From the time of ancient China and classical Greece health was considered to be a state of balance/equilibrium with nature. The amended definition of WHO also says, it is not absence of disease, but a state of well being with physical, cultural, psychosocial, economic and spiritual attributes. Health care professionals are change agents today through facilitating empowerment of individuals and communities to increase their control over and to improve health. By considering the changing status of community health with increased life style diseases and controllable infections disease, the scope of a Health Psychologist is increasing nowadays.

A number of approaches within Medicine, Psychology and the health care system had contributed for the emergence of Health Psychology. It can be called as one of the most important developments in Applied Psychology in the past 60 years. Until the 20th century the major causes of illness and death were acute disorders like tuberculosis, phenomena and other infectious diseases. Acute disorders are short term medical illness, often the result of a viral or bacterial invader and usually amenable to cure.

Health in Traditional Indian Context

Healing system that was established in India long before, was more based on the traditional knowledge system and Ayurveda. As the knowledge was not open to all, the experts in this area were limited and locally available herbs or plant products were used in limitation. But while developing into a well established system, it took into account health in a holistic perspective. The body system, mental set up of the patient, the home background and significant people’s attitude are taken into consideration during treatment. This indicates the importance given by traditional treatment and health intervention system of India, to the biopsychosocial factors. Though it was not specified in particular, our old system of Ayurveda has got a wider perspective to deal with health and illness.

Nowadays health intervention is not completely done by physicians alone and many killers of mankind are not infectious diseases. Microbes are not found as the major causal factors of many
disorders like heart disease, hypertension, diabetes, ulcer etc. Those were called as psychosomatic disorders, because psychological factors like particular mental set up, personality or distress experienced by the person, becomes one of the major causal factors here. The word psychosomatic has a long history, and was coined to refer to symptoms or illnesses that are caused or aggravated by psychological factors, mainly emotional stress (Lipowski, 1986). This concept is changing nowadays, though it is still in use by laymen as well as professionals. The physical symptoms or illnesses caused from the interplay of physiological and psychosocial factors are called as psychophysiological disorders. It is from the biopsychosocial perspective, this type of disorders are defined. Ulcer, Inflammatory bowel disease, irritable bowel syndrome, asthma, chronic headaches like tension type headache/migraine headaches, hypertension, cardio vascular disorders, coronary heart disease cancer etc are explained under this heading.

When recent etiological studies indicate the causal factors of psycho physiological disorders, it becomes the right time for Health Psychologists to research about how scientific designing of health intervention. People meet psychologist with list of complains out of which many can be health related. Psychologist should analyze the content and find out the relevant ones to support the diagnosis. This curious enquiry should be open to seek out causes from the biological, psychological and social areas of the client. The interventions which are merely symptom oriented may not work effectively. The increased number of referred cases from physicians to psychologists, indicate that the scope of health psychologists is high. The professional interventions of psychologists is more needed for patients with Diabetes, Asthma, Allergy, Hypertension, CAD, Cancer, Ulcer, Arthritis, Skin Diseases, headaches etc. But how should the intervention style be? To be scientific and systematic, it shouldn’t be merely symptom oriented only. The wider causal factors have to be taken into consideration in a scientific intervention. These chronic illnesses are found more in industrialized countries. They develop slowly, with which people live for long time, often they cannot be cured, but rather managed by the patient and provides working together.

**Biological Causes**

The biomedical model, which was leading the thinking of practitioners about causal factors for the past 300 years, explains illness on the basis of aberrant somatic processes – like biochemical imbalance changes in hormonal or neural functioning etc. As it was mainly used to explain infectious diseases, the cure or prognosis could be explained like this. This was roughly a single factor explanation. Rather than finding a variety of causal factors, biological malfunction is mainly concentrated in this as responsible for the development of illness. Biomedical model clearly emphasizes illness over health. It focuses on aberrations that leads to illness rather than on conditions that might promote health (Engel 1977).

Biochemical imbalances of the body can lead to illness, as explained by biomedical model. As per this view psychological and social factors are quite independent of disease process. Call for attention to psychological and social factors of health led to the development of biopsychosocial model of health and illness. (Engel, 1977). Biopsychosocial model determine health and illness issues through the interplay of biological, psychological and social factors.
People vary in stress reactivity, the degree to which changes occur in autonomic, endocrine and immune responses as a result of stress. This can affect vulnerability to illness. Those who have high cardiovascular reactivity experience stress associated increase in illness compared to less reactive children. (Boyce, Alkon, Tschann, Chesney & Alpert, 1995) Cardio vascular reactivity is associated with cortisol changes, a possible risk for infectious disease.

Biological factors are found to be one of the major causes of many illnesses. Scientific evidences of that type began to be collected, from the time of biochemical model. The intake of a toxin (a chemical that can’t be assimilated into a body, a virus or bacteria - into the body will lead to illness. Changes in the hormonal balance influence in the functioning of the vital organs or a system, neurochemical imbalances or internal damages etc can be attributed for the symptoms experienced during illnesses. Though Coronary Artery Disease is called as psychophysiological, plaque deposits inside the arterial walls, high cholesterol level, hypertension, ECG variations etc can be found along with, which are suitable biological causal factors for the illness. A physician will usually try to intervene into a health problem, primarily by identifying the biological causal factors behind it. Even an external cause may be converted into a biological cause due to the vulnerability of the body toward illness. It can be a background of malnutrition which makes the body vulnerable.

Psychological Causes

The role of personality and life style over health is mainly intended by the word psychological factors. They also include our cognition, emotion and motivation, perception, learning, memory, thinking, interpretation and beliefs, capacity for problem solving. Do all these factors affect health? Yes.

People believe that ‘there is only one life and I have to enjoy it’. Enjoyment can be through alcohol, drug, smoking, intake of saturated fat and so on. People also believe that ‘I won’t get that disease’ unless and until they get symptoms to identify. We ignore pain and only while getting a severe symptom, we remember that ‘oh, it started two weeks backs’. All these affect our decision about health intervention.

Positive and negative emotion affects our health status in two different ways. Those who regularly exercise, experience more positive emotions, has got a chance to be healthy and they are less disease prone. This is partly because they take care of their health and follow good health habits, and partly because they recover quickly than the people whose emotions are relatively negative. Emotions affect on decision making and problem solving about health. If children are frightened about doctors and medical procedure, that anxiety is found to continue even till old age, if not intervened and their decision about a health care which they urgently need, may not be taken effectively. Some people are concerned about their body build, and health, so that more health behaviour like exercise, dieting etc can be seen from them. Psychological influence of friends, relatives or spouse also leads to healthy behavioural styles, like quitting smoking or alcohol drinking.

Pessimistic explanatory style, a characteristic of explaining negative events of their lives in terms of their internal, stable, global qualities of themselves are ground works for poor health. People who
are optimistic cope effectively as their physiological functioning are also related. Specifically optimists are more of problem focused coping style and less of denial. A feeling that one can have control over the distressing event, (psychological control) also helps people to cope effectively. It is the belief that one can determine one’s own behavior, influence the environment and bring desired outcomes. A group of personal qualities like self esteem, conscientiousness, ego strength, self confidence etc have a role in the stress-illness relationship.

Social Causes

Human beings are also social beings. During interactions we influence others and others influence us. This is applicable in health behavior too. Adolescent boys do exercise and girls diet to be slim, more due to their peer influence. Health related beliefs and values exist in cultures. In Kerala, people earlier believed that a lady soon after labour shouldn’t drink water, so that many won’t allow ladies to drink enough water for about 40 days after labour, which may lead to urinary tract infection. Severe intake of spicy food by the lactating mother may even lead to symptoms in the sucking infant. But these kinds of unhealthy practices come in to their life as social influences.

Mass Media also reflect values, to promote health. But when celebrities express unhealthful behavior through media it provides a wrong model for people. Community, peers, family etc makes such influence. Healthy style of food pattern followed in families and taste preference help to keep balanced diet. While considering the interplay of biological, psychological and social factors, it becomes complex, as all of them are equally contributing to health, one way or the other. That is considered as holistic in its functions, meaning ‘as a whole’. Body as a system is mentioned in this.

Biopsychosocial Factors in Illness

Events in our life which are perceived as threatening or harmful are called ‘stressors’. They create tension in the mind. Catastrophic events, severe pain, or death of a loved one are examples of stressors. Stress is the condition that results when a person perceives a discrepancy between the demands of the situation and the resources of the person’s biological, psychological or social systems. Researches about stress give primary importance to stressors, the related response or the process is stress. Here, what happens is less important than what one thinks as happening to him. Cognitive appraisals of the person who are experiencing stress include whether the demands threaten the well being (primary appraisal) and the resources available for meeting the demand (secondary appraisal). Biopsychosocial reaction of stress, leads to illnesses.

Individual differences in coping with stress, makes the experience very unique. Some people get very desperate even when a slight change is anticipated in their plans, whereas some others face even challenges like natural calamities or accidents with courage. That is, appraisal of a person is really important than what happens to her/him. Judgment of a person about the event, as whether positive, negative or neutral determines further movement. Same event can be interpreted as challenging or harmful (primary appraisal). The cognitions about the resources available to deal with the demands of the situation also determines the psychological condition. (Secondary appraisal).

Problem focused coping and Emotion focused coping are the two general types of coping strategies. Problem focused coping involves attempts to do something constructive about the stressful
Role of Biopsychosocial Factors in Etiology and Intervention

A condition where emotion focused coping involves efforts to regulate emotions due to stressful event. Emotion focused coping includes coping of two kinds. One involves emotional distress, as may be experienced in rumination, where as the other involves classifying and working through the related emotion. Positive life events, good mood and opportunities for rest, relaxation and renewal may help people to cope effectively with stressors.

Certain personalities like Type A, are said to be vulnerable to experience high psychological distress. A pervasive negative mood marked by anxiety, depression and hostility is found to be prominent in them. Such people experience discomfort and dissatisfaction in a wide range of situations. Negativity is associated with asthma, arthritis, ulcers, headaches and coronary artery disease. These psychological factors predispose to make one disease prove. Increased anxieties also intervene to affect badly the cure process during treatment too. Even without physical disorder, people with high negativity report high distressing physical symptoms like headaches, stomach aches and other pains (Watson and Pennebaker 1989).

If you take an obesity case as an example, the causal factors can be found as spread in the biological, psychological and social arena of the patient. Chance of having obese parents, (hereditary background), practice of taking more sweety and fried food and the feeling that chubby cheeks is the sign of beauty and health from the significant people – all contribute from the different areas to make one obese. Stress experience also will be having all these three background. Many of the psychophysiological disorders will be developed from such bases. Inheritance of susceptibility to certain diseases and hereditary causal factors will be purely biological in nature. Heredity determines the limits above which an individual cannot move. Parental characteristics, damages in certain organ, limited/over reactions of the body, birth defects are some of the biological factors that determine illness. Proneness or resistance to illness can be attained through biological factors. In the complex physical system, the body, the effective and integrated functioning different system and subsystem are included. Biological factors become the supporting back ground of health on the basis of the body and physiology related areas.

India includes multiple cultures and people of different classes. Health behavior always can’t be directly related to their socioeconomic status. Studies indicate that people of high and middle socioeconomic class of India are not usually reluctant to seek medical assistance when needed, but only due to lack of awareness to certain illnesses, there may arise delay. When awareness is high certain other behavior of people also can be observed. In Kerala State where literacy rate is high this is readily observable. Earlier when availability of physician were rare, in villages and towns, the family doctor system were prominent. The doctors treated almost all the patients coming to them, with limited available facilities. But slowly the awareness of people were increased about the medical service so are private hospitals and specialization of medicine. Nowadays by detecting a child’s symptoms people takes it directly to the Pediatrician. While feeling chest pain, suspecting an angina, people rush to Cardiologist. Any problem of ear, nose and throat are primarily addressed by ENT specialists and there goes on the specialized awareness of layman. The screening and empathetic intervention of a family doctor is vanishing from us.

From the medical specialists’ table more sophisticated and specific treatment is expected by people, but many a time cases that are not necessary to be referred to specialists also will reach there,
when they lack referral services. They will have to undergo medical tests which are not that necessary. Intake of medicines also will be high, as there is a kind of patient satisfaction when medicines are more. Somatisation of feelings and anxiety also will reach at medical specialist like this.

Nowadays medical expenses are increasing. Even now total number of hospitals in the country is not enough to deal with the illnesses status of the country. As Government take public health into attention, things are changing. Still medical system is getting privatized a lot. Due to many limitations in the Government sector, for a medical assistance, middle and upper class people prefer private hospitals; though treatment there is very costly. As the life style diseases’ statistics are increasing, insurance companies are offering new health policies. They collect premium from healthy people and will pay the expenses whenever the policy maker (or even their family members) will happened to undergo any treatment. The question here arises is whether the insurance is either for health or for the illness, i.e. the expenses by the policy maker is being reimbursed by the insurance company, but there is no guarantee for health as such. If it were, the assurance of health could have been provided by the company through nutritious diet, safe drinking water, pure air to breath and mental peace. None of them could provide guarantee for the supporting conditions for health maintenance. This changing era should be known to a Health Psychologist. This can be the social background of a patient. For many people in the country, even primary necessities of life are not at all met and also lack awareness about healthy life style. Even the rich suffer nowadays from a lot of life style diseases, where sedentary life style, improper diet and other dangerous environments become the causal factors.

When there will be lack of proper nutrition in the body, it makes the body a proper place for getting infected by external agents and micro organisms. A continuous, steady and proper in take of balanced diet, including cereals, pulses or tubers and non vegetarian, vegetables, fruits and enough water at least twice a day, makes the body immune to many diseases. Importance for balanced diet shouldn’t be ignored in health intervention. As entering into middle or old age, the metabolism rate diseases and hormonal changes taken place in the body so that intake and exercises can be adjusted accordingly; but balance diet has to be taken by all. Usually an infectious agent can inter into the human body and get infected only when the body loses immunity. It usually takes place when the person is not consuming balanced diet where the body becomes a ‘fertile soil’ for the microbe to grow and develop. While analyzing cases, health psychologist shouldn’t ignore the diet pattern of patients/clients. Proper physical activity, sleep habit and presence of positive emotions contribute for health.

**Designing Interventions-Need for Biopsychosocial Approach**

Biological factors are affected by the health behavior. Unhealthy life style makes one prone to the hereditary related illness to be appeared earlier. Psychological causal factors and conditions also should be intervened effectively. Intervention to decrease the serum cholesterol should include awareness about quality of food intake, food preference - pleasure relation, social factors like influence over preference, variety of healthy diet available, necessity to keep a balanced diet etc. Psychologist should remind about the importance of balanced diet on illness.
Many psychological factors like Type A behavior pattern, hostility, stress etc can be addressed effectively with psychological intervention techniques. But while dealing with health related issues, there should be enough concentration up in the biological and social factors. Sometimes it is not the lack of awareness, but the lack of social support that keeps people away from exercises. The awareness is already there, in many but it is not properly being implemented. If there is peer or family support, a morning walk will be a fun and pleasure that provides health. Many of the healthy life style is being practiced due to the influence of the society, so is the unhealthy styles. When interventions are being designed the health contributions of society cannot be ignored. Peer/family support has to be included and generated. Family counseling is not only related to couple issues or parenting but also for health issues. Support of family, children, friends or colleagues in the development of healthy life style and eradication of the causal factors will be out reaching and long lasting in its effects. Even the society will get its secondary benefits but the social support will work as an extra contributing factor. Support for continuation of the treatment regiments and avoidance of causal factors are intended here.

A Biopsychosocial Intervention Experience

An intervention for the Coronary Artery Disease patients was designed by the author in the biopsychosocial perspective. As the patients were experiencing high serum cholesterol, hypertension and fat deposits, they were advised to control their diet. They were provided with intense training in charting their diet. Vegetables, fruits, nuts, sprouted grains, (Raw diet) pure water etc were included in their diet. They were given training in eating as per their real need, taste and health. They were allowed to sit, relax, chew, and enjoy the diet and its taste. They were also trained in Yoga and Meditation. A comfortable style of simple living was also practiced. When they are in a relaxed mood, the opportunities for artistic expressions were also provided. Constant interaction with air was allowed through cotton dressing. They were allowed to walk and swim with supervision. Group singing, lectures etc were provided in a camp situation in a naturally beautiful place. Here the group is tried to be homogeneous with similar kinds of patients so that the talk about health, allowed them to make doubt clarifications which were beneficial for the fellow participants too. Many a time, the participants were encouraged to take part in the camp along with their spouses and family. Family counseling is also provided as an element of intervention. The camp continued for seven days where the patients could interact with health experts whenever needed. Later they practiced he same at home for 40 days. Follow ups were done on 21st and 41st day. The before - after comparisons indicated that their cholesterol and blood pressure rates are decreasing to the normal level. Body weight is also decreased to the expected level of Body Mass Index. Stress, hostility and activation level (Rajo Guna) was decreased significantly where as stability (Satva Guna) was increased significantly. Inertia (Tamarsic Guma) was found to be unaffected by the intervention. More over the group of patients had a we feeling. They helped each other, tried to classify doubts and supported one another. The emotional support they received was reported as wonderful and comfort giving. Indirectly these were contributed to decrease stress and hostility levels, which are the notorious causal factors of the number one psychosomatic killer of the world.
These kinds of intervention consider the person (patient) as a whole, so that called as a holistic intervention. Some other Psychologists had already worked in the similar manner for Allergic Asthma and found successful.

Health intervention is not limited to patients alone. Health enhancement can be done for any person, where the enhancement can be enjoyed by the total body systems. Biopsychosocial intervention is intended for the mankind as such. As all the causal factors are addressed through this, it will be the most effective treatment, if work in association with the knowledge available to the Medical system. Though opportunities for Health Psychologists are abundant in India, Psychologists who are extending their services to Health area is still limited. The old saying explains, when health is lost something is lost, but Psychologists believe that when Health is lost Character also will be severely affected, so that health should be preserved and enhanced. The importance given to the physical, mental and social health will be an investment to our character and the nation as a whole. In any kind of health intervention the perspective to should be biopsychosocial.

REFERENCES


