CHAPTER-1

THE CONCEPTUAL FRAMEWORK
OF THE PROBLEM

OUTLINE

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It is a study of the psychological correlates of the dynamics of behavior in the patients of Hansen's disease. The psychological correlates in focus are Learned Helplessness and Death Anxiety.

I. THE VARIATE STRUCTURE AND CONCEPTUAL FRAMEWORK

(a) Learned helplessness

Seligman (1975) defined Learned helplessness as a belief that one's outcomes are independent of one's actions. The studies were conducted on animals and it was found that animals who were first exposed to shock that they could not avoid were later unable to learn how to avoid shock. He suggested that three kinds of deficits result from experiences with uncontrollable outcomes. First was motivational deficit, whereby the animal did not try to learn new behaviors. Second was cognitive deficit because the learning did not take place. Finally, the Learned helplessness hypothesis suggested that there was an emotional deficit as animal becomes depressed because outcomes were uncontrollable.

Seligman (1974,1975) had further suggested that increasing one's feeling of self-control is adaptive. It is the attribution of helplessness that creates problems for the individual. Wortman and Brehm (1975) have stated that there is good reason to believe that exposure to uncontrollable outcomes can result in profound psychological upset. Many kinds of maladaptive behavior have been attributed to the feelings of
helplessness with respect to one's environment. Investigators have argued that the helplessness stemming from feelings of lack of control is an important factor in the development of such psychiatric disorders as depression and schizophrenia (Bateson, et al., 1965; Seligman, 1974; 1975). The feelings of helplessness interfere with the ability to respond adaptively in stressful situations (Cofer and Appley, 1964; Janis, 1958; and Janis and Leventhal, 1968). Individuals can learn to cope with both, the known and the unknown, with varying degrees of success. Unfortunately, they can also learn how not to cope (Dhar et al., 1987).

One prominent model held that depression involved a kind of "giving up", or learned helplessness (Abramson et al., 1978). The idea is that people sometimes experience a series of setbacks or failures, conclude from the cues available that the situation is one they can not control, and simply stop trying to make things better. According to this model, depression can result when people expect bad things to happen to them and assume that they will not be able to prevent or control them. If people attribute this lack of control to personal causes (such as incompetence), their self-esteem will be impaired. If they believe the causes are stable, then their depression will be long lasting. If they believe their lack of control extends to many situations, then
their situation will be generalized across situations. In other words, depression is coloured by cognitions. Some studies support this model, showing that beliefs like those outlined above - "The causes of my failure are personal, stable, and present in many situations" - are more common in depression than in nondepression psychiatric clients (Raps et al., 1982), also people who show these cognitive patterns but are not depressed tend to get depressed later, when bad things did happen to them (Peterson and Seligman, 1984).

The feelings of helplessness have also been proposed as a precursor to physical disorder (Engle, 1968; Schmale, 1971). The perception of inability to exert control over one's environment can even result in sudden death from coronary heart disease or other factors (Ritcher, 1957; Greene et al., 1972). The feelings of lack of control had also been viewed as a cause of many types of antisocial behavior (Lamberth, 1980).

Learned Helplessness (LH) had also been demonstrated with human in the laboratory. Hiroto (1974) showed that if humans are subjected to an unavoidable loud noise for a long time, then on getting a chance to learn to stop that noise, they will fail to acquire the simple solution, because they had learned to believe that anything they did would be unsuccessful. Strassman et al (1956) reported that prisoners of war often become listless,
apathetic, and detached in the face of continuous unavoidable pain and punishment, if they feel that no action on their part will change their state of helplessness.

When a person believes that there is nothing that he or she can do to terminate an unpleasant situation, the phenomenon is called learned helplessness. It may be that a person in fact was in a situation in which no action would terminate an unpleasant situation, and if so, it would make sense to give up trying and to develop the belief that "Nothing that I can do will make a difference" (Hergenhahn, 1988).

The principle of learned helplessness shows that when organisms are placed in a situation over which they have no control, they develop the expectation that their behavior will not have any effect. This expectation then transfers to new situations where it may not be true. For example, certain learned behavior do seem very automatic. Consider driving a car. Most experienced drivers are able to perform this complex task while paying little or no attention to it. They respond to stimuli such as green lights, stop signs or children running into the street automatically. Although cognitive processes may have come into play when these people first learned these reactions, the process now seems very automatic. Now contrast this with trying to learn to write a computer program. In this instance the programmer must
reason about many facts, rules, and complex relationships to be successful. It seems that cognitive processes play a larger role here. Nevertheless, as the programmer becomes proficient, some aspects may become automatic. Both stimulus-Response and cognitive learning may interact in a variety of situations. This dual approach is now held by many psychologists (Premack, 1983).

Seligman (1975) Maier and Seligman (1978), Abramson et al (1978) describe the term learned helplessness that it is an organism's reaction when it is faced with important events that can not be altered by its voluntary responses.

A sense of helplessness leading to an inability to respond effectively is certainly a part of the everyday life. Many people who suffer a series of defeats will give up trying even though continued effort might lead to success. Students become discouraged in the job market. Many people feel they are in a rut but seem incapable of doing anything about it. In short, continued frustration can lead people to believe that things are hopeless and that any responses they make won't do any good anyway (Houston et al., 1983).

Hiroto and Seligman (1975) exposed subjects first to a set of soluble or insoluble problems and then gave them anagrams to solve. The group that had first worked on insoluble problems
did much more poorly on the anagrams than did the group that worked on the soluble problems. Some other studies have further established that more experience subjects had with insoluble problems, greater were the feelings of helplessness and lower was their performance on later tasks (Roth and Kubal, 1975). There are many examples of this phenomenon in everyday life. For instance, a child who is forced to continue to try to develop a skill of which he or she is developmentally incapable will often refuse to attempt that activity later when it is possible to achieve.

Exposure to uncontrollable positive events does not lead to learn helplessness (Benson and Kennelly, 1976). It is uncontrollable negative events which seem to result in this negative outcome on one hand, whereas exposure to controllable events can lead to increased performance on the other hand (Eisenberger et al., 1976). Seligman (1975) had observed that when people cannot control their environment, a sense of sadness and hopelessness occurs. The inability to control one’s life is apparently a powerful negative stimulus.

Mc Clure (1985) had contended that outcomes in learned helplessness experiments, rather than being uncontrollable, are
controlled by the experimenter, and helplessness can be reduced by transferring this control to subjects, giving them control over their contingencies.

Fincham et al (1989) in a study examined the relationship between selected personality factors and burn out in day care female workers. Results indicated that subjects who experienced emotional exhaustion and depersonalization tended toward lower self-esteem and learned helplessness. Burn out did not, however, include a reduced sense of personal accomplishment in this population. While studying control, type A behavior and cardiovascular responsivity in adult women employed as clerical workers, Schmied et al (1989) had found that both type A and type B subjects exhibited learned helplessness. The investigators exposed type A and type B subjects to various treatment conditions on a concept identification task. Type A's who experienced the helplessness treatment responded with greater increases of systolic blood pressure and greater decreases in heart rate variability on the anagram task. Type A's with an external locus of control were most reactive as was indicated by heart rate and heart rate variability. Variability for those subjects experiencing moderate helplessness, external locus of control type A's had higher systolic blood pressure levels.
It has recently been demonstrated that helplessness may be learned vicariously, as well as from direct experience. Under-graduate women who merely observed another subject in an insoluble training task later showed the same performance deficits as the subjects who had actually attempted the training task (DeVellis et al., 1978).

(b) Death Anxiety

Death anxiety refers to the fear and apprehension of one's own death. It is the neurotic fear of loss of the self which in intense state parallels feelings of helplessness and depression. Man's awareness of his own death produces anxiety that can only be dealt with by recognizing one's individuality. According to Fromm and the existential analysts, man's awareness of death gives him the responsibility for finding meaning in life. Death is a biological, personal, socio-cultural and existential phenomenon. The biological death is useful to distinguish between the process of aging and the ending called 'death'. Yet when the actual time comes, and the individual faces death alone, the psychological reactions appear to be remarkably similar. Kubler (1969) had found that in the majority of persons, almost regardless of age, the personal reactions to imminent death pass through five phases - Denial, Anger, Bargaining, Depression and Acceptance (although not every individual achieves the final phase). Dying and death, like other major aspects of
human life, are also very important cultural and social phenomena. Even less than a century ago, death was a common and familiar event in everyday life. There was no widespread technology to control infection and medicine could not do much for most diseases. Among the poorer classes the young died at an appalling rate, and the old died in their time, and they all died at home. The average person had been in the immediate presence of dead bodies at least half a dozen times before reaching adulthood. Against this background, death was in former years much more a part of life than it is today. It was not a matter to be shunned or a taboo to be mentioned by means of euphemisms such as 'passed on' but was dealt with directly and was even elaborated at the wake. It was not unusual in small European towns of a few centuries ago, for someone who was dying to pass their deathbed hours in the public square, greeting friends, saying goodbye, and glorying, for at least brief time in a position of respect. Under such circumstances, death was an occasion for sadness but not for shame. No one would have dreamed of hiding away the dying as we do, in the wards of hospitals or in old age homes.

The death can be fully understood only if it is viewed as one of the central meanings of human existence. An idea of the centrality of one's own death can be gathered if individuals could be made to contemplate seriously the possibility of their
own death (Mc Carthy, 1980). As death is the final stage of life cycle, it can be approached naturally by dying individuals and their families. Death and dying can be seen as part of the life process, or they can be viewed as a dramatic, painful, tortured experience both for the patients and the families. Increasingly, more research reports are being presented on the nature of death and dying. Research on exactly when death occurs, how the dying should be treated, and how their families might better cope will continue for many years (Lefton, 1982).

In old age, people must confront the possibility of their own death as well as the death of loved ones. Death may also be considered in statistical terms, which supply us with significant figures and facts. Even though death most commonly occurs in later years, it may happen at any stage in life. Accidents and suicides are the major causes of death among younger persons, and continue to be so in later years, although their relative significance declines. Often death is associated with some special psychological stress; it may be acute mourning, or an anniversary, or some particular loss of status or self esteem. Death is sometimes defined as the absence of certain clinically detectable vital signs. A person is dead "if his heart stops beating and he quits breathing for an extended period of time, his blood pressure drops as low as to be unreadable, his pupils dilate, his body
temperature begins to go down, and so forth" (Moody, 1975). This clinical definition has been used over the centuries, both by physicians and laymen. More recently death has sometimes been defined as the lack of brain wave activity. Still others say that death can only be defined as a bodily state which represents an irreversible loss of vital functions and from which the individual cannot possibly be revived. According to the concept of 'terminal drop', death can be predicted from certain dramatic changes in cognitive function in the period preceding demise. That is, significant changes both in personal adjustment and performance may serve as indicators of impending death (Reigal and Reigel, 1972).

Certain attitudes toward death are typical. Even when approaching death people ask, "why me?" and wish to find a meaning for their suffering. This question cannot be answered in generalized terms because the meaning of life and death vary from one individual to another (Kubler, 1975). The act of dying itself may involve a certain amount of "anticipatory self grief", grief over the loss of one's own life—that is, fearing what it may be to lose one's self. In addition, fear of dying is often associated with unfounded beliefs that dying itself is quite painful, that one may be abandoned by everyone when dying, that death involves an ultimate aloneness, and "that there may be final medical
procedures that will further dehumanize oneself by being turned into a sort of plumbing shop ......." (Holocomb, 1975). The fear of pain can be relieved by a knowledge of modern pain relieving processes. It can help to know that tough dying is rarely pleasant, it is neither as painful nor as unpleasant as is often feared. Fear of dying involves not only physiological but psychological factors, too. Pain is more easily dealt with than loneliness. It helps if the patient’s family visits frequently, communicates openly, and gives constant assurance that the dying person will not be abandoned. About two-thirds of the dying are anxious about being a burden to others, and about half are anxious about separation from their loved ones, they are concerned about how their loved ones will get along after they die (Holocomb, 1975). Many also feel that life no longer has any real meaning.

Bischof (1976) summarized the attitudes of older adults feelings about death. They realized that they had already lasted longer than many of their earlier contemporaries. They have a strong belief that their live’s should not be prolonged artificially. They realized that thought of life, not as the numbers of years lived, but in terms of time that remained. Finally they desired to leave this world with respect and dignity. In general the older the adult, the less important time becomes, so that death is less formidable to the very old that it is to
the young. It is true that older people think about death most frequently, but they were less afraid of it. Many older persons come to accept, or even welcome, the idea of their own death. They may feel that they were ready; or they may wish to escape infirmity; or they may have religious convictions which convince them that their life will continue after death (Butler, 1975). Young people generally avoid thinking about death; and when it does intrigue on their consciousness; they view it negatively. Yet even at this stage, individual view vary. In a psychology today questionnaire the typical respondent- a 20 to 24 years old, single, Caucasian, somewhat religions, protestant, somewhat politically liberal, college graduate from a small family had an ambivalent attitude toward death, both "risking death and loving life, wanting happiness and behaving in self-destructive ways; regarding death as taboo and insisting on a new permissiveness to talk about it ......." Most of the respondents recognized death and dying as aspects of living. Almost half believed that most people participate consciously or unconsciously in their own death. Only 2% wanted formal funerals, and a third wanted none at all. Almost a third wished to donate their bodies to medical schools or to science. Almost none of them wanted to die in youth or in the prime of life. Two-thirds of them would have liked to live to old age, and more men than women wanted to live out their full life spans. Both sexes accurately placed the time
of least fear of death in the years over 70.

In a study, retarded subjects were given a series of piagetian tasks and interviewed to determine their degree of understanding of death. Age was not significantly related to an understanding of death on any of the measures. However, piagetian cognitive levels were significantly related to a more realistic comprehension of death on three measures indicating that cognitive development is related to an increasingly complex understanding of death by the mentally retarded person (Elson et al, 1982). In a study of anxiety and level of aspiration in relation to certain social factors, the overall results showed significant differences in levels of aspiration with regard to religion, nature of home (normal vs broken) and age while anxiety showed significant differences with regard to age, patient's income and nature of home. Locality exerts no significant influence on any of the two, level of aspiration, anxiety and personality dimensions. (Husain, 1978).

It is not necessary that anxiety plays a casual role in the development of heart disease, but it depends upon the nature of the mechanisms involved (Kahn et al., 1980; Krantz and Durel, 1983). In an article, Templer (1971) attempted to determine the correlation between depression, death anxiety and health of a population of elderly. The findings revealed a positive
relationship between depression and death anxiety but health status and death anxiety were not found to be related. Kimsey, Roberts and Logen (1972) surveyed the attitudes toward death and dying of institutionalized and non-institutionalized subjects. The findings revealed that neither group expressed great fear of death and dying on the attitude questionnaires, but the TAT revealed institutionalized group significantly demonstrating denial than noninstitutionalized group. The researchers concluded that aging as such did not result in psychological regression but sickness and dependency compelled an individual to face the dying process resulting in denial of death anxiety. Salter and Salter (1978), however, obtained different findings on a sample of 65 college students. They correlated the scores of students on Templer's Death-Anxiety Scale with their attitudes and their behavior towards elderly. The results could not support the anxiety denial hypothesis that fear of aging and death results in repression of ideas associated with aging. Kalish and Reynolds (1977) conducted interviews on death attitudes of four ethnic groups of men and women of the age group 20-70 years and found that age was a significant factor on the attitudes toward death and dying. Older subjects accepted facts related to death more frequently in comparison to younger subjects. Some other studies also showed relationship between attitudes toward death and

In a study of relationship between fear of death and religiosity reported by Long (1987), the results indicated that church (mosque) attendance had a significantly negative correlation with fear of premature death. Hyams et al (1982) had investigated the relationship between locus of control and death anxiety and results indicated a significant relationship between external locus of control and concern about death. No sex differences were found for death anxiety. Schumaker, (1988) compared reported death anxiety in Malaysian and Australian University students. Australian subjects had significantly higher death anxiety scores than Malaysian subjects and in contradiction to the findings of Hyams et al. (1982), females had significantly higher death anxiety scores than males in both samples. Findings were explained in terms of factors in eastern cultures that more effectively control fear of death. It was contended that women might be evaluating death emotionally, whereas men might be doing so cognitively. Khalek and Omar (1988) too, have reported that women had higher mean scores than men on death and trait anxiety but they were similar in state anxiety. The mean death anxiety score for Kuwaitians was very close to that of Egyptians. There
was similarity in death anxiety between Kuwaitian and united states men, but not women. Significant differences appeared on trait anxiety, showing the order from low to high mean scores: united states, Kuwaitian, and Egyptian university students. Correlations among the scales were significant. However, the correlation between state and trait anxiety was higher than that between death anxiety and both state and trait anxiety for men and women. Death anxiety was associated more closely with trait than with state anxiety. In another cross-cultural study reported by McMordie et al (1984), it was revealed that women scored higher than men, subjects of different ages scored differently, and eastern samples scored lower than western samples.

Mahabeer and Bhan (1984) in a study of Indian university and high school students living in South Africa and representing in equal numbers the Christian, Hindu and Muslim faith examined the influence of age, sex and religion on death anxiety and the relationship between death anxiety and religiosity. Equal number of male and female subjects were included in each age and religious group. Results showed that Muslim subjects were more death anxious than Christian or Hindu subjects. The degree of commitment to religious practices and beliefs did not intensify or reduce death anxiety. Female subjects in all groups manifested higher death anxiety than male subjects. The effect of age was not significant.
Downey (1984) in a study to determine the association between religiosity and death anxiety indicated that experience of death or amount of contact the subjects had with death was not related to death anxiety. The study did not support the hypothesis that those subjects who were less religious would exhibit higher scores on death anxiety than would those subjects who were more religious. Further analyses had demonstrated a curvilinear relationship between religiosity and death anxiety. The subjects who were moderately religious demonstrated a significantly higher fear of death than the subjects who were either low or high in religiosity. Khanna et al (1988) had reported that schizophrenics had the highest death anxiety followed by Manic depressives and normal subjects. Patient groups had a significantly higher "fear of personal death" compared to normals. Schizophrenics also had a significantly higher "concern about suffering and lingering death". There were significantly positive correlations between most of the components of death anxiety for schizophrenics and manic depressives but few for normal subjects.

Age and death anxiety was studied by Baum et al (1984) in elderly persons who were divided into three groups: community residents who were actively involved in a group membership club (affiliated subjects), community residents who were inactive group members (community subjects), and institutionalized
subjects. No relationship was found between age denial and death denial. Single subjects who were poorer in emotional death and felt more externally controlled appeared to manifest more death anxiety. Conversely, those subjects who were married, of sound emotional health, and who perceived themselves as internally controlled showed lower death anxiety.

While studying death anxiety among early and advanced malignancy cancer patients, Feroz et al (1987) had indicated that younger subjects (below 30 years of age) scored significantly higher on death anxiety than older subjects (above 50 yrs of age). Early malignancy subjects, too, scored significantly higher on death anxiety that advanced malignancy patients. Death anxiety was least affected by financial status. In a study of heart attack patients, Kumar et al (1987) found that female heart attack patients possess higher death anxiety than male patients, Heart attack patients aged 46-50 years indicated somewhat greater death anxiety than other patient age groups. Patients consistently indicated greater death anxiety than normals.

In an attempt to cross-validate the results with cancer survivors and to test its sensitivity to illness related variables, Cella and Tross (1987) administered death anxiety questionnaire with measures of general anxiety, depression, somatization, and global psychological distress to Hodgkin's disease survivors and
testicular cancer survivors. There were no differences between groups on any of the dependent measures. Significant but weak to moderate intercorrelations confirmed that death anxiety is separate but related to general anxiety, depression, somatic distress, and global psychological distress. Death anxiety highly correlated with time elapsed since diagnosis, but no other variable was significantly associated with extent of the disease at diagnosis (i.e. prognosis).

The relevance of study of Learned helplessness and Death anxiety of the patients of Hansen's disease in the 'patient-society' interactional framework is clear. The status and integration of 'social-self' or the 'realistic-self' of patients is expected to depend heavily upon the nature of amount of positive satisfaction. Similarly the deficiency of role and status of the self and its correlates meaningfully relate to the experiences of learned helplessness and Death anxiety.

How do these outcomes of "individual-society" interactions relate to patients and Age make up? Do they affect each others' role in the context? The study proceeds with independent variables of Hansen's disease and age.
### Table 1.1
**The WHO Estimate (1982)**

<table>
<thead>
<tr>
<th>Country</th>
<th>WHO Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>4,000,000</td>
</tr>
<tr>
<td>Nepal</td>
<td>81,000</td>
</tr>
<tr>
<td>Bhutan</td>
<td>10,000</td>
</tr>
<tr>
<td>Sri Lanka</td>
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<tr>
<td>Maldives</td>
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<tr>
<td>Bangladesh</td>
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<tr>
<td>Burma</td>
<td>700,000</td>
</tr>
<tr>
<td>Indonesia</td>
<td>233,000</td>
</tr>
<tr>
<td>Thailand</td>
<td>140,000</td>
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</tbody>
</table>
The relevance of selection of these two independent variables may be enumerated as below:

(a) **Hansen’s Disease**

'Hansen’s disease' or 'Leprosy' is a chronic disease which is caused by a microscopically small germ called Mycobacterium leprae. The disease had afflicted human race for thousand of years. Though it has been curable for over 30 years and the bacterium that cause it was discovered over a 100 years ago, the world Health organization estimates that South East Asia has about half the number of patients in the world today (Table 1.1). It is mostly prevalent in tropical and sub-tropical countries. These countries are responsible for over 95 percent of the total world leprosy. About 3 to 4 lakh new cases are identified in India every year. No part of the country is free from this disease, but it is not evenly distributed. As about 80 percent of the population of India lives in rural areas. The major problem lies there.

There are so many diseases which look like Hansen’s disease i.e. Leucoderma, ringworm, some diseases of nerves and injury to or pressure on nerves, etc. There are two main types of Hansen’s disease or leprosy such as lepromatous and non-lepromatous. Clinically the lepromatous type of disease is more serious type, while the non-lepromatous type is the mild or
Deformity of the eyes and loss of eyebrows.

FIGURE 1.

Deformity of the nose and depressed nasal bridge.

FIGURE 2.
less severe type of the disease. Fortunately, in India a vast majority of the cases are of the non-lepromatous type. The lepromatous type of disease is characterised by the thickened and shiny appearance of the skin of the face especially nose, forehead and ears. Vague and flat or thick and raised patches and thick lumps (nodules) may appear which in later stages may produce ulcers. Enormous number of Mycobacterium leprae are found in the nose, throat and skin of patients with this type of disease, and these bacteria are thrown out by the patients in large numbers specially through ulcers in nose and skin. The patients with this type of the disease can, therefore, infect that the healthy persons who come in contact with such patients. Patients suffering from this type of the disease are infectious thus, this type of the disease is not only serious for the patients, but is also dangerous from the public health point of view. The non-lepromatous type of disease is characterised by the appearance of flat, discoloured or thick and red patches on the skin in which there may be partial or total loss of sensation for pain and touch. The patients of this type are non-infectious and do not spread disease to the healthy persons. Chauhan et al (1982) had observed in a study of the types of leprosy that lepromatous type has greater medical hazards but lesser social stigma due to lesser chances of organic disability and the non-lepromatous possesses lesser medical hazards but greater social stigma due to greater
The disease is full of stigma. It is the attitude towards oneself that might be weakening the tissue resistance and for Mycobacteria, it becomes easy to predominate. It has been advocated by many researchers and medical practitioners that the term 'leprosy' definitely evokes tension. As long as we call disease 'Leprosy' the patients will be known as lepers. Leprosy is an ugly word which brings to mind impurity, sinfulness and horrors. A Brazilian Seminar on control of leprosy, which took place in Sao Paulo (Oct, 1970) agreed that a new terminology would be a psychological weapon useful in health education. The XVII Brazilian congress of Hygiene (Bahia, 1968) had proposed the use of some other adequate designation for the disease. Faget has also asserted that it seems necessary to change the name of the disease for modern public education (Chauhan and Dhar, 1979). Inspite of the scientific information available today about leprosy, the fear and prejudices regarding leprosy and leprosy patients remain ingrained and persistent. In many societies leprosy is associated with guilt, rejection and isolation. These concepts were no doubt influenced by religious beliefs, local traditions as well as by the pathology of the disease. It is lamentable that in most control programmes these important social and psychological aspects of the disease are overlooked and
emphasis is laid only on early detection and treatment. Failure to appreciate the importance of the social and psychological factors has resulted in the failure of otherwise well conceived control programmes (Ahmed, 1984).

Hansen's disease is a serious public health problem of third world countries affecting more than 15 million persons and 1.5 billion people running the risk of contracting it. A quarter of the patients have physical disabilities and are often prove to unnoticed injuries. Nearly a quarter of the victims are children and majority of the patients are young adults (Chaudhary 1984).

An attempt has been made to identify the causes of the social stigma in leprosy (Pathan, 1984). Since the dawn of mankind, leprosy has been considered as a separate disease entity and patient is exposed to many stresses and strains due to uncongenial atmosphere in the family, and misconceptions and beliefs prevailing in the public. Medical treatment alone does not alleviate the problems of the leprosy patients. The therapy has to be extended to their families on a broader perspective such as psycho-sociol cultural-economic areas (Balasubramaniam, et al., 1983). In a study conducted by Bahlinger et al (1984), four groups were compared using the Life Events Survey : Institutionalized patients with Hansen's disease, patients with Hansen's disease who were treated as outpatients, outpatients
with chronic illness other than Hansen's disease, and individuals with no known diagnosis of chronic illness. Results suggested that institutionalized patients perceive themselves as having less stress than non-institutionalized patients. In addition, stress levels reported by outpatients with Hansen's disease closely resembled those reported by other chronic illness patients. Psychiatric morbidity in untreated cases of leprosy was assessed by Ramanathan et al (1984) and it was found that depression and anxiety were very common in these patients. Like most chronic diseases, leprosy may cause disability and prevent the patients from participating in normal social and working activities, and interfere even with their everyday activities. (Ramanaiah et al., 1984).

Results of a study conducted by Chauhan et al (1983) had shown that experiences of fixation-regression frustration atypically belong to normal senescence. Resignation and anxiety experiences as growing hazards, specifically related to leprosy patients. Personality factors that normally demote frustration-anxiety behavior exhibit role-negation in the leprosy patients. Age showed role-reversion implications of such role changes related to the "self-eroding" process of personality in the patients. Another study conducted by Chauhan et al (1984) had shown the presence of role-reversion and role-negation of
Deformity and ulcer in the foot.

Figure 3.

Deformity of hands.

Figure 4.

Deformity of feet.

Figure 5.
age and personality factors. The disease possessed antiroles which did not allow age and personality factors to promote identification-satisfaction and to demote differentiation - experience. The disease actively promoted differentiation and demoted identification through its own 'alien system'. The researchers had concluded that scenescents are the greatest sufferers. 'Social stigma' worked as 'social thanatos' and exposed senescents to substantial self-erosion. In a study of personality characteristics of children suffering from leprosy, the most salient features which were charted out are that they have a general craving for socio-genic needs like love and affection, security, affiliation and co-operation. Their anxiety level tends to be high due to certain conflicts. The authors had observed that leprosy possesses somatic devastation in the presence of highly active psychogenic starvation of personality (Chauhan and Dhar 1981).

To see, how the growth of the disease and feelings of worthlessness has in patients associate with enhancing 'psychic pain' i.e. anxiety, an attempt was made to study the anxiety levels in persons with and without leprosy. Results showed that non-lepromatous patients possess a higher level of anxiety than the lepromatous ones and people of the control group possess the lowest level of anxiety. The implications being that anxiety is
an intimate correlate of leprosy and that while clinical hazards of the disease are negative correlates of anxiety, physical disabilities and deformities promote anxiety. Paradox exists between the clinical dimension and the psychological one. The fact that resolves it is, that physical disabilities and deformities of the patients contribute to greater exposure to people, with lesser chances of self defence and hiding from them. The enhanced 'psychic pain' induces 'self erosion' (Chauhan et al, 1982).

In a survey by Kumar (1983), reaction of families, spouses and society to the patients was not found uniform. Families, spouses and society members respectively displayed negative attitudes to them when the diagnosis became known. Social reaction was manifested in the form of avoidance of social as well as physical contacts with the patients. 92(40.89%) of 225 patients, who had the advanced disfiguring deformities could not move freely in public places, whereas out of remaining 133(59.11%) patients who did not have any difficulty in moving freely, only 67 had deformities of mostly milder forms. 27(16.98%) of 159 patients with deformities, had tendency to hide the actual cause (Leprosy) of their deformities on enquiry. 136(60.44%) patients felt highly frustrated as all of them were cases of advanced leprosy with disfiguring deformities. The remaining 89(39.56%) patients were
optimistic that after treatment things would improve. It was further observed that out of 79 unmarried patients, 53 (67.1%) attributed leprosy as the only reason for not getting a partner for marriage. Out of 146 married patients, 34 (23.3%) were not living with their spouses; this also included 9 (62%) patients deserted by their partners. Leprosy uprooted 44 (13.55%) patients from their residences, of whom 27 settled in a leprosy village/settlement. The occupational status of 104 (46.22%) patients was adversely affected due to leprosy, of whom 43 became dependents and 17 beggars. Monthly income of 115 (51.1%) patients reduced to the extent of 84%, after getting leprosy. The social prejudice and deformities due to leprosy have played key roles in socio-economic deterioration of patients.

Leprosy is a chronic communicable disease. The history of contact in a sizable proportion of cases is not traceable—overcrowding associated with poor housing and a low socio-economic status are responsible for a higher prevalence of leprosy in the under-privileged populations (Ojha et al 1984). Osaka (1978) had reported that onset of the disease was most frequently noticed by patients between age 11 and 15 (39.1%). Seventy-five percent of the patients came to the hospital because of patches on their body surfaces, however, many of them did not know the nature of the disease until the medical staff explained
it to them. A considerable number of patients defaulted from regular treatment (46.2%). Their reasons for dropping out were an absence of pain.

Most of leprosy patients who receive treatment recover from the disease with no disabilities. Yet those who do become disabled are there for all to see. They may be cured of leprosy yet they live on, often getting slowly more disfigured, for leprosy does not kill. No other disease is associated with so much fear and stigma so that while it is undesirable to single out leprosy as a special disease, its control does present problems which are unique. Without health education, any scheme to control leprosy appears to be ineffective (Phillips, 1978). A study was undertaken to evaluate knowledge about disease among leprosy patients and attitude of family and neighbours towards patients by Sheshpal and Girdhar (1985). It was observed that less than fourth of the patients know the causes of the disease while 46% feared that their children were more prone to get leprosy. Interestingly 75% of patients did not encounter any adverse reaction from other family members, or neighbours even though most of them knew about the disease. For control of any communicable disease basic knowledge about the disease in the community is very essential. Unlike other common diseases, leprosy leads to development of visible deformities and consequently, the patients
are ostracized by society and family. It is now an established fact that with early treatment these disabilities can be prevented. For the early treatment, diagnosis at an early stage is essential. More important is awareness of initial symptoms and knowledge about the disease in the community. A study conducted by Anandraj (1986) had demonstrated that improved health education, rendered by the medical team can yield for better result in eliminating the problem of drug default. Medical treatment alone is not sufficient for the chronic disease like leprosy, but the introduction of socio-psychotherapeutic programmes is a must. This is one of the most important tools that can help in alleviating the persistent tensions of patients. Those tensions, which remain in them although in the absence of proper stimuli, can well be reduced by this procedure (Chauhan and Dhar, 1983).

A preliminary study showed that DDS resistant leprosy patients were as a group more irregular for treatment, showed personality traits of being casual and scored high on the neuroticism scale of the Eysenck Personality Inventory (John et al, 1983). Increasing chances of exposure with increasing age, and its relation to lepromin test: incidence of positive lepromin reaction (indicating increasing resistance) with increasing age may not be due to age itself, but may be the result of increasing chances of exposure to leprous or allied infections with increasing
age. Leprosy can occur at any age but is rare in infants. Leprosy is more commonly seen in men than in women, generally in the proportion of 2 to 1. Most of the reports on this matter support this view, although in some areas men and women have been found to be affected to the same extent. The possible causes of the greater frequency of leprosy among men than women may be either (i) environmental which results in less risks of infection in females, or (ii) biological, depending on the lower susceptibility of females caused by certain anatomical or physiological features. There is no doubt that in many countries environmental factors play an important role, and many researches believe that given equal chances of exposure, women are as likely to get the disease as men. It is however, not impossible that the biological factors may contribute to some extent to the observed differences. Puberty commonly causes a relative increase of leprosy rates in females. Another point to be taken into consideration is that when the case finding (leprosy survey) is done entirely by males, the coverage of the female population for examination is likely to be much less, and examination to be less thorough, than of the male population. It should be noted that a higher prevalence among males is by no means a universal finding, and careful intensive surveys in more than one country have failed to show this differentiation. Racial and regional differences have often been noted in the clinical manifestations of the disease, as also
in certain aspects of its epidemiology (type, age and sex distribution). These differences are not confined to the main racial stocks, but may be associated with minor racial differences. While the existence of these differences is more or less well-established, their significance is not clearly understood. (Dharmendra, 1967). There is some evidence that climatic conditions may have an affect on the activity of the disease, and may also be responsible for a greater frequency of certain clinical conditions in certain countries than in others. In a survey of Leprosy patients Guha et al (1981) had reported that sex had no appreciable influence on the age of onset. Lepromatous type of disease was manifested at a slightly later age than the other types. Late appearance of anaesthesia and other appreciable symptoms in lepromatous leprosy appear to be mainly responsible for this.

(b) Age

It is the temporal dimension of the 'life-in-being' that continuously relates the story of the 'self' and its achievements in terms of preparations, performances and actualizations based on skills, potentialities and learning (Dhar, 1981). The human being is never static. From conception to death, change is constantly taking place in physical and psychological capacities. The decade between 10 to 12 and 18 to 20 years is the adolescent period. However, the beginning and end points—the onset and
completion of adolescence—depend on other factors. The child has been growing in size since birth but certain growth characteristics seen during adolescence are unique. Boys and girls more closely resemble adults. Their bodies are now taking from and are stronger and more capable of adult activities. Girls mature faster than boys, at least in the early stage. The most important physiological changes, however, are hormonal. Many societies have formal customs and rituals, marking this period and preparing the child for the adult role.

Adulthood is the golden period or is the modal of life. It is the factual framework of a person's aspirations and achievements. The maturity and fullness of adulthood precures homeostasis of life (Dhar, 1983). Although adults do not continue to experience rapid physical changes, there are some changes. Shock (1962) has done extensive work on the physiology of aging, beginning with adults in their twenties. Among other things, Shock and his colleagues had measured 'the work rate' (the amount of physical work the subjects can do and still have his or her heart return to normalcy within 2 minutes). For most of the body functions Shock studied, the peak capacity or efficiency was among men aged 25 to 30. Among men over 30, Shock observed a fairly steady reduction in capacity with increasing age. Collectively, these changes gradually reduce the person's ability
to carry sustained physical effort. As always, there are wide individual differences in both, the speed and the extent of the physical changes. (Houstan et al, 1985)

Middle age is generally considered to extend from age forty to age sixty. The onset is marked by physical and mental changes. It is a long period in the life span, and is customarily subdivided into early middle age which extends from age forty to age fifty, and advanced middle age which extends from age fifty to sixty. Like every period in the life span, middle age is associated with certain characteristics that make it distinctive. It is a time of transition when men and women leave behind the physical and behavioral characteristics of adulthood and enter a period of life when new physical and behavioral characteristics will prevail. It is the time of stress, achievement, evaluation and boredom (Hurlock, 1988).

Researchers who compared different groups of adults at different ages—a strategy called cross-sectional research—found that each older group did a little bit less well on I.Q. (intelligence quotient) tests and on other measures of intellectual functioning (Baltes & Labouvie, 1973; Horn, 1970; and Matarazzo, 1972). Hasan (1983) reported that punctuality and life satisfaction are not consistent throughout but vary with age. Dharmangadan (1981) reported that boys score significantly
more than girls. It has been also proved that age group 40 to 49 years has significantly higher score on the four factors of J.A.S. (Jenkinson Anxiety Scale, 1979) i.e. type A: Speed and impatience, job involvement and hard driving and competitive behavior when compared to the 30-39 years and 50-59 years age groups. This has clinical implications (Chaudhary, 1987).

In a study found the traditionally expected decline of intelligence with age when they gave an I.Q. test to people of various ages. As expected, 20 year olds scored higher than 50 year olds. But when the scores were examined longitudinally (the change in one person was measured over time) the only decline found was in what Balter and Schaie refer to as "Visuo-motor flexibility". The investigators even found some improvement in people over 70 when they were tested several years apart. The idea that intellectual abilities decline with age appears to be a myth. Retirement appears to be a mixed blessing for many older people and may result in their feeling alienated from the mainstream of society which often chooses to ignore them. Studies dealing with the decline of intelligence indicate that older persons became slower at some tasks but often compensate by utilizing their previous experience. This often makes them more able than their younger colleagues, because they had encountered certain situations before, and they are often better at solving
related problems.

When age changes and stages are considered no matter what their content, the role of societal expectations must be taken into account. One of the ways in which society orders itself is through the establishment of age norms. Individuals of different ages are expected to behave differently to assume different roles. The recognition of age norms to the extent that society places contingencies on age normative behavior, the age norms become a guide, or a constraint. People are then to act according to their age and establish roles on time. This, in turn, feeds back to stabilize their own perceptions of themselves as aging organisms.

The norms indicated in the Neugarten et. al. studies may not exist at the present time as society has witnessed many transitions in recent years. Thus, new norms may indeed be evolving. It is possible in that it allows alternative paths for development. At the same time, however, increased options might also mean increased stress and conflict for many people. Young people may feel that they are not getting through to elderly people and may not be able to register the psychological significance of their different and much reduced expressive behavior. In addition, the elderly persons may be unable to keep pace with the rapidity of the young person's expressive behavior and social signals, and may also be unable to communicate their
own lack of comprehension. The young person may be impatient with aged persons slowless and lack of response. Lata and Dhar (1989) have indicated that effects of aging lead to some impairment in mental speed.

II. THE SOMATO-PSYCHOLOGICAL DIMENSION

The complexity and pace of modern living tends to over-burden the human being and 'stress' of living under highly complicated and demanding conditions plays havoc on both biological and psychological states of an individual. Stress is generally used in two major ways: to label situations that tax a person's physical and psychological resources and to refer to the emotional response of the person to such situation (Dhar, 1991). Broadly, it includes not only anxiety but other negative or aversive emotional states as well. An excess of it is indeed undesirable, but an optimum level is often necessary to achieve something (Hebb, 1955). It is the non-specific response of the body to any demand made on it (Selye, 1973). Prolonged emotional mobilization has been shown to produce physiological changes that are not only useless but actually harmful to the organism. The term 'psychosomatic' was coined by Heinroth in 1818 to refer to insomnia, but quickly become associated with a wide range of disorders like peptic ulcers, asthma, and hypertension (Houston, et al, 1985). The term 'somato-psychology' coined by Barker and his associates (1953, 1954) is other side of the phenomenon that
deals with individual's psychological reactions to physical illness or disability. Lachman (1972) has discussed a similar relationship under the rubric of somato-psychic problem. This area of research has attracted increasing interest through its practical implications for rehabilitation programmes. In somato-psychology, the individual's body is regarded as a fool for behavior and as an object with social significance to himself and others.

Many researches have been conducted in the area of cancer and to their subsequent hospitalization and treatment, providing knowledge in the field of psychological counseling for the acceptance of death which has much to contribute to the patients emotional well-being. The importance of somato-psychology has gradually been recognized by investigators working in the area of applied psychology. Exploratory studies have been conducted on the psychological effect of physical disability including deafness, blindness, amputation, facial disfigurement, cerebral palsy, leprosy, coronary and Ischemic heart disease, etc. (Anastasi, 1979; Chauhan et.al, 1981; 1982; 1983; 1984; 1985; Dhar, 1983; Agrwal and Dhar, 1983a; 1983b; 1984; 1986; Kohli and Dhar, 1985; 1986; Mehta and Dhar, 1989). These studies have revealed that physical disability often has prolonged effect on behavior.
Behre (1981) while studying psychological reactions to leprosy has observed anxiety, somatic symptoms and depression significantly high in patients having leprosy. Negative correlation between psychiatric symptoms and duration of illness was also reported. Dhar (1983) had conducted a comprehensive study of the socio-psychological correlates of behavioral dynamics in the patients of Hansen’s disease (Leprosy). It was found that Hansen’s disease has a devastating effect on the psychological place of the patient. It possesses experiences of rejection and dominance, and demotes satisfactions of acceptance and identification. The ‘self’ with its nuclear ingredients, functions of integration and organization exhibits a clear function deviation in these patients. It shows role-reversion, role-restriction and role-a-function. Hansen’s disease appeared more as a "psychosocial thanatos" than a somatic disease and promoted ‘self-erosion’. The factual base that emerged out of the study is that deprivation of ‘socio-genic needs satisfaction’ as well as creation and growth of unwanted experiences of isolation, differentiation, resignation, rejection and anxiety relate not only of the Hansen’s disease, but also to the age and personality make up of the patient. It was suggested that further research related to the study of these concepts must be conducted for further insights and confirmation of the obtained facts.
The study of psychodynamic background of the patients of Hansen's disease in the proposed framework appears of vital importance for designing various rehabilitation programmes. The knowledge is expected to contribute to the efforts meant for well-being of the patients.

III. THE OBJECTIVES OF THE STUDY

1. To determine the impact of Hansen's disease and Age on crucially important psychodynamic pattern of Learned helplessness and Death anxiety.

2. To determine interactional potentialities, if any, underlined among Hansen's disease and Age during their operations in the context.

3. To determine 'hopes' and 'hazards' in terms of end-products of 'patient-society' interactions.

4. To prepare a 'factual' base for creative and educational programmes that remain neglected despite being very significant in the context.
5. To open up 'new vistas' for further research aiming at eradication of uncalled for 'stresses' and for a congenial perpetuation of 'life-in-being' through needed 'emotional inoculations'.