CHAPTER-I

Introduction
A disease is an abnormal condition affecting the body of an organism. It is often construed to be a medical condition associated with specific symptoms and signs (Dorland's Medical Dictionary). It may be caused by external factors, such as infections, or it may be caused by internal dysfunctions, such as autoimmune diseases. In humans, "disease" is often used more broadly to refer to any condition that causes pain, dysfunction, distress, social problems, and/or death to the person afflicted, or similar problems for those in contact with the person. In the broader sense, it sometimes includes injuries, disabilities, disorders, syndromes, infections. Isolated symptoms, deviant behaviors, and typical variations of structure and function, while in other contexts and for other purposes these may be considered distinguishable categories. Diseases usually affect people not only physically, but also emotionally, as contracting and living with many diseases can alter one's perspective on life, and their personality.

There are four main types of disease: pathogenic disease, deficiency disease, hereditary disease, and physiological disease. Diseases can also be classified as communicable and non-communicable disease.

Fuller, (1998), in his article states that "...most conditions do not happen overnight. The choices a person makes not to ever exercise, or to stop for lunch every day and eat fast foods, or lead a stressful, negative lifestyle that can lead to the depletion and an imbalance of enzymes. Every one of us is born with an
introduced ability to make metabolic enzymes. However, enzymes can either be repressed or destroyed when the body's condition or environment is not in balance. It is these poor choices that, in fact, result in the imbalances to the whole body that can allow disease to happen. A disease does not happen overnight. It takes years of this constant neglect and over-indulgence to alter our enzyme balance and create a disease condition...." 

Fuller has listed 7 stages of diseases based on the lifestyle one follows in today's times:

**Stage 1:** This is characterized by approximately 95% lifestyle and/or environmental factors.

**Stage 2:** The choices above, such as not to ever exercise, or to stop for lunch every day and eat fast foods, or lead a stressful, negative lifestyle, when not corrected appropriately, will progressively overwhelm the system and create this stage.

**Stage 3:** Progression to "stage three" involves the pH, i.e., potential of hydrogen, imbalances and a definite deterioration to the biological terrain.

**Stage 4:** The continuance of constant toxicity has created a depressed environment in the body and the symptoms increase.

**Stage 5:** The onset of the actual disease due to organ deterioration and functional impairment.

**Stage 6:** The ability of the body has now given way to degenerative diseases and major system dysfunction occur.

**Stage 7:** The body is now being overwhelmed by disease.

The term, 'lifestyle diseases' is becoming more and more prevalent these days. As the name suggest, lifestyle diseases are a result of the way we lead our lives. These are also named as diseases of longevity or diseases of civilization. Lifestyle diseases are the result of an ill-relationship of people with their environment. These diseases are widespread, as countries
become industrialized and people live longer. The way these begin is dangerous. It takes years to develop and then become so much a part of our lives that it cannot be easily cured even with allopathic medicines. Carcinoma of the breast is the third most common cancer in Indian women. With rapid industrialization and effective control of communicable diseases, better diagnostic and treatment facilities, cancer is emerging as a major health problem. Since early detection is the only way to reduce morbidity and mortality from breast cancer, researchers undertook a pilot project to evaluate efficacy of using existing manpower and resources for screening women in the high risk group (Rebentisch, Rebentisch, Thomas, Karat & Jadhav, 1995).

The World Health Organization has warned that more than 270 million people are susceptible of falling victim to diseases linked to unhealthy lifestyles. Most of these people are thought to come from China, India, Pakistan and Indonesia (Jain, 2009).

Main causes of lifestyle diseases are that our diet is changing day by day, from high nutritional food, we move towards junk food, has contributed to the era of lifestyle diseases. Reduction in physical activity and exercise has also added to the scenario. Substance abuse, especially tobacco smoking and alcohol drinking may also increase the risk of certain diseases later in the life (Vaillant & Mukamal, 2001; Fraser & Shavlik, 2001; Steyn, Fourie & Bradshaw, 1992).

Diseases such as Alzheimer's disease, atherosclerosis, asthma, cancer, chronic liver disease or cirrhosis, Chronic Obstructive Pulmonary Disease, Type 2 diabetes, heart disease, metabolic syndrome, Crohn's disease nephritis or chronic renal failure, osteoporosis, stroke, depression and obesity, all come under lifestyle diseases. Most of these lifestyle diseases come under a broad range of conditions that have been regarded as being psychosomatic disorders. By systems involved, these include:
Cardiovascular disorders,
Endocrine disorders,
Genitourinary disorders,
Musculoskeletal disorders,
Respiratory disorders and
Skin disorders.

The term *psychosomatic disorder* is mainly used to mean "a physical disease that is thought to be caused, or made worse, by mental factors". Psychosomatic means mind (psyche) and body (soma). A psychosomatic disorder is a disease which involves both mind and body (Yates, 2010). A person's current mental state can affect how bad a physical disease is at any given time. To an extent, most diseases are psychosomatic (Servan-Schreiber, 2000).

Physical diseases are believed to have a mental component derived from the stresses and strains of everyday living. This is the case, which appear to be partly related to stress in everyday life (John, 2006).

Many studies have been conducted to show the relation between stress and diseases. It has been seen that *Stress plays a vital role in the onset of diseases*.

In a review of the scientific literature on the relationship between stress and disease, Carnegie Mellon University psychologist Sheldon Cohen has found that stress is a contributing factor in human disease, and in particular depression, cardiovascular disease (American Academy of Periodontology, 2007).

Stress effect a person through four areas of human functioning:
1. *Physical effects of stress*: Mainly through the neuro-endocrino-immunological pathway: Changes in the heart rate, blood pressure, respiration, gastric acidity, muscular tensing, intestinal motility etc.

2. *Emotional effects of stress*: Through hypothalamus and endocrinal release; mainly responsible for the so called psychosomatic disorders.


4. *Behavioural effects of stress*: Behavioral effects of stress showcases the way in which a person acts and behaves when under the influence of stress (See figure 1.1 for Details)

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**Figure 1.1**

**Areas of Body Affected by Stress**

Harrison Wein (2006), tells us about the findings of Esther Sternberg, director of the Integrative Neural Immune Program at NIH's National Institute of Mental Health (NIMH), who has been rediscovering the links between the stress and the immune system. According to Sternberg, if one is chronically stressed, the
part of the brain that controls the stress response is going to be constantly pumping out a lot of stress hormones. The immune cells are being bathed in molecules which are essentially telling them to stop fighting. And so in situations of chronic stress the immune cells are less able to respond to an invader like a bacteria or a virus. This theory holds up in studies looking at high-levels of shorter term stress or chronic stress: in caregivers like those taking care of relatives with Alzheimer's, medical students undergoing exam stress, Army Rangers undergoing extremely grueling physical stress, and couples with marital stress. People in these situations, show a prolonged healing time, a decreased ability of their immune systems to respond to vaccination, and an increased susceptibility to viral infections like the common cold.

As we all know that stress, anxiety, depression plays a very important role in the onset of the disease but various studies have also proved that after the onset of disease, the level of stress, anxiety, and depression increases and the adjustment of individual is negatively affected in various spheres of life (Parmar, 2007).

As stated earlier, diseases usually affect people not only physically, but also emotionally, as contracting and living with many diseases can alter one's perspective on life, and their personality.

Illness of any kind disrupts routines and interferes with day-to-day functions, all of which stresses an individual.

A person's response to the stress of physical illness varies tremendously and in large part depends on his or her own personality style and social supports. It is known, for example, that certain diseases such as diabetes, rheumatoid arthritis, peptic ulcer disease, or cardiac disease can worsen with mental stress. While it is not clear that stress causes these diseases, it
is clear that these and probably many other illnesses are influenced by stress.

Newer information supports the idea that not only does physical illness cause stress, but stress may bring on or worsen certain symptoms or diseases. When a person is scared (as in the example of the confrontation in the dark alley) his or her blood pressure and pulse increase. Many people experience diarrhoea when confronted with the stress of an important test or presentation. Stress can also lead to common symptoms like headache, chest pain, or backache.

Failure to recognize the important role that stress may play in the interaction between health and disease can lead to improper medical care (The Cleveland Clinic Foundation, 2009).

Cuncic (2010), in her research states that Anxiety and illness often go hand-in-hand. Physical health concerns are troublesome on their own, but even more so when complicated by mental health concerns. Anxiety disorders such as social anxiety disorder (SAD) tend to occur along with illnesses such as heart disease, gastrointestinal issues, and respiratory illness. What research has clearly shown is that those who have physical health problems complicated by anxiety tend to have worse symptoms and more treatment-resistant and potentially fatal illnesses.

Bier (2001), states that so much of the emotional impact of chronic or serious illness revolves around the theme of adjustment. Adjustments to feeling unwell, to lesser levels of activity and capability, and changes in priorities, finances, self-image, and relationships all can come to the fore at once. Adjustment isn't just for the beginning stages of an illness. There is a continuous need for emotional and mental adaptation as time goes by, too.
Chronic or serious illness also produces feelings of helplessness, frustration, hopelessness, or great sadness. It is common to experience resentment when an individual come to know that he/she is ill and needs other's help and feel lot of grief at losing a way of his/her life. Regardless of the source of the illness, there is a powerful emotional component which creates a need for treatment, support, and amelioration.

Many chronically or seriously ill people report a noticeable worsening of their physical symptoms under stress. This may be because stress has a wide variety of physiological effects on the body. Exactly how emotions/mind and the physical body relate is of course a complex question. But a deep, overarching connection is assumed to exist by many healthcare practitioners. Reduction of stress and improvement of coping skills may be help control certain physical symptoms in some types of chronic or serious illnesses.

Chronic diseases carry important psychological and social consequences that demand significant psychological adjustment. Patients with chronic illness encounter a number of challenges that impact every aspect of their lives. Therefore, in order to facilitate an engaged and activated patient, clinicians must be able to understand their patients' internal experiences and outward expressions of their emotions and intervene in ways that promote adaptive coping. Adaptive coping means having available a repertoire of responses that can be used to deal with and modulate the ebb and flow of experience.

Chronic illness clearly presents a challenge to psychosocial adjustment on both the patient and his or her family. At the same time, psychosocial adjustment influences onset, course, treatment effectiveness, and management of a chronic illness, which ultimately bear upon the patient's quality of life. Learning to live with chronic illness is stressful. Stress causes changes in chemicals in the body that can lead to feelings of anxiety and
depression, which commonly accompany chronic medical illnesses. Patients and family members usually experience feelings of loss and sadness and feelings of anxiety when physical activity becomes more limited. There is a close relationship between mental well-being and physical symptoms. Anxiety and depression often go together. If symptoms of stress, depression and anxiety are acknowledged and treated quickly, then patients feel better and their physical symptoms also improve (Heru, 2008).

Anxiety, worry, and stress are all afflictions of life in the modern world. According to the National Institute of Mental Health, approximately 10 percent of the American population, or 24 million people, suffer from anxiety disorders (Grohol, 2005).

Learning to live and get ahead today is not possible without stress. Anything that brings on feelings of stress is called a stressor. There are some people who thrive under stress and there are others who have a hard time handling stressful situations. An individual's reaction to the stress-causing event will determine whether the stress is positive or negative. When stress levels surpass mental, emotional, and physiological limits, stress becomes distress and can interfere with functioning effectively. The following are some common symptoms, divided into categories that people experience when they are stressed:

**Physical**

- Frequent colds or flu
- Headaches
- Trouble sleeping
- Muscular aches (mainly in neck, shoulders, and back)
- Skin problems
- Trouble with digestion
- High blood pressure
- Nausea
Introduction

Mental

- Poor concentration
- Forgetfulness
- Frequent negative thoughts

Emotional

- Anxiety
- Depression
- Hostility
- Irritability
- Feelings of helplessness
- Feeling a lack of purpose
- Relationship troubles

Behavioral

- Increase in or loss of appetite
- Driving recklessly
- Abusing alcohol or drugs
- Being accident prone
- Showing aggression

Previously people lived a less intense life, following more closely their internal clock. In recent decades, however, the pace of life has accelerated dramatically and most of us experience our days as an emergency situation, which requires continuous action and no rest. And precisely because there is no time for rest and leisure, we move more and more away from ourselves and become more and more stressed (Chris, 2012). The main reasons that cause stress and anxiety in modern life can are as follows:

1. Too many obligations: The chronic stress we are experiencing daily, like the stress caused by a bad marriage or a job that is too demanding, is causing health problems. It is clear and proven than when facing chronic stress, the autonomic nervous system is affected and thus causing stress. The stress in
turns causes overwork, overwork causes exhaustion, exhaustion causes depletion, and depletion makes us collapse and also is the cause of various diseases. The first symptoms are relatively mild, chronic headaches and increased sensitivity to cold. As the stress cycle continues, health problems become increasingly serious in both physical and mental level. An estimated 90% of doctor visits are related to stress. Most of the common diseases are associated with a chronic form of the insomnia, depression, mental disorders, muscle pain, hair loss, diabetes, sexual dysfunction and cancer.

2. *When the enemy is our self:* Sometimes we sabotage ourselves by being impatient with others or causing undue tensions due to psychological pressure. Some of the more common ways that we undermine ourselves and if effect we create more stress and get anxious are:

   a. *Negative thoughts*- Sometimes the enemy is in our head. The way we talk to ourselves, although generally formed in childhood, it follows us throughout our lives and plays a significant role to all our experiences. If we are accustomed to think and speak negatively then this is a major source of stress.

   b. *Poor skills to deal with conflicts*- Conflicts with others are a part of life and we need to know how to properly handle them so that our relations become stronger and not a source of stress. And this does not mean that we must be aggressive towards others, or to let them treat us because we cannot say «no».

   c. *Pessimism*- The pessimistic people see things worse than they are in reality and that prevents them from seeing the possible solutions and opportunities presented before them.
d. The taking of too many commitments- Everyone reacts differently to stress. Some withstand pressure more and others less. The taking of more responsibilities than someone can handle is a source of stress.

Hence, we can see that stress and anxiety not only play a major role in the onset but once the disease occurs, their levels rise.

The Present Study

As the sample of the present study was taken from army, occupation played a major role. Though almost all occupations to some level are stressful, but if we see the life of a soldier, it is very different as compared to the civilians. His life is full of overwhelming anxiety/stress, daily life routines, environmental conditions he is living in, for example, emergencies, high altitude areas (Siachen, Kargil), sensitive areas (Jammu and Kashmir), combat situations, battle etc., these are the situations a soldier lives in most of his life. Most of these conditions are traumatic, they develop many psychosomatic symptoms like fatigue, hypersensitivity, depression, sleep disturbances, etc. These can also cause major diseases like hypertension, diabetes, cancer, asthma, and so on. After the development of these disorders, there are net changes in stress and neuroticism. Stress is expressed through neuroticism. Thus, it is a two way process i.e., there are two schools of thought, one which conceives that stress and neuroticism lead to disorders and in the order of thought, diseases and disorders lead to changes in the levels of stress and neuroticism (Parmar, 2007).

So in the present study an attempt has been made to see the role of neuroticism, stress, depression on army personnel’s adjustment suffering from diabetes, hypertension and other psychosomatic disorders.