Chapter-I

INTRODUCTION
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Health is a common theme in various cultures and societies. Traditionally health is considered as “absence of disease”. In some cultures, health and harmony are conceived equivalent or interchangeable concepts. Harmony is defined as “being at peace with the self, the community, god and cosmos.” The ancient Greeks and Indians shared this concept and attributed disease to disturbance in bodily equilibrium of what they called “humors”.

Historically, the term ‘health’ is derived from an old Anglo-Saxon word ‘haelth’, meaning the conditions of being safe and sound, or whole. For a long time this historical definition was lost because of the common belief that health was in essence freedom from disease. Health as a relative concept, condition or state still has various meanings and interpretations for different people.

To the general public, being healthy may just mean ‘not being ill’. Health is taken for granted, only considered when illness or health problems are interfering with people’s everyday lives. Perhaps the more positive way in which the general public thinks of health is reflected in phrases like building up strength and having ‘resistance’ to infection. This implies, that health means strength and robustness, and having reserves which can be called upon to fight illness and cope with stress and fatigue.

Researchers in different settings have found a wealth of complex notions about health. For example, to mothers of families with small children, the capacity to cope with and function as expected was an important aspect of health, and they also associated positive health with being cheerful and enthusiastic. To the physical culturist health means a “body beautiful” exhibiting rippling muscles gained through performing a set of prescribed systematic exercises. To the physiologist it is the product of the normal function of cells, organs and systems. To the family physician it means constant supervision and care utilizing the most modern medical services.
including health guidance and periodic examinations, and the best equipment and facilities to ensure happy, zestful living of the total family.

Health is undoubtedly the greatest bounty of Nature to an individual. To the person who has lost his health, it is the most priceless possession of all. As Sir William Temple wrote: “Health is the soul that animates all the enjoyments of life, which fade and are tasteless without it.” Franklin P. Adams stated that health is the thing that makes you feel that now is the best time of the year. To the person who has lost his money, health is his one hope. To quote an old Arabian proverb: “He who has health has hope, and he who has hope has everything.” Disraeli once pointed out the significance of health to the state and nation in these words: “The public health is the foundation upon which reposes the happiness of the people and the strength of the nation.”

To summarise, then, the people’s ‘health’ and being ‘healthy’ vary widely. They are shaped by their experiences, knowledge, values and expectations, as well as their view of what they are expected to do in their everyday lives, and the fitness they need to fulfill that role.

Changing concepts among professionals:

Not only among the general public, confusion about health prevails today even among professionals. Health has been viewed by different scientists (e.g., biomedical scientists, ecologists, sociologists, economists, etc.) from different angles giving rise to different concepts. These may be briefly described as under.

(a) Biomedical Concept:

The biomedical scientists have traditionally defined health as “absence of disease” and disease as deviation from a biomedical norm. This biomedical concept, based on the germ theory of disease, which dominated medical thought at the turn of the 20th century, looked upon the human body as a machine, disease as the consequence of the breakdown of the machine, and one
of the doctor's task as repair of the machine. Despite its spectacular popularity and acceptance, the biomedical model was found inadequate to solve some of the major health problems of mankind such as, the population problem, problem of malnutrition, chronic diseases, accidents, mental illness, drug abuse, insecticide and bacterial resistance, etc.

(b) **Ecological Concept**

The drawbacks of the biomedical concept gave rise to other concepts, one of which that has drawn particular attention is the ecological concept. The ecologists viewed health as a harmonious equilibrium between man and his environment, and disease as a maladjustment of the human organism to the environment.

(c) **Bio-social and Bio-cultural Concepts**

Developments in social sciences revealed that disease is both a biological and social phenomenon. The social scientists, therefore, asserted that not only biological factors, but also social, cultural, economic and psychological factors should be taken into account in defining health and disease.

(d) **Holistic view of Health**

The holistic view is a synthesis of all the above concepts. According to this concept, health is viewed as a multi-dimensional process involving the well-being of the whole person in the context of his environment. This view corresponds to the view held by the ancients that health implies a sound mind, in a sound body, in a sound family, in sound environment. The holistic approach presupposes that all sections of the society have an impact on health.

**Definition of the World Health Organisation**

The WHO defined health as a "a state of complete physical, mental and social well-being andnot merely the absence of disease or infirmity". This
definition is important because some fifty four nations reached international agreement on it at the first World Health Assembly in 1948.

The WHO definition goes beyond the mere absence of disease. It envisages three dimensions or components of health — physical, mental and social, all closely related. A fourth dimension has also been suggested, namely, spiritual health.

The definition of the WHO is still extensively quoted, although the organization has developed its view considerably since that time. This historic definition has also been heavily criticised, mainly on two grounds. One is that it is totally unrealistic and idealistic (how often does anyone truly feel in a state of “complete physical, mental and social well-being?”). The other criticism is that it implies a static position, whereas life and living are anything but static. The idea that health means having the ability to adapt continually to constantly changing demands, expectations and stimuli, can be seen to be preferable.

Another criticism of the WHO definition is that it appears to assume that someone, somewhere, has the ability and right to define a state of health, whereas people define their own state of health in a myriad of different ways. Nevertheless it is the most widely accepted definition today. It can be defended on the grounds that it embraces the notion of positive health and acknowledges the central place of social and mental well-being.

While accepting the traditional definition by the WHO, some authors have claimed that they have formulated a more functional definition of health. According to them, ‘health is the quality resulting from the total functioning of the individual, that empowers him to achieve a personally satisfying and useful life’. This definition expresses health as a state of well-being, dominance of positive or favourable adaptations, resulting from the interaction of the individual and his environment.
**Dimensions of Health**:

The above discussion and an analysis of the foregoing two definitions inevitably leads one to the conclusion that the concept of health is multidimensional. These dimensions may be briefly stated as follows:

(a) **Physical Health**:

This is perhaps the most obvious dimension of health and is concerned with the mechanistic functioning of the body. It conceptualizes health biologically as a state in which every cell and every organ is functioning at optimum capacity and in perfect harmony with the rest of the body. All the organs of the body are of unexceptional size and function normally; all the special senses are intact.

(b) **Mental Health**:

Mental and physical health are inter-related. The ancient concept, a sound mind in a sound body has been rehabilitated. Poor mental health affects physical health and vice versa. Psychological factors are considered to play a major role in disorders such as essential hypertension, peptic ulcer and asthma.

In general, the concept of mental health connotes such abilities as those of thinking clearly and coherently, of making friendships that are satisfying and lasting, of assuming responsibilities in accordance with one's capacities, of finding satisfaction, success and happiness in accomplishments of everyday tasks and living effectively with others.

(c) **Social Health**:

Health cannot be isolated from social and cultural context. A person's health is inextricably related to everything surrounding him. It is an established fact that it is not possible to raise the level of a people's health without changing their social and cultural environments. For example, people obviously cannot be healthy if they cannot afford necessities of food, clothing and shelter, nor can they be healthy in countries of extreme political oppression where basic human rights are denied. Women cannot be healthy when their contribution to
society is undervalued, neither blacks nor whites can be healthy in a racist society where racism undermines human worth, self esteem and social relationships. Unemployed people cannot be healthy in a society which only values people in paid employment, and it is very unlikely that anyone can be healthy in an area which lacks basic services and facilities such as health care, transport and recreation. Michael Wilson puts this graphically when he says that health cannot be possessed, “It can only be shared. There is no health for me without my brother. There is no health for Britain without Bangladesh.” Thus social health takes into account that every individual is part of a family and of wider community and focuses on social and economic conditions and well-being of the “whole person” in the context of his social network.

(d) **Spiritual Health**:

This for some people is connected with religious beliefs and practices; for others it is to do with personal creeds, principles of behavior and ways of achieving peace of mind and being at peace with oneself. It is the intangible something that transcends physiology and psychology. Plato lamented: “For this is the error of our day that physicians separate the body from the soul”. This is true even today. The importance of this aspect of health can hardly be over-emphasized.

(e) **Positive Health**:

The identification of these different aspects of health is, of course, useful in creating awareness of the complexity of the concept of health. However, in actual life, it is obvious that dividing people’s health into ‘physical,’ ‘mental’ and so on often imposes artificial divisions and unrealistic statement of the factual position. Sexual health, for example, crosses all these boundaries. The WHO has, therefore, rightly stressed in its definition of health a “state of complete physical, mental and social well-being”. However, there is no denying the fact that a satisfactory definition of “well-being” is itself a problem. Health like happiness cannot be defined in exact measurable terms.
Nevertheless the concept of health as defined by WHO is broad and positive in its implications. It sets out the standard—the standard of positive health as goal or ideal towards which people should strive.

Ideal health will, however, always remain a mirage because everything in our life is subject to change. Health in this context has been described as a potentiality—the ability of an individual or a social group to modify himself or itself continually in the context of changing conditions of life.

**Determinants of Health:**

Health does not exist in isolation. It is influenced by a complex of factors, such as genetic, environmental, social and economic, etc. These are interrelated and contribute to the total functioning of the individual. The importance of these varied determinants of health can hardly be overemphasized. For the purpose of this study they are categorized as (a) heredity, (b) environment, (c) ways of living, (d) socio-economic status, and (e) health services.

(a) **Heredity:**

Heredity is a foundational factor and the innate endowment for health given by one’s parents. It plays an important role in determining the uniqueness of each individual and his particular health status. The physical and mental traits of every human being are to some extent determined by the nature of his genes at the moment of conception. The genetic make-up is unique as it cannot be altered after conception.

There is a lot of evidence that superior mental traits are found in persons with superior hereditary endowment. Lorge of Columbia University states: “Superior intellectual ability is not a miracle. It is as natural as superiority in height or weight. Basically it is genetically constituted, but what the superior individual will do with his intellect will certainly be conditioned to a large degree by his environment and his education”. Genetic studies also show a
hereditary basis for special capacities such as music, artistic and mechanical activity.

Heredity also plays an important role in the production of many of the mental and nervous disorders. According to Walhin, "Defective heredity may furnish a fertile soil for the development of mental and nervous diseases". In fact a number of diseases are now known to be of genetic origin, e.g., sickle cell disease, haemophilia, mental retardation, some types of diabetes, etc. The state of health, therefore, depends partly on the genetic constitution of man.

(b) Environment:

It was Hippocrates who first related disease to environment, e.g., climate, water, air, etc. Centuries later the association of environment to disease was revived by Pettenkofer in Germany. In modern times the protection of natural environment is considered vitally important for health and effective living.

Environment is classified as internal and external, or according to some authors, micro and macro. The micro or internal environment of man pertains to each and every component part, every tissue, organ and organ-system and their harmonious functioning within the body system. The macro or external environment consists of all the external things and influences to which man is exposed from conception to death. The external environment is further classified into three components—physical, biological, psycho-social, all closely related. It is also customary to talk about occupational environment, socio-economic environment and moral environment.

Physical environment relates to geography and climate which are of vital importance for man's health. Good climate and natural surroundings contribute to good health. Unfortunately man has been constantly fighting against Nature and madly changing the physical environment around him through nuclear explosions, deforestation, industrialisation, pollution of air and water, creation of slums etc., which are badly spoiling his health and giving rise
to new environmental hazards, e.g., noise and radiation hazards, industrial effluents and food additives. Man-made alterations frequently lead to the outbreak of endemic and epidemic diseases. However, man's victory over his physical environment has also been responsible for most of the improvements in health in developed countries during the past century. He has made good the deficiencies in his physical environment and altered many things to his advantage and healthful living.

The biological environment is the universe of living things which surrounds man, including man himself. The living things are the viruses and other microbial agents, insects, rodents, animals and plants. These are constantly striving for their survival and in this process some of them act as disease producing agents, reservoirs of infection, intermediate hosts and vectors of disease. Among the members of the ecological system (which includes man) there is constant adjustment and readjustment. When for any reason this adjustment is disturbed, ill-health results. In this area man has been constantly endeavouring to protect the health of his community through preventive measures.

The third area of environment, the psycho-social environment, is of man's own creation. It includes a complex of psycho-social factors influencing health, health services, and community well-being. They include cultural values, customs, habits, beliefs, attitudes, morals, religion, education, occupation, standard of living, community life, health services, social and political organizations.

Social and medical scientists have clearly established association between psychosocial environment and the prevalence of illness. In fact man today is viewed as an agent of his own diseases; his state of health is determined more by what he does to himself than what some outside germs of infectious agent do to him. Psychosocial stresses, such as poverty, death of a spouse or parents, desertion, loss of employment, birth of a handicapped child,
etc. may disturb his mental and nervous equilibrium and precipitate the onset of psychosocial disorders, such as ulcers, bronchial asthma, hypertension and mental illness. Most people committing suicide are mentally ill. Crime, violence, drug abuse and other forms of deviant behavior are due to psychosocial stress. From a psychosocial point of view, disease may be viewed as a maladjustment of the human organism to his psychosocial environment resulting from misperception, misinterpretation and misbehavior.

In view of the fact that man exists concurrently in so many environmental contexts, it is obvious that a stable and harmonious equilibrium between him and his “total environment” is needed to reduce man’s vulnerability to disease, and to permit him to lead a more productive and satisfying life. The policy of the United Nations Environmental Programme (UNEP) aims at promoting the quality of life and protecting the world against health hazards.

(c) Ways of Living:

Health is a way of life. It is related deeply to life style which includes ways of living, personal hygiene, habits and behavior. These life activities are the experiences engaged in by the individual. These experiences determine the way he lives, which to a large extent produce the quality of life and the degree of effective living. Experiences can be classified as physical, mental, social and spiritual. They include what the individual does each day —his work, his play, his sleep and rest, his expression of faith—all his health practices determining his way of living. The selection of wholesome experiences and adoption of a balanced programme of activities will surely exert a powerful influence on the quality of life and consequently ensure good quality of health.

Currently, the major health problems in the developed countries are tied significantly to life style, viz., cardio-vascular disease, automobile accidents, drug and alcohol abuse, suicides and homicides. In order to change for the better it will require education to change life style and behavioral pattern.
Freudenberg (1978) suggested a strategy called “Health education for social change”.

(d) **Socio-economic Status:**

The health of a community is integrally related to its economic status, and its social and political organization. The world today is divided into rich and poor, developed and undeveloped, haves and have-nots. There is little doubt that in many developed countries, it is the economic progress that has been a major factor in reducing morbidity, increasing life expectancy and improving the quality of life.

It is said that poverty leads to sickness and sickness to poverty, one of mankind’s vicious cycle. Poverty leads to sickness by depriving man of his needs of adequate nutrition and shelter and by exposing him to the hazards of poor sanitary conditions. The teeming millions of India’s population, which has now crossed the one billion mark, live in rural areas in abject poverty. They are in fact below the poverty line. The striking features of the rural life of our country are insanitary living conditions, malnutrition, lack of safe drinking water—all responsible for poor health. It is an established epidemiological finding that the prevalence and distribution of disease is strongly influenced by economic factors. In fact, most of the infectious and nutritional deficiency diseases, common in developing countries, are really “diseases of poverty”. Poverty predisposes to high maternal, child and infant mortality rates. Poverty also predisposes to crime, violence, drug abuse, depression and other forms of deviant behavior.

The other side of the coin is affluence. Ironically, it can also contribute to illness as exemplified by the high rate of ischaemic heart disease and diabetes in the upper socio-economic groups. The major medical causes of death in the West today are cardiovascular diseases and cancer which together account for two-thirds of all deaths.
Health Services:

Health services include all those personal and community services, including medical care, which are directed towards the protection and promotion of health of the community. They range from preventive to curative measures, including health guidance, periodical health examinations, recording of health histories, and clinical, surgical and hospital care. The health of the people is strongly influenced by the quality and availability of health services. For example, immunisation of children will have a powerful impact on the incidence and prevalence of particular diseases. Provision of safe water supply will go a long way in preventing water-borne diseases. Again, the care of pregnant women and children would contribute to the reduction of maternal and child morbidity and mortality. The importance of all these services can hardly be over-emphasized in ensuring good health of the community.

The World Health Organization has taken a leading role in action for health promotion in the 1980s and 90s. WHO stated in 1977, at the 30th World Health Assembly that the main social target of governments and WHO in the coming decades should be the attainment of all citizens of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life. This was the beginning which has come to be known as the “health for all” movement which led to the development of regional strategies for different regions of the world in 1980s.

The regional strategy called for fundamental changes in the health policy of member countries, including a much higher priority for health promotion and disease prevention. It called for not merely the health services but all public sectors with a potential impact on health to take positive steps to maintain and improve it. Specific regional targets were set and published in 1985. This gave impetus to the new interest in health promotion activities during the 1990s with emphasis on addressing inequalities in health through attention to the key social, economic and environmental determinants.
of ill-health and on community participation in health promotion. These moves are all positive indications of a concern to address inequalities in health and tackle root causes of ill-health in today’s society.

**Health Behaviour:**

There is little doubt that the way we lead our lives, directly and indirectly, affects our health. Recognition of the influence of individual behavior on health goes back at least to Hippocrates. In the twentieth century, research in the behavioral science has shown that it contributes strongly to our understanding of physical health and illness (Roden and Salovey, 1989). Health psychology is now defined as that field which studies the psychological processes affecting the development, prevention and treatment of physical illness (Glass, 1989; Taylor, 1985). The following findings provide significant evidence of the impact of nonphysical factors on health.

1. Certain illnesses are more likely to occur among individuals with specific personality characteristics (Suls & Rittenhouse, 1987).

2. A patient’s recovery depends in part on how the physician interacts with him or her (Krantz, Grunberg & Baum, 1985).

3. Socio-economic status obviously affects health as many of the required services are expensive, yet there are more subtle effects too. In the affluent society of the United States today, scientific, technological and economic progress has led to great expansion of individual behavior choices, many of which can affect health (Anne Ramsay Somers and Victoria D. Weisfeld).

4. A study in Great Britain comparing newspapers aimed at the higher socio-economic classes with those designed for the lower socio-economic classes revealed a striking difference in the coverage of health issues. Kristiansen and Harding (1988) discovered that the “quality press” prints more information about health than the “popular press”.

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These investigators suggested that such difference in content may be partly responsible for the greater number of illnesses and higher death rates among those lowest on the socio-economic scale.

There are no adequate overall measures of functioning, vitality, or well-being. People tend to view health more globally and experientially. Although they may become concerned about specific symptoms, they tend to view their health in terms of an overall sense of well-being and the extent to which the symptoms they experience disrupt their ability to function or interfere in some significant fashion with their activities. People’s feeling states influence their sense of physical well-being. Persons reporting poor physical health are frequently depressed, feel neglected, have low morale, suffer from alienation, and are less satisfied with life. Although the casual sequence goes both ways, there seems little doubt that overall life experiences affect one’s general sense of well-being.

**Models Of Health Behavior:**

Kasl & Cobb (1966) make a distinction between three different types of “health behavior”. These are briefly described below.

(a) **Health Behavior:**

It may be defined as an activity undertaken by a person believing himself to be healthy for the purpose of preventing disease or detecting it in an asymptomatic stage. In other words, it refers to patterns of response relating to health when the person has no specific symptoms. Traditionally, it has been used to study people’s orientations towards preventive care services such as immunizations, medical check-ups, hypertension screening and prophylactic dentistry.

(b) **Illness Behavior:**

It relates to any activity undertaken by a person who feels ill, to define the state of his health and to discover a suitable remedy. The term illness
behavior describes the ways in which persons respond to abnormal bodily indications. Illness behavior thus involves the manner in which people monitor their bodies, define and interpret their symptoms, take some remedial actions, and utilise the health care system. People differentially perceive, evaluate and respond to illness, and such behaviors have enormous influence on the extent of the interference with usual life routines, the chronocity of the condition, the acquisition of appropriate care, and the cooperation of the patient in the treatment situation.

(c) **Sick-role Behavior:**

It covers all activities undertaken for the purpose of getting well by those who consider themselves ill. It includes receiving treatment from appropriate physicians, generally involves a whole range of dependent behaviors and leads to some degree of neglect of one's usual duties. It is obvious that the distinction between illness behavior and sick-role behavior, pointed out by Kasl and Cobb, is of little significance and according to authors like David Mechanic, "this further classification has limited empirical utility."

The models discussed below are essentially concerned with understanding and predicting health behavior.

**Health Belief Model:**

This was developed by four psychologists—Hochbaum, Kegeles, Leventhal and Rosenstock (Rosenstock, 1974) to predict individuals' preventive health behavior. It was subsequently modified by Becker and Maiman (1975) to incorporate sick-role behavior and compliance with medical regimens. Readiness to take action and engage in health related behaviors depends on a number of factors. The first two are concerned with the extent to which individuals feel vulnerable to a particular illness. This involves whether they feel susceptible to contracting the illness and their thoughts about how severe it is. Besides, susceptibility, severity and vulnerability other factors
involved in the model are *benefits* (potential to be gained from a particular course of action), *barriers* (degree of physical, psychological or financial distress associated with any form of action) and *cues to action* (stimuli that trigger appropriate health behavior). Diverse factors such as demographic, ethnic, social and personality traits may also influence health behavior.

Becker et al. (1977) include yet another factor in their revision of the model, which is the predisposition or motivation of the people to engage in health-related practices. Becker et al. (1977) state that the health belief model is a useful tool in predicting the degree to which individuals are likely to play an active role in their and others’ health care.

Stated plainly, the Health Belief Model examines the extent to which a person sees a problem as having serious consequences and a high probability of occurrence. The model is basically a psychological cost-benefit analysis in which action follows motives that are most salient and perceived as most valuable when the person has conflicting motives. The model also gives attention to cues to action because investigations show that activating stimuli are necessary to bring about the necessary actions among motivated persons. It is also helpful if persons have a clear plan for translating their motives into action. Possibilities for desired actions are enhanced when the person has comprehensible instructions on how to engage in the desired behavior without vastly disrupting usual daily routines. Preventive action is more likely to take place if it can successfully be integrated with routine behavior. For example, members of some religious groups have good health practices associated with their religious beliefs. Their better health outcomes occur not so much because health is given special emphasis but more because behaviors associated with religious beliefs promote good health.

There is no doubt that the Health Belief Model can be a useful guide to health behavior under certain circumstances (Rosenstock, 1974; Rosenstock and Kirsch, 1979), but there are a number of criticisms. Firstly, the
reformulations by Becker and Maiman (1975) make the theory unnecessarily unwieldy with 11 "readiness" factors and 23 enabling factors. This clearly constitutes more variables than can be included in any one study (Wallston & Wallston, 1984). Secondly, the model treats people as rational decision makers. Janis (1984) says, "The important point is that the health belief model, like other models of rational choice, fails to specify under what conditions people will give priority to avoiding subjective discomfort at the cost of endangering their lives, and under what conditions they will make a more rational decision". Finally, Wallston and Wallston (1984) think that combining the health belief predictors interactively may prove more fruitful than simply adding them together.

With growing interest in recent years in reducing risk factors in disease through behavior change, research attention has focused on a much wider range of behaviors than usually associated with the health belief model. As one broadens the range of concerns to such varied behaviors as smoking, drinking, exercise, driving and preventive use of medical services, no general theory serves effectively in integrating relevant data. Indeed these behaviors are complex patterns of response arising from prior socialization, peer group pressures, situational factors and personality configurations. Research examining a wide range of health behaviors has not resulted in the identification of any unitary health behavior orientation that can be taught in a non-specific way, but we can make some generalisations, e.g., about the relation between educational level and health behavior. Given the limitations of current knowledge, it remains more productive to attempt to change health behavior by focusing on specific problems such as smoking rather than on a more diffuse approach.
Locus Of Control Model:

Rotter (1954) proposed that behavior was a function of the individual's belief that the behavior will lead to a reinforcement (expectancy) and how much that reinforcement is liked (reinforcement value). The most important factor in determining generalized expectancies is locus of control. To measure these generalized expectancies, almost a dozen different locus of control measures have been developed (Lefcourt, 1982), but the test that Rotter devised is known as the I-E Scale.

We have an external locus of control if we believe that we are not masters of our own fate and are subject to the control of outside forces, such as luck or destiny (e.g., such beliefs that many people can be described as victims of fate; most of the things that happen to us are a matter of luck). However, we have an internal locus of control if we believe that we have the ability to influence and determine the features that affect our lives (e.g., beliefs such as—what happens to other people is very much of their own making; we are in complete control of our destiny). If we have an external locus of control, we are less likely to engage in behaviors that could have a positive effect on our health or lives, believing that it does not matter what we do, fate has already decided for us. But if, on the other hand, we have an internal locus of control, then we are much more likely to do things for ourselves, because we believe that we can have a significant say in how our life is run.

An increasing number of health researchers have measured locus of control beliefs and have attempted to relate these expectancies to a host of health related behaviors (Oberle, 1991). Some of these studies used a scale where there was no mention of health factors (Lavenson, 1973); others have incorporated specific health items into their scale (Wallston and Wallston, 1984). Some studies have found that a person is most likely to engage in health behavior if he has a belief in internal health locus of control and a high valuing of health; others have found the opposite to be true.
There are a number of drawbacks to this approach. Firstly, its predictive value is not as reliable as the health belief model (Wallston and Wallston, 1984). Secondly, the prediction of behavior from attitudes requires a high degree of correspondence; it is doubtful whether the model can accommodate such difficulties. Stainton Rogers (1991) thinks the model is totally inappropriate as an explanation of health behavior. However, Oberle (1991) thinks that the main problem has not been with the locus of control itself but with the standard of studies that have used the model. Finally, it may be more profitable to investigate other constructs as well as locus of control that are defined by the specific situation.

**Conflict Theory Model**

This is a model of personal decision making that attempts to specify the conditions under which individuals will give priority to avoiding subjective discomfort at the cost of endangering their lives, and under what conditions they will make a more rational decision by seeking out and taking into consideration the available medical information about the real consequences of alternative courses of action in order to maximize their chances of survival. Janis (1984). Janis and Mann (1977) have suggested five different patterns of coping with realistic threats and five stages that individuals go through in order to arrive at a stable decision. These five coping patterns of the decision are as follows:

1. **Unconflicted Persistence**: Ignoring the information about risks and the person continuing to behave in a complacent fashion.

2. **Uncomplicated Change**: Accepting without question and adopting whatever course of action is recommended.

3. **Defensive Avoidance**: Evading the issue by putting things off, shifting the responsibility to someone else or selectively attending to the sorts of information one wants.
4. Hypervigilance: Due to a feeling of impending doom the person becomes so panicky that he jumps at the first solution that appears to provide the answer, without considering the other courses of action.

5. Vigilance: The individual carefully considers all the courses of action in an unbiased manner before taking a decision for good reason.

According to Janis and Mann (1977), the fifth pattern ‘vigilance’ is a prerequisite of decision making. All the other four lead to maladaptive behavioral consequences. In order to put the vigilance pattern into operation three conditions must be satisfied: (1) awareness of serious risks for whatever alternative is chosen; (2) hope of finding a better alternative; and (3) belief that there is adequate time for search and deliberation before a decision is taken. If condition one (conflict) is not met, uncomplicated adherence or unconflicted change would follow in all likelihood. If the second condition (hope) is not met, defensive avoidance will be the dominant coping pattern. If the third condition (adequate time) is absent, hypervigilance will inevitably follow as the dominant coping pattern.

Having satisfied all these criteria, the decision maker is now in a position to proceed through the stages of making a stable decision which include appraising the challenge; surveying alternatives; weighing alternatives and taking a decision; developing a plan to implement the decision and informing interested parties about the same; and adhering to the decision (commitment) despite negative feedback of any new threats or opportunities which are discounted.

The most important feature of the theory is the emphasis on the coping pattern of vigilance. If any of the other coping patterns is dominant, then the decision maker will fail to engage in adequate information search and appraisal of consequences, overlooking or ignoring crucial information about relevant costs and benefits. Under these conditions the outcome will not be correctly predicted by the Health Belief Model or by any other rationalistic model of
decision making (Janis, 1984). The model has not been fully tested, but Milner (1994) successfully used the model in a study of decision making processes in self-help groups. Group structure was not only related to decision making but to self-esteem as well.

**Self-Efficacy:**

Self-efficacy can be defined as the extent of an individual's competence to face the challenges in life. Obviously, it differs from person to person. Self-efficacy forms part of Bandura's social cognitive theory (Bandura, 1986) which postulates that behavior is learned through modelling, visualizing, self-monitoring and skill training. Behavior is determined by expectancies and incentives. Expectancies are categorized into:

(i) expectancies about environmental cues—beliefs about how events are connected;
(ii) outcome expectancies—beliefs about how behavior is likely to influence outcomes;
(iii) efficacy expectancies—expectancies about one's own competence to perform the behavior needed to influence the outcome.

Incentive is the value of a particular object or outcome (health status, approval of others, outcome gain). Thus people with a weight problem will try to change their diet if they believe that their current eating habits pose a threat to any personally valued outcome, such as health or appearance (environmental clues); that specific changes in dieting habits will reduce the threats (outcome expectations); and they are capable of adopting new eating habits (efficacy expectations). Bandura (1989) observes that expectations of personal efficacy determine whether coping behavior will be sustained in the face of adversity. In the case of people with a strong sense of self-efficacy, their weight problem will sustain them in adhering to a particular diet regimen even though there is a
small reduction in weight. Those with a weak sense of self-efficacy, in the same circumstances, would be more likely to become discouraged and give up. Linn (1988) related the ability to tolerate pain to self-efficacy. Those subjects with high self-efficacy were able to tolerate more pain than those with low self-efficacy. Bandura et al. (1983) say that self-efficacy enables people to cope with stressors because it activates the production of endogenous opioids that block the transmission of pain and allow the person to function more effectively.

**Theory Of Reasoned Action:**

The cardinal principle of this theory is that intention is the best predictor of behavior. Suppose if someone invites his friend, who has just given up alcohol, for lunch or dinner, he would naturally ask his guest if he would accept a glass of wine with meal. According to the theory of reasoned action (Ajzen & Fishbein, 1980) the host would like to know in such a case what his guest intends to do. But what determines intentions? The theory indicates that intention to perform a behavior is determined by beliefs and attitudes. Ajzen (1985) added another concept to the theory and labelled it the theory of planned action. He suggested that perceived control was an important factor in behavioral intention. Thus, one of the best predictors of weight loss is the perceived control over one's weight. It involves beliefs about abilities, opportunities and obstacles to the behavior. The theory has been applied to smoking (Fishbein, 1982) losing weight (Schifter and Ajzen, 1985) and breast self examination (Lierman et al., 1990).

The models and theories of health behavior discussed above represent a significant step forward in understanding why people do and do not seek health care. They have also been applied to a variety of health topics ranging from safe sex to brushing and flossing teeth. However, it has been pointed out that they suffer from two drawbacks.
1. According to Weinstein (1988), the theories assume that people think about risks in a detailed rational fashion. However, people may modify their behavior for vague, illogical reasons.

2. With the various reformulations of the models and theories, the distinction between many of them has blurred. Soggard (1993) points out that both the health belief model and the social cognitive model are based on Lewin's field theory (Lewin, 1951). Recently, the health belief model has been revised to incorporate self-efficacy (Rosenstock et al, 1988). Similarly, the notion of perceived control is close to Bandura's concept of self-efficacy (Ajzen & Madden, 1986).

Although much valuable research has been done in the sphere of health behavior, it seems there is still enough scope for further research before we are able to predict the circumstances under which people will, or will not, engage in health behavior.

In the backdrop of above theories and models the present research is undertaken to study health maintenance behavior in relation to certain personality and demographic variables. More specifically, the present research investigates the influence of health locus of control (i.e., internal and external), hardiness (i.e., hardy and non-hardy), age (i.e., young and old) and sex (i.e., male and female) on health maintenance behavior. In the context of the conceptual framework of the study it would be appropriate to explain briefly the personality variables here.

**Health Locus of Control:**

Locus of control has already been discussed above. This concept has frequently been applied to health behavior using a special measure known as Health Locus of Control (Lau, 1988). Those who strongly believe that internal factors control their health tend to seek more health related information, remember the information better, and respond more readily to messages
encouraging medical examination than do those who believe in external control (Quadrel & Lau, 1989). This attitude gives them the feeling that they can make decisions and take effective action to produce desirable outcome and avoid undesirable ones (Rodin, 1986). Several studies have found that people who have a strong sense of personal control report experiencing less strain from stressors (Elliot, Trief & Stein, 1986; Matheny & Cupp, 1983; McFarlane, Norman, Streiner & Roy, 1983; Suls & Mullen, 1981).

Wallston, Maides, Wallston (1976) reported three important uses of health locus of control —

(a) as an independent variable to predict health behavior, either alone or in combination with other relevant belief and attitude variable (Wallston, Wallston, Kaplan and Maides, 1976; Krantz, Baum and Wideman, 1980; Toner and Manuck, 1979; Sproles, 1977).

(b) as an independent variable, in combination with different treatment conditions, such that treatment outcome may vary with locus of control beliefs (Saltzer, 1978; Key, 1975; Wallston and Mcleod, 1979); and

(c) as dependent variable to measure treatment outcome (Wallston and Wallston, 1973; Bloom, 1979; Tolor, 1978; Dishman et al., 1980).

Hardiness:

According to researchers Suzanne Kobasa and Salvatore Maddi, individual differences in personal control provide only part of the reason why some people who are under stress get sick whereas others do not. They have proposed that a broader array of personality characteristics—called hardiness—differentiates people who do and do not get sick under stress (Kobasa, 1979, 1986; Kobasa and Maddi, 1977). Hardiness includes three characteristics:
(1) **Control**: It refers to people's belief that they can influence events in their lives, that is, a sense of personal control.

(2) **Commitment**: It is people's sense of purpose or involvement in the events, activities, and people in their lives. For instance, people with a strong sense of commitment tend to look forward to starting each day's projects and enjoy getting close to people.

(3) **Challenge**: It refers to the tendency to view changes as incentives or opportunities for growth rather than threats to security.

The above variables constitute the framework of the present study. It is hoped that the findings of the study will provide useful information about health maintenance behavior and its relation with personality and demographic variables, i.e., whether externally oriented and internally oriented subjects, hardy and non-hardy subjects, young and old subjects, and male and female subjects differ with respect to health maintenance behavior. The angle of approach to the subject of study differs significantly with that of earlier studies on health maintenance behavior. Perhaps this study will make some humble contribution to the existing research literature on this aspect.