WHO defined chronic diseases as diseases of long duration and generally slow progression. 60 percent of all deaths in the world are due to chronic diseases (WHO) such as heart disease, stroke, cancer, chronic respiratory diseases and diabetes and 80 percent of chronic diseases deaths occur in low and middle income countries. The rapidly increasing burden of chronic diseases is a key determinant of global public health. In 2001, chronic diseases contributed to approximately 60% of the 56.5 million total reported deaths in the world and approximately 46% of the global burden of disease. The proportion of the burden of non-communicable diseases is expected to increase to 57% by 2020 (WHO 2002).

In chronic diseases health status (health related quality of life) is a major concern. Diabetes mellitus is a chronic disease which has a great impact on health status (Health related quality of life) of the patients; it is an important cause of death, illness and disability across the world. Diabetes greatly increases the risk of developing blindness, lower limbs amputations, end-stage renal disease, coronary artery disease, cerebrovascular disease or peripheral vascular disease thus in other words diabetes mellitus affects the health status (health related quality of life) of diabetic patients. Diabetes Mellitus one of the most prevalent chronic diseases is a condition in which a person has a high blood sugar (glucose) level as a result of the body either not producing enough insulin or because body cells do not properly respond to insulin that is produced. In other words diabetes is a condition where the body is unable to regulate blood glucose levels, resulting in too much glucose in the blood, the body cells do not absorb the glucose, the glucose accumulate in the blood( hyperglycemia), leading to various potential medical complications.

According to King (1999) diabetes is a chronic disease arising from inherited and/ or acquired deficiency in the production of insulin by the pancreas. Glucose comes
from foods that contains carbohydrates (starches & sugars); for example, breads, cereals, milk, fruits and some vegetables.

**Classification of Diabetes**

According to American Diabetes Association (2009b), diabetes can be divided into four categories: type 1 diabetes, type 2 diabetes, gestational diabetes, and other specific types of diabetes.

**Type 1 Diabetes:** It results from the body’s failure to produce insulin, when the body’s immune system eventually destroys the cell of the pancreas that produces insulin (auto immune response). The onset of type 1 diabetes may be quite sudden and often the person has rapid and unplanned weight loss over several weeks.

**Type 2 Diabetes:** It results from insulin resistance, a condition in which cells fail to use insulin properly, sometimes accompanied by an absolute insulin deficiency. The majority of people with diabetes have type 2 diabetes. People with this type of diabetes are more likely to carry excess weight around the waist and to have high blood pressure. They are more likely to have raised cholesterol levels and heart disease. This is called the “metabolic syndrome”

**Gestational Diabetes:** It occurs in women who are pregnant and who have never had diabetes before they have a high glucose levels during pregnancy, it may precede development of type 2 diabetes mellitus. This type of diabetes resembles type 2 diabetes in several respects, this form of diabetes is fully treatable but 20%-50% of women affected with gestational diabetes develop type 2 diabetes later in life.

Other specific types of diabetes includes genetic defects of beta cell function, genetic defects in insulin action, diseases of the exocrine pancreas, endocrinopathies, drug or chemical induced diabetes, infections, uncommon forms of immune- mediated
diabetes, and other genetic syndromes associated with diabetes (American Diabetes Association, 2009c). The classical symptoms of diabetes mellitus are polyuria (frequent urination), polydipsia (increased thirst) and polyphagia (increased hunger), symptoms develop quite rapidly in type 1 diabetes mainly in children but in type 2 diabetes symptoms usually develop more slowly or may be slightly or completely absent. All of these symptoms except weight loss (which is more significant in type 1 diabetes) can also manifest in type 2 diabetes in patients whose diabetes is not managed properly, but unexplained weight loss is usually seen at the onset of disease.

Chronic or prolonged high blood glucose causes glucose absorption, which leads to the changes in the shape of the lenses of the eyes, resulting in vision changes; sensible control usually returns the lens to its original shape. Blurred vision is a common symptom of diabetes which often leads to its diagnosis. The clinical picture of type 2 diabetes differs from the clinical picture of type 1 in several important aspects. Many type 2 diabetics do not complain of obvious diabetic symptoms, so the disease is detected either opportunistically or during hospital visits or when the patients report intercurrent infections like genital candidiasis, or urinary tract or skin problems.

The presence of diabetic complications can greatly influence the duration of the admission and the patient’s ability to perform self-care activities (Dunning, 2003). Complications of Diabetes can be classified as acute and long-term complications. Temporary changes in blood sugar levels may cause acute complications. Hypoglycemia, hyperglycemia, hypertrophy or fat atrophy, infection and insulin allergy constitute the acute complications of diabetes mellitus (Dunning 2003). Guthrie and Guthrie (2002) pointed that hypoglycemia may be caused by too high dosage of an oral hypoglycemic agent, too much insulin, or insufficient food intake, the symptoms includes nervousness, shakiness, weakness, headache, perspiration, double vision and
hunger. On the other hand hyperglycemia results from too much glucose and not enough insulin (Guthrie & Guthrie, 2002), the symptoms of hyperglycemia in the earlier stage are polyuria, polydipsia, and polyphagia (Guthrie & Guthrie, 2002). Cardiovascular system, the kidneys, the retina and the peripheral nervous system are the areas which get affected by the diabetes and causes long term complications in the adult diabetic patients. The major problem in type 2 diabetes is severe artherosclerosis which leads to myocardial infarction, angina, stroke and heart failure. Patients with type 2 diabetes often get affected by Retinopathy, Nephropathy and Neuropathy.

There are many atherosclerotic factors which predispose a type 2 diabetic patients to arterial diseases, the factors includes obesity, hyperlipidaemia, hypertension and smoking , Reaven (1988) grouped these factors into ‘Syndrome X’. Retinopathy and cataract each effects 15 percent of patients, nephropathy is another micro vascular complication of diabetes but its prevalence is lower in type 2 diabetics than in type 1 because type 2 patients being older as compared to type 1 patients have a shorter exposure to hyperglycemia, so less chances to progress to end-stage nephropathy which leads to renal failure. It has been reported by Mc Culloch et al. (1980) that about one-third of male patients when questioned directly have some degree of erectile dysfunction.

Diabetes not only affects the body but it affects the mind also. A number of psychological complications of diabetes have been observed like cognitive decline, depression and anxiety among diabetic people. Perlmutter et al. (1984) and Biessels et al. (2001) found that people with type 2 diabetes have impaired performance on complex cognitive tasks. It has been shown by researchers like Jagusch et al. (1992) and Gregg et al. (2000) that longer illness duration and complicated diabetes are related to increase in cognitive decline in diabetic patients. Diabetes has been widely reported
to be associated with depression and anxiety. Kessing et al. (2003) reported that depression is not particularly prevalent in diabetes than the rates reported in other chronic illnesses but it is more prevalent among diabetics than the general population.

Nichols and Brown (2003) reported that women with type 2 diabetes are twice as likely as men to be depressed. De Groot et al. (2001) founded that complications of diabetes such as neuropathy, retinopathy, sexual dysfunctions and macro vascular complications are also related to depression. Lustman et.al (1998) showed that Cognitive Behavioral Therapy was found to be useful in diminishing depression but CBT is not as effective when complications of diabetes are present and if there is lower frequency of blood glucose testing. Piette, Richardson & Valenstein (2004) proposed that depression affects diabetes self management in three distinctive ways firstly by affecting older patients’ overall quality of life (Kohen, Burgess, Catalan & Lant 1998), second by reducing physical activity levels and third by impairing patient’s ability to communicate effectively with their health care teams.

Delahanty (2007) found that the association of diabetes-related emotional distress with diabetes treatment in primary care patients with type 2 diabetes, through this study the researcher wanted to find out which aspects of diabetes care cause emotional distress for people with type 2 diabetes, they compared people treated with insulin, people treated with oral drugs, and people treated only with dietary changes. 815 people with type 2 diabetes were studied in the study; they were treated by primary care medical practices in the Boston area. Participants completed a survey and were given a standardized test called Problem Areas in Diabetes (PAID) to identify sources of emotional distress; the researchers found that the most emotional distress is with insulin therapy, oral drug therapy was the second greatest cause of emotional distress, followed by adopting a more healthful diet.
It has been found that Diabetic Peripheral neuropathy, or nerve damage in the toes, feet and sometimes hands, affects up to 50% of patients with diabetes, the most serious complications of diabetic nerve damage, are linked with high health care costs, loss of work time and a lowered quality of life. Some studies have suggested that diabetic nerve damage is also linked with symptoms of depression, one such study was done by Vileikyte (2005) used a well-established test to identify and measure symptoms of depression in the 494 patients who had diabetic nerve damage, the researches also used tests and instruments to measure symptoms of diabetic nerve damage, how active the patients were, and the patients’ perception of themselves and their illness and symptoms. The researchers found that symptoms of diabetic nerve damage were linked to symptoms of depression.

Engum (2005) wanted to find out if there was a specific connection between diabetes, and depression that was different from the connection between depression and other factors. Researchers invited 92,100 people living in Nord-Tromdelag County, Norway to take part in the Nord-Tromdelag Health study. The study was made up of the 65,648 members of the community between 20 and 89 years of age who responded to the invitations, of the individual studied, 223 had type 1, 958 had type 2, and 359 had other subtypes of diabetes or were unclassified. Researchers looked at health and lifestyle aspects such as education levels, marriage, smoking, and exercise among people with and without diabetes, they also looked at the connection between high blood glucose and depression, patients rated their own levels of depression using a well-known depression scale. The finding of the study was long-lasting physical illnesses were linked with depression in people who had type 2 diabetes but not in people who had type 1 diabetes second.
Grigsby et al. (2002) reviewed anxiety prevalence rates in diabetics and found that around 14 percent of patients showed clinical features of generalized anxiety disorder (GAD), they further noticed that around 40 percent of diabetes patients had elevated symptoms of anxiety with the presence of elevated symptoms being higher in women as compared to men.

Diabetes is also related to greater chances of physical disability, like immobility and difficulty in doing daily tasks among older adults having diabetes. (Gregg et al., 2000, 2002). Gregg et al. (2002) and Schwartz et al. (2001) found that diabetic women become disabled at approximately twice the rate of non-diabetic women and they had an increased risk of falls and hip fractures. Findings from the National Health and Nutrition and Examination Surveys indicate that people who have diabetes have about two to three times the prevalence of inability to walk 400 meters, do house work, prepare meals and manage money. In National Health and Nutrition and Examination Survey 111, coronary heart disease, and high body mass index were the strongest factors among women which accounted for 52 percent of their excess risk for disability (Gregg et al. 2000). On the other hand among men coronary heart disease and stroke were the most important explanatory factors accounting for 25 percent and 21 percent of the excess disability risk respectively (Gregg et al., 2002; Schwartz et al., 2001).

According to Sridhar and Madhu (2002) diabetes mellitus is a lifestyle disease and requires a different yardstick for management. The main aim of any health care provider is to relieve suffering and improve quality of life of the patients. There is a rapid rise in the prevalence of lifestyle diseases including diabetes in countries like India. Sridhar and Madhu (2002) pointed out that the concept of health and disease has grown from being a biological model to include psychological and social factors as well. Sridhar (2002) highlighted the fact that biopsychosocial construct acknowledges
that disease results from a dynamic interaction among the biological, psychosocial, developmental, sociocultural and ecological factors. So management of diabetes does not only require taking account of the biological or physical factors only but psychological, social, cultural, ecological factors play an equally important role.

The rise in the prevalence of diabetes is due to population growth, aging, urbanization, increase in obesity and physical inactivity. In the west the older population is most affected, the prevalence of diabetes in Asian countries is high in young to middle-aged adults. (Chan et al., 2009; Ramachandran et al., 2010) which effects adversely a nation’s health and its financial condition this is true especially in the case of developing countries. Estimated global health care expenditure to treat and prevent diabetes and its complications are expected at 376 billion U.S Dollars (USD) in 2010 and by 2030 this number is expected to increase to USD 490 billion (International Diabetes Association, 2009).

Wild et al. (2004) conducted a study to estimate the prevalence of diabetes and the number of people of all ages with diabetes for year 2000 and 2030. The results showed the prevalence of diabetes for all age groups worldwide to be 2.8% in 2000 and 4.4% in 2030. The total number of people with diabetes is projected to rise from 171 million in 2000 to 366 million in 2030. The researchers further noticed that the prevalence of diabetes is higher in men than women but there are more women with diabetes than men. In developing countries the urban population is projected to double between 2000 and 2030. The researchers pointed that the most important demographic change to diabetes prevalence across the world appeared to be the increase in the proportion of people >65 years of age.
According to Wild et al. (2004) “The number of people with diabetes is increasing due to population growth, aging, and urbanization and increasing prevalence of obesity and physical inactivity.” Wild et al. (2004) elaborated that the number of people with diabetes in the world is expected to approximately double between 2000 and 2030, the regions greatly affected by diabetes will be Middle Eastern Crescent, Sub-Saharan Africa, and India. They further pointed out that the greatest absolute increase in the number of people suffering from diabetes will be in India. Wild et al. (2004) further noticed that the majority of people with diabetes in developing countries are greater than 64 years of age. By 2030, it is estimated that the number of people with diabetes > 64 years of age will be ≥ 82 million in developing countries and ≥ 48 million in developed countries.

<table>
<thead>
<tr>
<th>Country/Territory Rank</th>
<th>2010(millions)</th>
<th>Country/Territory 2030 (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 India</td>
<td>50.8</td>
<td>India 87.0</td>
</tr>
<tr>
<td>2 China</td>
<td>43.2</td>
<td>China 62.6</td>
</tr>
<tr>
<td>3 U.S</td>
<td>26.8</td>
<td>U.S 36.0</td>
</tr>
<tr>
<td>4 Russia Federation</td>
<td>9.6</td>
<td>Pakistan 13.8</td>
</tr>
<tr>
<td>5 Brazil</td>
<td>7.6</td>
<td>Brazil 12.7</td>
</tr>
<tr>
<td>6 Germany</td>
<td>7.5</td>
<td>Indonesia 12.0</td>
</tr>
<tr>
<td>7 Pakistan</td>
<td>7.1</td>
<td>Mexico 11.9.</td>
</tr>
<tr>
<td>8 Japan</td>
<td>7.1</td>
<td>Bangladesh 10.4</td>
</tr>
<tr>
<td>9 Indonesia</td>
<td>7.0</td>
<td>Russian Federation 10.3</td>
</tr>
<tr>
<td>10 Mexico</td>
<td>6.8</td>
<td>Egypt 8.6</td>
</tr>
</tbody>
</table>

In the Indian scenario Ramachandran et al. (2002) found that the prevalence of diabetes is lower in the low socio-economic group living in urban areas compared with the high-income group (12.6 vs. 24.6 % in subjects >40 years). Mohan et al. (2001) found a lower prevalence of diabetes in lower income group as compared to middle income group in southern India.

Studies conducted in India in the last decade have showed though the prevalence of type 2 diabetes is high, but it is increasing very fast in urban population. (Mohan et al., 2000, Misra et al., 2001). The first systematic nationwide study in India was conducted by the Indian Council of Medical Research Task Force on diabetes (Sridhar, Rao, & Ahuja 2002). They assessed 34,194 subjects and found prevalence of diabetes to be 2.1% in urban subjects and 1.5% in rural subjects. Verma et al. (1986) compared the prevalence of diabetes between urban subjects in Delhi and South Hall London. They found diabetes was more prevalent among Indians living in Delhi and South Hall compared to British whites. On the other hand Deo et al. (2006) and Chow et al. (2006) reported very high prevalence rates similar to those in urban Indian population. Verma et al. (1986) and Ahuja et al. (1991) reported lower prevalence of diabetes in north India compared with the southern parts of the country.

Zargar et. al (2000) reported lowest prevalence of diabetes was in Kashmir among the urban population and the highest in Chennai & Trivandrum (Ramachandran et al. 1992, 1997& Asha Bai et al. 1999). Ramachandran et al. (2001) reported the prevalence of diabetes to be 9.3% in Mumbai to 11.6% in Delhi, 11.7% in Calcutta, 12.4% in Bangalore, 13.5% in Chennai & 16.6% in Hyderabad. Indian Council of Medical Research (ICMR) study conducted in 1972 reported a prevalence of 2.3% (Ahuja 1979) in the urban population in India, which increased to 12.1% in 2000(Ramachandran et al., 2001). Mohan et al. (2008a) found that in urban areas there
was a prevalence of 7.3% of known type 2 diabetes mellitus and a prevalence of 3.2% in peri-urban/slum area. On the other hand Ahuja et al. (1991) showed that the prevalence of type 2 diabetes mellitus in rural areas in Delhi ranged from .4-1.5%. Data from a large scale survey on 4,535 individuals aged >/30 years from 20 villages of Godavari, showed that rural India may soon experience the urban epidemic of type 2 diabetes mellitus.(Chow et al. 2006).

Ramachandran et al. (2002) highlighted important risk factors for the high prevalence of diabetes, the factors highlighted by them includes High Familial aggregation, obesity especially central obesity, Insulin resistance and life style changes due to urbanization. According to Vishwanathan et al. (1996) nearly 75% of the type 2 diabetic patients have a family history of diabetes, this shows a strong familial aggregation in the Indian diabetic population. According to Ramachandran et al. (2002) Insulin resistance has been demonstrated to be a characteristic feature of Asian Indians. According to Ramachandran et al. (1998) comparison of Asian Indians, Europeans and other ethnic groups has shown that Asian Indians have high insulin response than others at fasting and in response to glucose. Ramachandran et al. (1992, 1997 & 2001) highlighted that waist-hip ratio (WHR) was found to be a greater risk factor for type 2 diabetes than general obesity. Technology and urbanization has brought a lot of change in the lifestyle of Indians living in metros and sub-urban cities, the eating pattern has also changed a lot, sedentary lifestyle has also contributed in the increase in prevalence of many diseases like diabetes, cardio-vascular diseases, cancer etc. Ramachandran et al. (2002) conducted a study in Chennai which showed that the total activity level was very low, especially in women. The activity score was inversely related to wealth score and according to Ramachandran et al. (2002) low activity score is related to poor effects on glucose intolerance.
Statement of the Problem

Type 2 diabetes poses serious threats to physical as well as mental health of the individual. According to UK Prospective Diabetes Study (1998) type 2 diabetes is a complex multifactorial disease. It is associated with progressive deterioration of Beta-cell function and insulin resistance. In India there is serious threat to health care with fast rising rate of diabetes, chronic diabetes causes several microvascular and macrovascular complications which in turn affect health related quality of life of the patients. Diabetes is considered as one of the most psychologically demanding of the chronic medical illnesses as it needs strict daily management of the treatment by the patients. (Cox, Gonder-Frederick, 1992). Diabetes is found to affect the health related quality of life of patients in several studies. (Coffey et al., 2002, Gough et al., 2009; Solli, Stavem & Kristiansen 2010). Psychological factors play an equally important role in the management of diabetes. According to Sridhar and Madhu (2002) resources for effective coping includes baseline health, positive beliefs, social skills and support and material resources to cope with the disease. Insulin treatment, age, duration of diabetes reduces health related quality of life of the patients or they have no effect on the health related quality of life of the patients. Generally male diabetic patients have better health related quality of life than female diabetic patients and better educational levels predict better quality of life. (Glasgow et al., 1997; Peyrot & Rubin 1997). Research has shown that negative attitudes, coping difficulties and psychological problems like anxiety, depression and eating disorders may lead to poor outcomes (Lustman et al., 2000). This study is an attempt to study the influence of health locus of control, resilience and perceived social support on health status of diabetics. It is important to explore how psychosocial factors play a role in influencing diabetes management and through this study we made an attempt to explore how psychosocial factors like health locus of
control, resilience and perceived social support influences health related quality of life of diabetic patients.

Significance of the Study

India is called the diabetes capital of the world. The burden of type 2 diabetes in India is projected to rise from 51 million people in 2010 to 87 million in 2030 (Snehalatha & Ramachandaran 2009). Diabetes is responsible for 109 thousand deaths in 2004 in India (Venkataraman et al. 2009), 1.157 million years of life lost in 2004 (Venkataraman et al. 2009) and 2.263 million disability adjusted life years (DALYs) in India during 2004 (ICMR 2006).

Life can be very stressful for individuals with diabetes as they face an increased risk of many serious complications, such as cerebrovascular disease, peripheral vascular disease, nephropathy and neuropathy (Guthrie & Guthrie, 2002) due to this the people with diabetes need to learn how to cope with the demands of the disease. So, apart from medical interventions, taking into consideration the psychosocial factors is also very important in the better management of diabetes. Diabetic people report greater psychological distress due to complex medical regimens and self care activities. Large amount of research has been done in the west to see the effect of psychosocial variables on health related quality of life of diabetics but in India not much research has been done with psychosocial variables like resilience in the diabetic population. Since India is facing the diabetes epidemic it is very essential to study the relationship among various psychosocial variables and how they affect health related quality of life of people with diabetes so, in addition to medical interventions, educating people with diabetes to effectively manage psychosocial factors can help to curb the negative effect of disease.
Purpose of the Study

The purpose of this research is to examine the affect of health locus of control, resilience and perceived social support on health status/health related quality of life of type 2 diabetic people. The demographic variables such as gender, age, duration of diabetes, education level, and presence of complications are some of the determining variables that make complex outcomes of researches and they might have an effect on health status/health related quality of life of type 2 diabetics.

1. To study the prediction equation of independent variables (health locus of control, resilience and perceived social support) on dependent variable (health status/health related quality of life)

2. To study the differences of dependent variable (health status/health related quality of life) and independent variables (health locus of control, resilience and perceived social support) in terms of demographic variables (gender, education level, presence of complications, and mode of treatment).

Objectives

1) To examine whether health locus of control, resilience, and perceived social support will differentially predict health status among diabetic patients.

2) To examine whether health locus of control, resilience, and perceived social support will differentially predict health status among controlled diabetic patients.

3) To examine whether health locus of control, resilience, and perceived social support will differentially predict health status among uncontrolled diabetic patients.

4) To examine whether diabetic males differ from diabetic females with respect to health locus of control, resilience, perceived social support and health status.
5) To examine whether educated diabetic patients differ from uneducated diabetic patients with respect to health locus of control, resilience, perceived social support and health status.

6) To examine whether insulin dependent diabetic patients differ from non-insulin dependent diabetic patients with respect to health locus of control, resilience, perceived social support and health status.

7) To examine whether diabetic patients with complications differ from diabetic patients without complications with respect to health locus of control, resilience, perceived social support and health status.

### Research Questions

1) Do health locus of control, resilience, and perceived social support differentially predict health status among diabetic patients?

2) Do health locus of control, resilience, and perceived social support differentially predict health status among controlled diabetic patients?

3) Do health locus of control, resilience, and perceived social support differentially predict health status among uncontrolled diabetic patients?

4) Do diabetic males differ from diabetic females with respect to health locus of control, resilience, perceived social support and health status?

5) Do educated diabetic patients differ from uneducated diabetic patients with respect to health locus of control, resilience, perceived social support and health status?

6) Do Insulin dependent diabetic patients differ from non-insulin dependent diabetic patients with respect to health locus of control, resilience, perceived social support and health status?
7) Do diabetic patients with complications differ from diabetic patients without complications with respect to health locus of control, resilience, perceived social support and health status?

Hypothesis

- **Ho1**: Health locus of control, resilience and perceived social support will differentially predict health status among diabetic patients.
- **Ho2**: Health locus of control, resilience and perceived social support will differentially predict health status among controlled diabetic patients.
- **Ho3**: Health locus of control, resilience and perceived social support will differentially predict health status among uncontrolled diabetic patients.
- **Ho4**: There would no significant difference between diabetic males and females with respect to health locus of control, resilience, perceived social support and health status.
- **Ho5**: There would be no significant difference between educated diabetic patients and uneducated diabetic patients with respect to health locus of control, resilience, perceived social support and health status.
- **Ho6**: There would be no significant difference between insulin dependent diabetic patients and non-insulin dependent diabetic patients with respect to health locus of control, resilience, perceived social support and health status.
- **Ho7**: There would be no significant difference between diabetic patients with complications and diabetic patients without complications with respect to health locus of control, resilience, perceived social support and health status.
Definition of key terms

Health Locus of Control

Health Locus of control is one such psychosocial factor which is found by various researches to affect diabetes management. The concept of locus of control developed from Rotter’s social learning theory (Rotter, 1966) and has been extended by Wallston et al. (1978) to cover the multidimensional aspect of health-related behaviour (Wallston and Wallston, de Vellis 1978). Health locus of control can be defined as the degree to which an individual feels that their health is within their own control or within the control of external factors such as chance, luck, and other people. Health locus of control is an important component in social learning theory models designed to predict behaviors and cognitive processes relevant to mental and physical health. The social learning theory stated that an individual learns on the basis of his or her history of reinforcement. The individual will develop general and specific expectancies.

Locus of control refers to the extent to which individuals believes that they can control events that effect them. Individuals with a higher internal locus of control believe that events result primarily from their own behaviour and action. Those with a high external locus of control believe that powerful others, fate, or chance primarily determine events. Those with a high internal locus of control have better control of their behaviour, tend to exhibit more political behaviours, and are more likely to influence other people than those with a high external locus of control; they are more likely to assume that their efforts will be successful. They are more active in seeking information and knowledge concerning their situation. Locus of control’s most famous application has probably been in the area of health psychology.
Resilience

Resilience is the positive capacity of people to cope with stress and catastrophe; it includes the capacity to bounce back to homeostasis after a disruption. Resilience is defined as a dynamic process that individuals exhibit positive behavioral adaptation when they encounter significant adversity, trauma (Luthar, Cicchetti & Becker 2000), tragedy, threats or even significant sources of stress. Resilience differs from traditional concepts of protection and risk in its focus on individual variations in response to comparable experiences. Resilience is described as a personality characteristic that moderates the negative effects of stress and promotes adaptation. (Waglind & Young, 1993). Resilience is a complex personality characteristic which plays an important role when people encounter an important change, adversity or distress. According to Connor (2006) resilience may include many different elements such as optimism, striving towards personal goals, and sense of commitment to self, hardiness, self-efficacy, and self-esteem.

Perceived Social Support

Barrera (1986) classified support as 1) Social Embeddedness 2) Received Support 3) Perceived Support. Social embeddedness refers to the frequency of interaction which an individual has with member of his/her social networks. Receive Support refers to the emotional and instrumental help that is provided by the members of the network to an individual. On the other hand perceived support is perception of an individual that support will be available from the members of the network when the individual will need it. Social support is the psychological and physical comfort or help provided by our family members, friends, colleagues and others. It helps us to recognize and feel that we are the part of a society which cares for us, helps us and give
value to us. Cobb (1976) proposed one of the first definitions of social support as ‘the individual belief that one is cared for and loved, esteemed and valued, and belongs to a network of communication and mutual obligations’. Social support can also be defined as ‘the perceived availability of people whom the individual trusts and who make one feel cared for and valued as a person.’ (MINDFUL, 2008).

**Health Status or Health Related Quality Of Life**

Health status can be defined as the range of manifestation of disease in a given patient which includes symptoms, functional limitation, and quality of life, in which quality of life is the discrepancy between actual and desired function (Rumsfeld, 2002). Health related quality of life is a broad multidimensional concept that usually includes self-reported measures of physical and mental health. It goes beyond direct measures of population health, life expectancy and causes of death, and focuses on the impact health status has on quality of life. Clinicians and public health officials have used health related quality of life to measure the effects of chronic illness, treatments, and short- and long-term disabilities. Health Related Quality of Life (HRQOL), a multidimensional construct referring to patients' perceptions of the impact of disease and treatment on their physical, psychological and social function and well being (Badia et al., 2005) is crucial in the evaluation of health care interventions (Feeny et al., 2004). Health-related quality of life (HRQOL) has evolved to include aspects of life that affect perceived physical, emotional, and social aspects of health and well-being, and it is a fundamental measure used to understand the health status of a population. (Centers for Disease Control and Prevention, 2000). Clinicians and policymakers are recognizing the importance of measuring health-related quality of life (HRQOL) to inform patient management and policy decisions. (Guyatt, Feeny & Patrick 1993). Health related quality of life can be distinguished from quality of life as we defined it
earlier in that it concerns itself primarily with those factors that fall under the purview of health care providers and health care systems (Wilson & Cleary 1995).