

- They are sensitive to monotony (Thiffault & Bergeron, 2003)
- They are high sensation seekers and have a greater tendency to take risks (Jonah, 1997)
- They demonstrate significantly poorer performance on vigilance tasks (Koelega, 1992)

2-2-3- Conscientiousness

Individuals who are conscientious are usually very determinant, disciplined, with strong will and trustworthy. They are very much achievement oriented, self-disciplined and deliberate in their thinking (Costa & McCrae, 1992).

Highly conscientious people demands a lot from themselves, they have a strong sense of responsibility and planning capability, and are highly success-oriented. Because the efficiency and hard work associated with this trait that foster task accomplishment, these individuals often plan ahead, are more organized and self-controlled and since they are strong-willed and determined to pursue their own goals (Schneider & Delancy, 1972). This is the tendency to show self-discipline, to be dutiful, and to strive for achievement and competence. Its components also include self-discipline, consultative, competence, order, dutifulness and thorough. People who are high in this factor have the following features:

- They are always thorough in decision-making style (Clarke & Robertson, 2005)
- They follow rules and regulations (Arthur & Doverspike, 2001)
They are interested in goal targeting and systematic approach

They are always interested in providing adequate cost-benefit analysis and contingency planning (West et al., 1993)

They are less vulnerable to cognitive failures.

2-2-4- Agreeableness

This character implicates the ease to get along, communicate and work with others. Individuals possessing such a trait are trustworthy, straightforward, altruistic, compliant, modest and tender-minded (Costa & McCrac, 1992). It is also easier for them to establish friendship with others (Digman & Inouye, 1986) because they believe that human beings are innately kind, and they like helping others.

These people are basically altruistic, will actively show compassion one others and wholeheartedly help them, believing that others would do likewise. They constantly put themselves in other people's shoes and do not ask for anything in return, making people feel warm.

Based on the above, agreeableness is the trait meaning the ease to get along, communicate and work with others. Although this trait is basically altruistic, the compassion to help others and the belief that others would not exist in the virtual competition environment. This is the tendency to be compassionate towards others and not antagonistic. Its components include pleasant, tolerant, tactful, helpful, trust, respectful, sympathetic and modest. People who are high in this factor have the following features:-

- They are generally easy to get along with (Hough, 1992)
- They are salient in situations that involve interaction or cooperation with others (Barrick & Mount, 1991)
- They are less aggressive
Schmutte and Ryff’s findings (1997) revealed consistent linkages between the domains of personality and psychological well-being. Environmental mastery demonstrated strong negative links with neuroticism, as did purpose in life and autonomy, to a lesser degree. Self-acceptance, environmental mastery and purpose in life were linked with extraversion and conscientiousness. Personal growth demonstrated linkages with openness. A positive relation with others was linked with agreeableness and to a lesser degree with extraversion. Finally autonomy was linked with extraversion, conscientiousness and openness but most strongly with neuroticism. Schmutte and Ryff concluded that the dimensions of psychological well-being, are distinct from, yet meaningfully influenced, by personality.

2-3- Life Satisfaction

It is a fact that ours is a machine made civilization; life is dominated by machine. We get up by the alarm clock, clothe ourselves in machine-made stuff and eat a patent breakfast. We then rush to the time of gas or compressed steam, to factory, shop, office, or field where we manipulate one’s mind of tool, implement or appliance or other all day long. That is our life. The hectic schedule of life has made lost the beauty of nature. Are we satisfied with this life? -Obviously not (Khatoon, 2006).

The story of man’s quest for happiness and satisfaction begins at the very beginning of time. Milton in his “Paradise Lost” depicts how Adam, though residing amidst the boundless joy and pleasure of Eden, experiences a vague restlessness and dissatisfaction.

The strive for happiness, satisfaction has so inextricably woven into the very deep core structure of the human psyche, that its existence has from the beginning been accepted as an inevitable reality of human life. Satisfaction is both a physiological state of contentment of the organism as well as a state of psychological well being, not
essentially a consequent of the physiological situation at least among the humans. Satisfaction with life is one's own perceptions that all is well with him in relation to his environment and others' view of him, that he enjoys the bliss of well-being and of being at home in the world. What is central to satisfaction is need fulfillment and experience of whole some, pleasant and comforting state of affairs with one's being on attaining equilibrium by getting the needed. The deprivation of which motivates the organism to pursue a goal in that direction (Khatoon, 2006).

Life satisfaction is often considered a desirable goal, in and of itself, stemming from the Aristotelian ethical model, eudemonism, (from eudemonia, the Greek word for happiness) where correct actions lead to individual well-being, with happiness representing the supreme good (Myers, 1992). Moreover, life satisfaction is related to better physical (Veenhoven, 1991) and mental health (Beutell, 2006), longevity, and other outcomes that are considered positive in nature. Men and women are similar in their overall levels of life satisfaction (Diener, Suh, Lucas, & Smith, 1999) although women do report more positive and negative affect. Married people are more satisfied with their lives and those with life-long marriages appear to be the most satisfied (Evans & Kelly, 2004). Life satisfaction tends to be stable over time (e.g., Cummins, 1998) suggesting a dispositional (Judge & Hulin, 1993), and perhaps, even a genetic component (Judge et al. 1994). Fujita and Diener (2005) have examined the life satisfaction set-point (a relatively stable level that an individual will return to after facing varying life circumstances) reporting that there are longitudinal changes in satisfaction levels for about one-quarter of their respondents.

Campbell et al. (1976) argue that satisfaction is the better concept because "satisfaction is a judgmental or cognitive experience, whereas happiness suggests an experience or feeling of affect" (p. 8). Likewise, Lane (2000) argues that "happiness is
a mood, satisfaction with life is a more cognitive judgment” (p. 275), although satisfaction, according to Campbell et al. (1976), can be precisely defined as “the perceived discrepancy between aspiration and achievement” (p.8).

Some limited aspects of the all pervasive phenomenon of satisfaction in psychological literature may be found in such concept of homeostasis. Cognitive dissonance and so forth, but none of these is adequate to explain psychological situation contained in life satisfaction. Cantrill’s (1965) is perhaps is the most acceptable conceptualization, close to what satisfaction consist in. For him, it is a typical human-like to be capable of experiencing satisfaction coated with lives of values. This enables him to explore experiment and extend the range of his behavior to expand and elevate his value satisfaction along with ensuring the recurrence of satisfaction state. Polyani’s (1959) observations on the subject seem to be quite relevant. Here as he speaks of “desire for tension” the craving for mental dissatisfaction and the essential restlessness are the by products of the inbuilt desire of human being to enrich the possibilities of satisfaction in life and giving vent to man’s innovative and creative potential. Studies on the role of personality factors and distinctive human characteristic in the satisfaction-dissatisfaction are not many. In one study, for e.g. (Blishen and Atkinson 1980), factors as age, language and income were found to be related to life satisfaction. Satisfaction increased with income as well as age decides certain socio culture factors contributing to it.

Satisfaction with current life circumstances is often assessed in research studies, Diener, Suh, Lucas, & Smith (1999) also include the following under life satisfaction: desire to change one’s life; satisfaction with past; satisfaction with future; and significant other’s views of one’s life. Related terms in the literature include happiness (sometimes used inter changeably with life satisfaction), quality of life, and (subjective
or psychological) well-being (a broader term than life satisfaction). The research on life satisfaction and cognate concepts is extensive and theoretical debates over the nature and stability of life satisfaction continue. Life satisfaction is frequently included as an outcome or consequence variable in work-family research (Allen, Herst, Bruck, & Sutton, 2000).

Satisfaction with life has emerged in recent years as dimension of fairly great psychological import in personality studies, referring to what may be termed as a feeling of subjective well-being (Diener, 1984). The concept has been delineated from various related concepts, the three components — positive-affect, negative-affect and life-satisfaction contributing to it. The first two refers to the affective emotional aspect of the construct and the latter to the cognitive, judgmental aspects. Shin and Johnson (1978) define life satisfaction as “a global assessment of person’s quality of life according to his chosen criteria”. Judgment of satisfaction has to do with a comparison of one’s state of affairs with what is perceived as an appropriate standard, no matter it is at variance with standards at large. One important dimension that seems to bear conceptual relevance to life satisfaction is alienation, which too is to be defined in terms of the “satisfaction — dissatisfaction”, perceived or felt in one’s own being; vis-à-vis the global standards of satisfaction. Persons lacking in self-confidence perceived themselves as socially incompetent, unsuccessful, dissatisfied, pessimistic, anxious and in general, as having negative feeling and self-evaluation.

2-3-1- Causes of Satisfaction

There are many factors that contribute to an individual’s happiness or satisfaction with life, and these factors rather than age, impact the person’s perceived quality of life in the later years. Research has demonstrated that locus of control, health;
housing, social-support and sources of reinforcement have impact on individual’s happiness and satisfaction.

The most obvious cause of satisfaction is the real satisfaction of needs by the objective conditions of life and in fact a number of factors are found to be predictive of happiness — income, health, interesting and high status work, marriage and other social relationships and satisfying leisure (Argyle, 1987). The condition of people winning football pools or lottering is quiet interesting. Some of them are a little happier than before, but their lives are often seriously disrupted as a result of giving up jobs, and moving house to more prosperous neighborhood, where they are not accepted. So their objectives conditions of life have not really improved much. Though it is widely believed that wealth is one of the main causes of happiness but in the case of winners, it has little effect on happiness (Kamman & Campbell, 1982).

Strack, et al. (1985) found that subjects reported satisfaction levels of 7.27 after thinking of three particularly unpleasant events in the past, but 6.85 after thinking of very happy events. A Cambridge study found that British manual workers in the top third of British incomes were more satisfied than n-manual workers with the same salaries — because the manual workers compared themselves with other manual workers, most of whom were paid less while the non-manual workers were paid less, than many other non-manual workers (Runciman, 1966). In fact this is one of the main areas where comparisons are important: industrial workers are very concerned about fair payment, and what other workers are being paid. Such comparisons are a major source of pay satisfaction (Berkowitz et al. 1987), and there are several cases of workers choosing to lose their jobs entirely rather than be paid less than another group.
The gap between aspirations and achievement predicts satisfaction quite well typically 0.50 in a series of studies (Michalos, 1986). The Michigan model states that the goal achievement gap is partly based on comparisons with past life, partly on comparisons with ‘average folks’.

It is normal for us to have hopes and aspirations, and to raise them upward if they are attained — like a high jumper raising the bar. However, over high aspirations can be a threat to happiness and therefore happiness therapy is sometimes suggested for persuading people to lower them.

People can get used to almost anything, and one theory of satisfaction is that they do, and only respond to recent changes in conditions. This was given some support from the reported finding that accident victims who become para and quadriplegic become nearly as happy as other people. However, as Veenhoven (1990) has pointed out these patients were in fact less satisfied than controls, and they were interviewed face-to-face, while controls were telephoned. It is found that higher satisfaction is reported in face-to-face interviews. Furthermore, other kinds of victims report quite low levels of satisfaction.

One group of people who believe have not adapted to their situation are those suffering from depression. There is one very striking example of adaptation, however, and that is to the weather. Although, people are happier and more satisfied on sunny days, there is no general effect of climate on satisfaction, presumably because people get used to their weather.

Do the different domains of satisfaction produce general satisfaction, or does a more basic personality trait of satisfaction lead to satisfaction with particular domains? There is evidence that both directions of causation work, especially for broad and important domains like work. It has been found that there is a top-down effect for
or negative mood might influence life satisfaction independently of the conditions that
gave rise to it. For e.g. Schwarz and Clore (1983) had subjects recall their pleasant or
unpleasant past events and the feelings associated with it. They found that subjects who
described negative past events were in a more depressed mood and reported lower life
satisfaction, than subjects who described positive events.

Reliable and valid measures of life satisfaction are available. The Satisfaction
with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985), for example, shows good
psychometric properties and has been used in a number of organizational work-family
studies reviewed below (e.g., Judge, Boudreau, & Bretz, 1994). Satisfaction in the
human context is not merely a concept of need fulfillment; it is more complex, evolving
a number of explicit and implicit parameters physical, social and psychological, while
the importance of drive reduction and need fulfillment can hardly be over emphasized
in satisfactions, which are ultimately connected with survival itself. Satisfaction, among
human being, is a multiplicative function of numerous factors, the upper most being the
felt psychological experience, which is unique with each human being, this
idiosyncratic experience.

Much of the work-family literature, however, has emphasized a conflict
perspective (e.g., Greenhaus & Beutell, 1985, although this is changing, e.g.,
Greenhaus & Powell, 2006) noting the potential for role incompatibility and strain
relating to negative outcomes. Life satisfaction is used to assess the impact of conflict
levels on overall feelings about one’s life. Importantly, life satisfaction exhibits the
strongest relationship with work-family conflict of all non-work variables studied
(Allen et al. 2000). Research has shown that, beyond direct relationships between
work-family conflict and life satisfaction, how people deal with such conflicts is also
important. Successful coping with work-family conflict is also associated with higher
levels of life satisfaction (e.g., Beutell & Greenhaus, 1982). According to this view, even if conflict is a likely consequence of engaging in work and family roles, how people deal with such conflict is a determinant of life satisfaction possibly because of self-efficacy perceptions generated by successful coping behavior.

2-3-4- Models

Theories of relations between global and life facet satisfaction have proposed either “top-down” or “bottom-up” influences — “Bottom-up” theories proposed that perceptions of structural aspects of the environment lead to satisfaction within various life domains. Social indicators research (Glatzer & Mohr, 1987) has proceeded along the lines of bottom-up theories, under the rationale that changes in overall life satisfaction can be affected by addressing social concerns within specific domains of life.

“Top-down” theories on the other hand (Diener, 1984; Liang, 1984; Liang & Bollen, 1983; Staw & Ross, 1985; Stones & Kozma, 1985), propose that global satisfaction determines satisfaction with specific life facets. Social interventions may effect changes in satisfaction with specific aspects of life.

A third “bi-directional” or “reciprocal” model proposes that global life satisfaction both determines and results from satisfaction with specific domains of life (Diener, 1984). Michalos (1980) for example suggested that satisfaction in several life domains may contribute to overall life satisfaction and that satisfaction with life in general influence individual’s satisfaction judgements in various life domains. Thus, the bi-directional model acknowledges the importance of both (a) stable dispositional influences on global and domain specific satisfaction judgements and (b) the impact that life facet satisfactions have on judgements of overall life satisfaction.
Research in this area has demonstrated positive association between overall life satisfaction & satisfactions in several life domains (e.g. Andrews & Withey, 1974; Headey et al., 1985; Iris & Barrett 1972; Kopelman et al. 1983; London, Crandall & Seals 1977; Mastekaasa, 1984; Mc Kennall & Andrews, 1980; Michalos 1980; Near et al. 1978, 1983; Rouseau, 1978) and among satisfaction in various life domains (e.g. Headey et al. 1985; Hulin 1969; Kopelman, et al. 1983; London et al., 1977). However the simple co-relational approach taken by most of these studies precludes conclusion about the direction of the caused relation, if any, between global life facet satisfactions.

The relationships between life satisfaction and health (physical and mental) have important implications for understanding and containing health care costs. Finally, organizations might examine ways to increase work-family synergy (in addition to interventions designed to reduce work-family conflict) because of the observed relationships with life satisfaction. (Recall that synergy and conflict seem to represent separate and distinct variables although they are somewhat related.) At this point, similar interventions to those noted above, like work-family benefits and greater employee control over role resources might be expected to enhance role performance at work and in the family.

Viren et al. (2007) examined the associations between life satisfaction, loneliness, general health and depression. Life satisfaction was negatively and significantly correlated with suicidal attitudes, loneliness and depression; and positively with health, which was negatively and significantly correlated with depression and loneliness. Self-concept was negatively correlated with loneliness and depression, depression was positively and significantly correlated with loneliness. Meditational analyses showed that the effects of loneliness and life dissatisfaction on depression were fully mediated by health.
Kenneth et al. (2004) investigated coping resources (Coping Resources Inventory for Stress), perceived stress (Perceived Stress Scale), and life satisfaction (Satisfaction with Life Scale) among American and Turkish university students. Results support the use of transactional stress constructs in studying life satisfaction with students in both countries. American and Turkish students did not differ significantly in regard to perceived stress, life satisfaction, or an overall measure of coping resources; however, they did differ significantly regarding specific coping resources. There were significant sex differences for both countries, generally favoring males, in regard to specific coping resources.

Fujita (2005) examined the life satisfaction set point. Using data from 17 years of a large and nationally representative panel study from Germany, the authors examined whether there is a set point for life satisfaction (LS)-stability across time, even though it can be perturbed for short periods by life events. The authors found that 24% of respondents changed significantly in LS from the first 5 years to the last 5 years and that stability declined as the period between measurements increased. Average LS in the first 5 years correlated .51 with the 5-year average of LS during the last 5 years. Height, weight, body mass index, systolic and diastolic blood pressure, and personality traits were all more stable than LS, whereas income was about as stable as LS. Almost 9% of the sample changed an average of 3 or more points on a 10-point scale from the first 5 to last 5 years of the study.

2-4- Achievement expectancy

Students with high expectancy for achievement i.e. success tend to be internally focused, demonstrating better academic performance and ability to delay gratification than those with low expectancy for success. Goal and achievement-oriented, they perceive themselves as being in command of their academic and social destiny,
Scheier and Carver (1985) define optimism as a generalized expectancy that good things will happen. They argue that optimists maintain positive expectations that are not limited to a specific domain or class of settings. (This definition is similar to earlier views of hope that described it as a unidimensional construct involving an overall perception that goals will be met) Scheier and Carver hypothesize that optimism is a major determinant of the manner in which people pursue their goals and that optimists' expectancy that good things will happen leads them to approach goals through "contingent striving" rather than "giving up and turning away" (Klinger, 1975; Kukla, 1972; Roth & Cohen, 1986). Furthermore, optimism is construed as a stable personality trait that is not limited to a specific setting. Hope is similar to optimism in that it is conceptualized as a stable cognitive set reflecting general rather than specific outcome expectancies. Hope and optimism differ, however, in the hypothesized relationship between outcome and efficacy expectancies and the role that this relationship plays in the prediction of goal-directed behavior.

Scheier and Carver (1985) suggest that outcome expectancies per se are the best predictors of behavior. Although Scheier and Carver allow for the possibility that efficacy expectancies may influence the analysis of outcome expectancies, they would argue that outcome expectancies are the last and most powerful analyses determining goal-directed behavior. Hope in the present model, however, involves reciprocal action between an efficacy expectancy reflecting the self-belief that one can achieve goals (agency) and an outcome expectancy reflecting the perception of one or more available strategies for achieving those goals (pathways).

Success expectancy has also been found to affect academic achievement even when perceived ability, prior preparation, and previous grades are controlled (Vollmer, 1986). Haynes and Johnson (1983) found this effect for college students enrolled in
remedial education. Students whose success expectancy was experimentally raised actually performed better in their regular courses than did students who were assigned to other experimental conditions. Finally, success expectancy structures the explanations (attributions) we make for our successes or failures, which in turn influence our emotional responses and future actions (Weiner, 1985). Thus, feelings about courses, majors, and the entire college experience could be shaped by whether outcomes correspond to expectancy. For example, Gigliotti and Buchtel (1988) found that student evaluations of college courses and instructors are slightly but significantly biased by this process. They also found that students' feelings of satisfaction with a course and with themselves are influenced by the same expectancy confirmation process.

2-4-1- Dispositional Factors


Overall, the evidence indicates that females tend to display lower self-confidence in achievement settings such as college classes (Hesse-Biber, 1985; Lenney, 1977; Lenney, Gold, & Browning, 1983), which in turn could lead to lower success expectancy.

Many researchers have found that in achievement context, females, with their lower success expectancies, are more likely than males to attribute success externally (luck, task ease) and attribute failure internally (Bar-tal & Frieze, 1977; Chapman &
Perney, 1974; Kimball & Gray, 1982; Lenney, 1977; McMahan, 1982; Nicholls, 1975; Simon & Feather, 1973). In a similar vein, there is evidence that how a situation is defined and how familiar the individual is with the activity affect success expectancy. A positive definition and greater familiarity increase success expectancy (Karabenick, Sweeney, & Penrose, 1983; Kimball & Gray, 1982; Simon & Feather, 1973).

A second line of research shows that male-linked tasks, like traditional male fields of study, promote lower expectancies in females (Deaux & Farris, 1977; Hartman-Hanusa, 1982; Lenney, 1977; McHugh, Frieze, & McMahan, 1982), and that female-linked achievement tasks promote higher expectancies in females (McHugh et al. 1982). Research, however, has essentially ignored the latter case. A major problem is that achievement itself has historically been a normatively male domain. Thus, comparing male and female success expectancy in a sex-neutral achievement task should still result in males being higher.

Some researchers combine elements of familiarity with normative appropriateness. For example, competitive activity (traditionally a male domain) reduces achievement expectancy for females but not for males. This holds true whether the competition is against males or females. However, when working alone or in cooperative activity (traditionally a female domain), success expectancy differences disappear, and indeed there is some evidence that females are higher than males (Feather & Simon, 1971; House, 1974; Teglasi, 1977). Assorted similar findings suggest that female success expectancies are negatively affected when performance standards are presented; when they must make a public statement on their expectancies (Lenney, 1977); and when they must compare themselves with people who are defined as more competent (Lenney et al., 1983).
Further research suggests that academic achievement expectancy is not necessarily an enduring personality dimension and that it can be raised by promoting positive mental health as well as by increasing experience and familiarity. Obviously, these are not the only factors impacting upon success expectancy but they are ones that to some extent could be affected by institutional programs and policies. For example, recruiting women and minority faculty and administrators for strategic positions can profoundly affect students' definitions of legitimate and possible careers. Semester-long freshman orientation courses seem to help student retention and achievement by generating more insight and confidence into ways of successfully managing the college experience (Stupka, 1986).

A study was conducted on 114 males and females college students (mean age 22.02 yrs.) to examine the relationship of cognitive style and optimism (Sarmany, 1997). Results showed a positive influence of optimism on problem solving and solving everyday situation more heuristically. Pessimists needed significantly longer time to fall asleep then optimists did. There were no significant longer time to fall asleep then optimists did. There was no significant gender difference in optimism pessimism scores.

Stoecker (1999) examined the relationship between 44 college student's optimism and their expectations of how they would perform in a hypothetical university course. There was found no relationship between optimism scores and expected grades.