CHAPTER I

THE CONCEPTUAL FRAMEWORK OF THE PROBLEM

Outline

1. The variate structure and Conceptual framework.

2. The somato-psychological aspect.

3. Objectives of the study.
It is a psychological study of certain correlates of the dynamics of behaviour in the patients of coronary heart disease. The correlates in focus being physical and emotional or psychological distress.

1. THE VARIABLE STRUCTURE AND CONCEPTUAL FRAMEWORK.

Distress

The intensity of the response varies from individual to individual and various systems of the body will be differentially involved at the various levels of response. Differences between individuals in response to affectively neutral stimuli are marked and should be no less variable than responses to emotionally evocative stimuli.

Generally, it is studied that the hyper-responsive nervous system developed an anxious personality and less ability to cope with physical and psychological events. Hypertension and headaches are often mentioned in this context. They are more related to the coronary heart disease.

If a hyper-responsive nervous system is an underlying factor in the development of heart disease,
then chronic anxiety would be a marker of heart disease. It is not necessary that anxiety plays causal role in the development of heart disease, but it depends upon the nature of the mechanisms evolved (Kahn et. al. 1980; Krantz and Durel 1983).

When studied the relationships among nervous system activity, emotional expression, personality and health, it has been found that inhibition of emotional expression is likely to be a correlate and may be a cause of poor health (Buck, 1984).

Mertens (1986) discussed the existence of psychogenic factors in the etiology of cardiovascular disease and also the behavioural and personality pattern associated with cardiovascular disease. In this study, it was concluded that the impulsiveness, expression and aggressiveness significantly discriminate between people with cardiovascular disease and healthy people. 66% of them repress their aggressiveness and 34% use opposite defense mechanisms. Stressful events produce risk factors mainly in anxious, depressed and hostile subjects.

Pepler et. al. (1984) has reported that defense mechanisms play an important role in coronary heart disease.

Emotions are simple as well as complex processes. They are expressions of the inner personality. An emotion is a
state of arousal tending to disrupt homeostatic base lines. There is a stirring up of the organism during emotional arousal.

The emotions are accompanied by certain physiological changes: increase in heart rate, the adrenal glands secrete epinephrine and norepinephrine, blood rushes to the extremities and flow of urine can increase in some emotional conditions such as anxiety. On a personal and private level it is a strong feeling to which we attach a conscious label such as fear, anger or joy.

There is an increasing evidence that negative emotions tend to be involved in different types of illness e.g. high blood pressure, asthma, obesity, headaches, backaches, rheumatism, arthritis, allergies and peptic ulcers.

Type A behaviour is described as an action – emotion complex, in which people struggle to achieve more and more in less and less time (Friedman and Rosenman, 1974). The major elements of the behaviour pattern are competitive achievement, striving a sense of time urgency, impatience, aggressiveness and easily aroused hostility. Type - a behaviour is often summarized as "hurry sickness".

Uncontrollable stress leads to an increased risk of CHD (Glass 1977). Similarly, a study by Williams et. al. (1980) indicated that both type - A behaviour and
hostility related independently to coronary atherosclerosis.

Rarefoot, Dahlesten and Williams (1983) in a 25 years follow-up of medical students found hostility a significant predictor of CHD development. In the study of Dunbar (1954), it was claimed that as a group the patients of myocardial infarction (MI) are outstanding in being hard working, aggressive men who attain positions of authority, play the role of exemplary husband or father carry more than their share of the family burden, but demand care and attention in return, live for the future and keep troubles to themselves, rarely admitting their depression and inner tension to others.

Indices of longstanding emotional maladjustment effect more the coronary patients as compared to the control group (Weiss et. al. 1957). Fox et. al (1954) studied 32 patients who had mitral surgery. In their report, 6 patients appear to have had "obvious emotional disturbance". This constitutes about 19% of their sample, besides several cases with less severe psychological disturbances. Haier et. al. (1985) concluded that the cardiac anxiety syndrome is a subtype of panic attacks and does not represent a separate disorder.
H. Van Dijl (1982) suggested that patients who have had a heart attack appear to have more extreme judgements than non-heart attack patients. It is hypothesized that more polarizing personality experiences more tensions and therefore more susceptibility to heart attacks. The hypothesis has been proved by various studies.

The emotions produced depend to some extent on a particular person's previous experiences and physiological patterns (Ax 1953; Schachter 1957, Averill 1969).
The study proceeds with coronary heart disease and smoking behaviour as its independent variables. The relevance of selection of these variables is as under:

(a) Coronary Heart disease (CHD)

Heart is a muscular organ in the bony chest of the body. Its main function is to circulate blood throughout the body through a set of blood vessels known as arteries. The blood returns to heart through other type of blood vessels known as veins. Heart itself is supplied blood through a pair of arteries known as coronary arteries. When due to any reason the coronary arteries are narrowed, the reduced blood supply to heart thus resulted may lead to the condition broadly classified as coronary heart disease (CHD) or ischemic heart disease. Maybe, psychological factors have a greater impact on one disease than the other. Different studies of coronary prone behaviour have studied different aspects of psychological behaviour. Cardiovascular response is associated with different emotional feelings, such as anger and anxiety (Funkenstein et al. 1957).

A number of factors have been identified as increasing the risk of CHD, such as aging, sex (being male), elevated levels of fatty substances in the blood, hypertension, heavy cigarette smoking, family history of heart
disease, obesity and physical inactivity (Glass et al. 1980).

Rahm & Roma (1974) studied 61 people in apparently good health who died suddenly. In the two years prior to death, the subjects had experienced a 250% increase in stressful events and were found to have coronary artery disease. Cardiologists, Friedman and Roseman in their book *Type A Behaviour and Your Heart* (1974) studied that there is specific behaviour pattern that effects heart during middle age.

The accumulation of stress inducing events, way in which individuals live their lives and response to life events are related to CHD. Pediera et al. (1984) studied 162 males and 153 males who had had a coronary episode. Their results indicate a lower level of sexual activity that was attributed to the coronary condition and to partner's attitude. 68% of subjects with psychiatric pathology reported lessened sexual activity, compared to 49 in subjects without such pathology. The investigations support the necessity of educational programmes on sexuality for coronary patients.

(b) Smoking

Nicotine causes a rise in blood pressure, an increase in heart rate, an increase in stroke volume and a large increase in cardiac output. However both nicotine and cigarette smoking produce shifts in electrocortical arousal
which are indicative of increased alertness
(Keing & Morphee 1973; Kuman et. al. 1978;
Warburton & Wesner 1979).

On the basis of epidemiological studies, it
has been established that cigarette smoking is a
significantly independent risk factor for coronary
artery disease. It is reported that the chronic use is
a more serious problem, as smokers are more likely than
nonsmokers to die from lung and other cancers, bronchitis
and emphysema, ulcers and heart and circulatory
problems.

Hall et. al. (1984) reported that rapid smoking
therapy is safe and effective in patients with mild to
moderate cardiopulmonary disease and for those who have
had uncomplicated heart attacks.

The Tobacco industry continues to argue that there
are genetic differences between smokers and nonsmokers and
that the smokers are genetically more prone to cancer
and other diseases.

These can be few smokers in the modern world who
are not aware of the relationship between smoking, death
and disease for nearly more than a decade there has
been government health warning on all cigarette packets.
The health education campaign in the mass - media, too,
have been extensive. The majority of smokers appear to
accept the evidence that smoking is hazardous and
Somato-Psychological Aspects

Emotions on the body has been recognized for many years. A psychosomatic disorder is a physical disorder, often involving the destruction of tissue, which is considered to be caused by social or psychological events rather than a physical agent. The term was coined by Heinroth (1818) to refer to insomnias (Kaplan 1967, More 1967). The negative emotions tend to be involved in the illnesses like high blood pressure, asthma, dermatitis, obesity, headaches, backaches, rheumatism, arthritis, allergies, and peptic ulcers. The heart is one of the most sensitive targets for stimuli of psychic origin.

Psychosomatic disorders result from the interaction of many factors. Basic is the personality pattern and the situation of those patients who tend to develop disturbance in cardiac rhythm.

On the basis of studies, the following traits have been commonly observed - chronic anxiety, excessive hostility, inadequate expression of hostility, compulsiveness, depression and stress or tension may result from a variety of factors: sudden fear, anger, loss of sleep, excessive fatigue, the excitement of watching a football game, a prize fight or any other excited event.

detrimental to health (Kohli, 1985).
Through genetic factors, through accident, or through disease a particular system or part of the body system may be more valuable than other systems or body parts to stress factors which may lead to a psychosematic condition. The theory predicts that if one's weakest system was, say the heart system, one might be prone to develop heart disease.

Lynch (1977) showed in his book on cardiovascular conditions, that psychological factors associated with loneliness were very much related to the high death rate attributed to cardiovascular disease. Psychological factors play an important role in their complex obscure etiology (Lipowski 1968).

Beginning from the opposite end, many psychologists have studied the individual's psychological reactions to somatic illness or disability. The term 'somato-psychology' has been coined by Barker and his associates (1953, 1954) for this field of study. The somato-psychology has attracted increasing interest through its practical implications for rehabilitation programmes. A number of empirical studies have been conducted on the psychological effects of many types of physical disability in the recent past. The diseases or disabilities studied include cancer, tuberculosis, blindness, deafness, amputation, polio, leprosy, coronary heart disease etc. (Anastasi 1979; Chauhan et al. 1982, 1983;
Dhar 1983; Agrawal & Dhar 1983a, 1983b; Kohli 1983b, Hatter 1986; Savita 1987). Patients in these categories have been investigated through intensive case studies, interviews and psychometric and projective tests. These studies have revealed that physical disability has often a profound effect on behaviour.

The relevance of study of physical and emotional or psychological distress of the patients of coronary heart disease is in its extension of earlier work done in this area on the variables like anxiety, adjustment, frustration reactions, dependence proneness and learned helplessness (Kohli 1985; Hatter 1986; Savita 1987).

Study of the psychodynamic variables in the proposed framework appear to be of great significance, both for education of society as well as for boosting up of the morale of patients for greater tolerance and adaptability. The results are expected to contribute meaningfully to the knowledge of specialists from somato-pyschological point of view.
III Objectives of the study

1. To determine the impact of CHD and smoking on mental health, in terms of physical and emotional or psychological distress.

2. To determine interactive potentialities between CHD and smoking during their operations correlates with mental health in the patients of CHD and normal people.

3. To prepare a factual base for creative and educational programmes that remain neglected despite being crucial in the context.

4. To open up new vistas for further research in applied psychology.