CHAPTER II
CLARIFICATION OF CONCEPTS AND THEORIES

VARIOUS THEORIES OF PERSONALITY

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CHAPTER II

CLARIFICATION OF CONCEPTS AND THEORIES

This chapter is devoted to the theoretical framework necessary and relevant for the proposed study. Major theoretical issues like Mind body relationship, Psychosomatic interaction, Personality intervention, Activation theory, Psychiatric diagnosis etc. are reflected here.

Various Theories of Personality

For centuries philosophers and scientists have been debating to solve the problem of the relationship between mind and body and the relationship between mental and physical processes. During the pre-scientific era the belief was that mind and body are separate entities, and therefore distinguished between psychological and physical illnesses, both were considered parallel.

The earliest societies regarded abnormal behavior as the product of supernatural forces. A more scientific approach to abnormality evolved in ancient Greece. The physician Hippocrates observed and recorded cases of mental disturbance, developed an organic theory of abnormal behavior, attempted to classify abnormal mental states, and adopted human methods of treatment. His approach survived until the fall of the Roman Empire in the fifth century A.D.

In the middle ages, abnormal behavior was often attributed to demonic possession, and cures ranged from prayers and other
gentle measures to starvation and flogging. In the Renaissance, thousands of people, many of whom exhibited abnormal behavior, were executed as witches.

The leaders of this reform movement in nineteenth century America were Benjamin Rush, and Dorotha Dix. They advocated moral therapy, improving the moral of mentally ill through peaceful living, useful employment and dignified treatment. Moral therapy declined in the late nineteenth century, because of the rise of the medical model. Wilhelm Wunodt and his student Emil Kraepelin were pioneers in applying scientific methods to the study of human thought and behavior. At the same time, psychogenic theories, which attributed mental disorders to emotional stress also began to gain prominence. Then came Franz Anton Mesmer, who discovered the power of suggestion to cure some mental disorders, and laid the ground work for psychogenic theory.

Mesmer's efforts were expanded by the members of the Nancy school, notably Ambrose - Anguste Liebeault and Hippolyte - Marie Bernhelm and later the rival Paris school, under Jean Martin Charcot. Sigmund Freud was the student of Charcot, he got convinced that mental disorders were caused by "unconscious" conflicts that, once revealed under hypnosis, could be resolved. Freud later abandoned hypnosis, replacing it with his technique of free association, and developed his pioneering theory of Psychoanalysis.

Sigmund Freud's theory of Psychoanalysis provided the foundation for the psychodynamic perspective. The theme concept of Freud's theory, is the depth psychology hypothesis, that all
mental activities take place unconsciously. Freud divided the mind into the conscious and the unconscious. The unconscious contains much material that has been actively repressed. Freud stated that the goal of psychoanalytic therapy is "to make the unconscious conscious".

Freud later proposed the structural hypothesis, which divided the mind into three forces - the id, ego and super ego that continually interact and often conflict. Freud viewed personality development as a process of childhood psychosexual development from the oral stage to the anal stage and then to the phallic stage. Anxiety connected with ungratification or overgratification at any of these stages can lead to maladaptive adult behavior.

Freud believed that both normal and abnormal behavior result from the interactions of the id, ego and super ego. Abnormal behavior can result when the three components are in a state of imbalance and the ego is weakened or when an unresolved childhood conflict produces acute anxiety or neurosis. Anxiety over impulse gratification can lead to fixation in the adult personality. In extreme cases, adaptive functioning breaks down and the ego collapses, a condition called psychosis.

Carl Gustav Jung and Alfred Adler the Post-Freudian theorists deemphasized sexuality, the id and the phallic stage of development, instead they emphasized self direction and social relationship. Jung believed that the libiado and the unconscious contain broader and more positive forces than they do in Freud's views, he also argued for the existence of a collective
unconscious or set of symbols shared by human kinds. His brand of psychotherapy involved individuation or integration of opposite forces. Adler claimed that all human behavior is an attempt to overcome an inferiority complex and that social relationships are the key to psychological health.

Harry Stack Sullivan agreed with Adler that psychological problems are caused by interpersonal ones and stressed the parent-child relationship, he pointed out the importance of the self-concept.

Karen Horney also believed in the social root of psychological disorders, attributing them in part to society as a whole, not just to immediate social relationships.

Erik Erikson emphasized the formation of ego identity through the process of psychosocial development, a series of stages that extends not just through childhood but until death.

Margaret Mahler and Heinz Kohut emphasized the child's relations and emotional ties to the parents. Mahler was an object relations theorist. Kohut developed self psychology and invented the diagnostic category of narcissistic personality disorder.

Psychodynamic theory was the first theory to explain behavioral and mental disorders in terms of the individual's emotional history or the learning theories.

Behavioral perspective or the learning theories, the second major perspective, was developed in the early twentieth century as a way to study psychology empirically, with stress on proximal rather than distal causes of behavior. Its foundation was the discovery of the mechanisms of learning, whereby behavior
changes in response to interaction with the environment. Ivan Pavlov's research with dogs revealed the conditioned reflex, training of an organism to respond to a neutral stimulus in the same way it would do a non-neutral one. His work raised the possibility that complex human responses were simply the result of a conditioning process.

John B. Watson publicized behaviorism, arguing that psychology is a natural science that has no use for introspection. He conditioned baby boy who feared rats, to demonstrate that many of our "unreasonable" fears are produced in a similar way.

Edward Lee Thorndike developed the law of effect, which states that responses that lead to "satisfying" consequences are strengthened and likely to be repeated, while responses that lead to "unsatisfying" consequences are weakened and unlikely to be repeated. B.F. Skinner renamed this law the principle of reinforcement and viewed it as the basic mechanism for predicting and controlling human behavior.

Early cognitive behaviorists argued that the stimulus response position overlooked the way in which the human mind processes stimuli and failed to explain why different people respond to the same stimulus in different ways. The basic assumptions of classical behaviorism are that psychology's task in the study of behavior, or the responses an organism makes to the stimuli in its environment, its methodology should be empirical, based on measurements, behavior can be controlled and predicted, and major component of behavior is learning.

Humanistic - existential psychology arose in the 1950s in
reaction to the determinism of psychodynamics and behavioral theory and in response to the spiritual problems of mid-twentieth century life, it took a uniquely non-mechanical view of human existence.

This theory shares an emphasis on human individuality and self awareness, capacity for growth, freedom to choose one’s fate, and responsibility for one’s decisions. The humanistic movement in psychology can be traced to post-World War II disillusion with automation and depersonalization in America. The roots of existential psychology lie largely in Europe.

Humanistic psychology sees human beings as basically good, rational and socially oriented. It sees consciousness and self consciousness as uniquely human and on this ground distinguishes human behavior from the behavior of other forms of life. According to this philosophy the prime motivation in human life is the drive towards self actualization, the fulfillment of one’s capabilities. Abnormal behavior results from a blocking of self actualization, either because of an incongruence between an individual’s experience and his or her self image – this is according to Karl Roger’s theory, or because of a failure to satisfy basic needs – according to Abraham Maslow’s theory, both these theorists believed that healthy personality is not defined simply by the absence of psychopathology, rather its characterized by an openness to the experience and challenges that lead to self fulfillment.

Existential psychology stresses the concept of being in the world i.e. the individual’s relatedness to the world and his or her
constant state of interaction with others.

In the last two decades there has been the tremendous advances in the study of the biological bases of behavior. And this advance in turn has led to a tremendous rise for the neuroscience perspective or neuroscience theory. This theory focuses on the organic determinants of behavior.

In the neuroscience perspective, genetic factors, the central and peripheral nervous systems, and the endocrine system are all biological functions that interact with each other and with environmental influences to determine behavior. Behavior genetics is a subfield of psychology that attempts to determine the degree to which specific disorders are inherent. A few disorders such as Down's syndrome, have a clear cut genetic cause, many disorders, including schizophrenia, result from the interaction of environmental stressors and an inherited diathesis, or predisposition, to the disorder. Through family, twin and adoption studies, behavior geneticists try to assess heritability. Family studies help to determine the degree of influence of the genotype by comparing percentage of genes shared by family members.

The neuroscience theory is the issue of the relationship between physical and psychological aspects of our functioning and the so called "Mind - Body problem".

The mind - body problem was first discussed in the early seventeenth century by the French philosopher Rene Descartes. Psychological theorists regard human behavior primarily as a function of the relationship between the mind and the social
environment. Biological researchers focus on the relationship between the mind and its organic environment, the body, and they are certainly justified. Though the mind is regarded as a thing apart from the body, the fact is that, what we call the mind is actually a function of our physical being, especially of the brain and the nervous system. Thus physical and mental functioning can not realistically be considered apart from each other.

The central nervous system consisting of the brain and spinal cord, controls behavior by processing, transmitting, and storing information. The peripheral nervous system consists of the somatic nervous system and the autonomic nervous system (ANS). The somatic division activates selected muscles and controls purposeful behavior, the autonomic nervous system activates smooth muscles, glands and internal organs and controls such automatic responses as heart rate, respiration, and the release of adrenaline. The autonomic nervous system functions to adjust the body to changing environmental demands through its sympathetic and parasympathetic branches and the ANS is associated with the stress related disorders as hypertension, ulcers etc.

THE ACTIVATION THEORY

The neural mechanisms for activation and for the CNS regulation of autonomic and endocrine processes are well mapped. Activation may be looked upon as a final common path for all phenomena that lead to higher activity in the CNS. The psychological conditions for activation have been summarized in the classical works by Lindsley (1951), Hebb (1955) and Duffy
(1972). Recent data have given additional insight into these processes. Activation occurs to all novel stimuli, and is an important element of the orienting response (Sokolov, 1963). Activation also occurs during exploration of unfamiliar surroundings, need registrations or registered discrepancies from set values (inborn or acquired), and emotions. Activation is reduced when set values or expectancies are being met, and when uncertainties are reduced (Levine, Goldman and Coover, 1972; Bassett, Cairncross and King, 1973; Ursin, 1978). Problem solving directs itself at eliminating differences between set values and actual values (Miller, Galanter and Pribram, 1960; Vickers, 1973). Activation persists until the problem is solved.

Despite its potential, Activation Theory has met criticisms, particularly from traditional psychophysiology. In particular, it has been pointed out that there is a lack of correlation between indicators, and considerable individual variability (Lacey, 1950). Some of this is due to the nature of the processes studied by traditional psychophysiologists. Poor correlations between the various indicators are to be expected since autonomic processes are innervated by two opposing systems, the sympathetic and parasympathetic.

Both are active during activation, as pointed out even by Cannon (1932). The end result, therefore, is affected in two opposing ways by the brain during activation. This is a serious handicap for making inferences about the underlying central nervous mechanisms, or the nature of the psychological response. In addition, response feed-back systems may be complex, and there
are also interactions with metabolic regulatory processes. Finally, individual variation is added to these processes from the fact that they are subject to classical as well as instrumental conditioning (N. Miller).

These difficulties are less important for most endocrine systems. Hormone levels, therefore, may represent a new deal in activation theory. These processes may also be more directly related to the possible pathogenic consequences of activation. Quantification of the responses is reliable, accurate and fairly easy to do with the modern methods of measuring plasma levels of hormones. Most data in the report rely on such analyses. The presence of an important, common "driving" force ("activation") is confirmed, but individual variance is still meaningful.

**ACTIVATION : TRAINING OR STRAINING?**

The key issue is when is activation a part of a healthy interaction with the environment, and when does it produce somatic disease. Activation may be a healthy response which strengthens the system, in particular skeletal and heart muscles. If so, it represents training. However, it could also have a deteriorating effect, it could be using resources which would not be replenished, and there might be wear and tear. In the latter case, the organism is subjected to a strain.

Since a certain stimulus giving rise to activation may have either a training or a straining effect, it is necessary to be precise in the terminology. To regard any stimulus giving rise to physiological activation as a "strain" (or "stress") is grossly
inadequate. In living organisms resistance to strain is a dynamic factor. The breaking point which marks the difference between training and straining differs between individuals, and differs with time. It depends on how much load the system has been subjected to previously. With training, the resistance will be increased. A certain minimum level of loads has to be present in order to keep the resistance intact. Absence or deprivation of loads has pronounced ill effects both in physiology and psychology.

There is no doubt that laymen and many professionals take it for granted that "stress" produces disease. This implication is not necessarily true; for many types and degrees of stress it is simply wrong. It may even mislead people to avoid strains and challenges that would have given them a training effect. Selye himself holds that only distress produces disease (Selye, 1974), and that stress itself is unavoidable, and a necessary life process. According to him, the only absence of stress is death.

The term "stress" is used partly for the response, partly for the stimulus. All immediate somatic changes that "stress" is said to produce may be accounted for by activation theory. The key psycho-somatic question remains: When is activation a healthy response, and when does it produce disease?

**ACTIVATION DAMPENING MECHANISMS**

One very important defect with popular notions on the relationship between "stress" and disease is that it lumps all stimuli. However, when an organism is subjected to stimuli that
produce activation, it is not the stimulus situation itself that predicts the response. The most striking feature is the variance in what the individuals are responding to (Lazarus and Averill, 1972). There are differences in what drives the activation mechanisms; there are also personality differences in what dampens activation. Two such response dampening mechanisms should be identified as particularly important for the activation that eventually may lead to somatic pathology. These two mechanisms should be identified as distinctly different mechanisms. They will be referred to as defense and coping, respectively.

Coping and defence

When the response represents a solution, an effective way of dealing with the environment, activation is reduced. This action-induced response decrement will be referred to as coping. Coping, therefore, is not the performance of the response itself, but depends on the appraisal of the situation after the individual has done something to his situation, and then re-evaluates his situation. This second evaluating process is referred to as "secondary appraisal" (Lazarus and Averill, 1972).

The relationship between defense and coping in situations with repeated exposures to a threatening situation.

Coping is not identical to defense within the definitions offered here. Since coping also includes intrapsychic processes contributing to successful mastery of a psychological challenge, this distinction should be made clear. The gradual development of a response decrement observed in the animal experiments as well as
in the human experiments (Ursin et al., 1978) is coping. A reduced initial response is due to defense. This distinction between defense and coping is similar to "conscious" and "unconscious" processes French, Rodgers and Cobb (1974), Haan (1969), and Kroeber (1963). Defense corresponds to "unconscious" alteration of perception, while coping responds to direct "conscious" action.

Coping is the key term to the understanding of why dramatic and threatening events, even if objectively persistent, do not produce continuous activation and hence pathology in but a minority of cases. The term has been found useful and even necessary in clinical psychology and psychiatry, developmental psychology, and geriatric psychology (D. Hamburg, Gunnar, and Rodin).

The easiest way to define it is that it is the psychological operations (except the defense) which reduces activation as measured in the accompanying physiological state (Levine, Weinberg, and Ursin, 1978).

MULTIFACTORIAL ANALYSIS OF ACTIVATION

Since the endocrine indicators of activation are not influenced by the main sources of variance affecting the traditional psycho-physiological indicators, it was hoped that analysis of plasma levels of hormones would reveal a clear activation factor. However, factor analyses of plasma levels of hormones do not confirm the existence of one simple and straight-forward activation mechanism, but produce independent
factors. There is a fairly consistent principle in this organization, which should be taken into account in future work in psychosomatic relationships. On the other hand, there is no reason to discard activation theory, which still predicts the group data, and predicts when any individual will show activation in all his somatic processes. The individuality affects the relative intensity in the activation response, much in the same way as in traditional psychophysiology (Lacey, 1950).

SUSTAINED ACTIVATION PRODUCES SOMATIC PATHOLOGY

Sustained activation produces somatic pathology. Shortlasting activation has not been demonstrated to have any ill effects except when there already is a somatic change, or a genetic predisposition. The phasic activation observed in coping subjects is also postulated to be a healthy response. It is only when the tonic activation variables fail to decrease that there is a risk for somatic pathology. Persistent high levels of the tonic activation system may be related to pathology in a variety of ways, high norepinephrine levels might produce high blood pressure, cortisol may be related to immune mechanisms, and free fatty acid elevation to cardiovascular disease. The theory has not been developed in detail for any particular disease or any particular organ system, but is at least compatible with available data.

SPECIFICITY OF PSYCHOSOMATIC DISEASE

Alexander (1950) and Dunbar (1954) held that particular
emotional states were channeled into particular physiological responses. When a particular emotional phenomena had occurred over a length of time, psychosomatic symptoms occurred in the body system specific to that emotion. Type of disease and organ selection was specific and meaningful. Considerable attention has been focused on demonstrating such relationships between particular emotional states and particular physiological responses, so-called specific activation. The personality traits relate to specific endocrine systems. The personality traits also determine the coping potential and strategies used when an individual handles threatening and difficult situations. When sustained activation produces psychosomatic pathology, the pathology may be specific and predictable from the personality traits and their related dominating endocrine activation system. It should be stressed that activation is a general phenomenon acting on all endocrine activities in all subjects. We treat factors in multidimensional space, where no pure "types" exist. All individuals load on all factors, but to a varying degree.

There are two previous well known psychosomatic theories, Selye's stress maladaptation theory, and the psychodynamic theory of Alexander and Dunbar. Neither of them are supported by data. The substantial evidence against the Alexander/Dunbar position has been referred to already. Selye's maladaptation theory is also without empirical support. Collapse or decrement in suprarenal cortical activity has not been described or identified as an underlying cause for any of the experimental psychosomatic models or any of the accepted psychosomatic diseases (Weiner, 1977).
Both theories have outplayed their role as explanatory concepts.

Contemporary research in psychology and physiology, as well as epidemiological research, offers an empirical basis for a new psychosomatic theory. This psychosomatic theory has not been worked out firmly or formally, but is already in its present available form more specific and more supported by data than any of the previous theories. It also suggests new research by generating testable hypotheses.

The theory addresses itself to the general, standardized somatic response to psychosocial events, just as Selye did with his "stress" response. Profound changes take place, affecting all endocrine and autonomic processes, brain function and muscle tension. This response is a normal, healthy response which is referred to as activation in accordance with the use of the term psychophysiology, physiological psychology and neurophysiology.

The activation process relates to pathology in two ways. Normal shortlasting activation may be too great a load for a diseased organ. The other aspect is that sustained, longlasting activation may produce somatic changes. Interactions with other pathogenic agents is an obvious further development of diseases as multicausal phenomenon (Wiener, 1977).

The essential element in this new psychosomatic theory is that it is possible to specify the psychological conditions which produce sustained activation. Activation depends on the individual perception of the stimulus situation, the available responses, and previous experience with stimuli and responses.
Processes identified as defense and coping are of decisive importance for the resulting activation, and hence the internal state of the organism. Activation is a multivariate process and should be studied as such. The individual variance is related to personality traits affecting both defense and coping mechanisms. This makes it possible to develop specific hypotheses in psychosomatic theory, identifying risk groups based on personality, somatic responses, and life situations.

The theory explains why life changes (Rahe and Arthur, 1978) are related to somatic disease, but only with low correlations (Rabkin and Struening, 1976). This is due to the coping potential of man. When these are surpassed sustained activation occurs, which may result in pathology. Selye and Theorell point to "distress"; it is only the degree of experienced unsolved conflict which is the important element, since this is what produces sustained activation.

THE EFFECTS OF STRESS ON HEALTH

There is a debate over the meaning of the term "stress". Some researchers define it as an objective feature of the environment. Others define it as an interaction between environment demands and individual coping resources. Still others define it as an appraisal of the implications of environment demands (Dohrenwend and Dohrenwend, 1974).

Stress can be defined as a feature of the environment that under certain circumstances, can affect the health of people exposed to it.

In the common Eye disease like cataract Glaucoma and
Retinal Detachment

Sress is very prominent yround in the Glaucoma condition. It is assumed to be present in Cataract and Retinal Detachment condition.

Besides stress there are other relevant factors which also play a role in the formation of these diseases.

The role of Heredity;
The role of Chemicals;
The role of Psychological factors;
The role of Social, cultural factors and stress;
The role of Occupational conditions and
The role of Environment.

I. Role of Heredity

In Cataract no role of hereditary factors is found.

In retinal detachment actually hereditary factors are not found, because detachment can be due to some trauma, surgery, etc. But, due to high myopia which is hereditary, detachment can indirectly be hereditary. Otherwise for simple retinal detachment there is no role of heredity.

In Glaucoma, hereditary factor does play a role. Hence family history is important.

II. Role of chemicals

Cataract

Certain drugs do induce Cataract like Pilocarpine. In this drug the preservative can induce Glaucoma. Certain other
drugs like slimming agents, Naphthalene derivatives, galactose induce Cataract. Long use of steroids; ultraviolet rays/infrared light heat radiation - all these can cause Cataract. For example, workers of glass blowers factories farmers, Adivasis working under direct Sun rays in farms can get Cataract at a young age of 40 years.

**Glucoma**

Long use of steroids, tranquilizers, etc. can induce Glucoma.

**Retinal Detachment**

In this connection, no chemical plays any role.

### III. Role of Psychological Factors

**Cataract**

There is no psychological factors in predisposing the essential Cataract condition.

**Glucoma**

Glucoma of angle closure type. There is always the stress condition. There is the hormonal disturbance also. And when individual cries, there is ciliary conjecture and sympathetic activity. All this can precipitate angle closure Glucoma.

**Retinal Detachment**

There is no psychological factor/role in predisposing the essential retinal detachment condition.
IV. Role of Social, Culture Factors and Stress in Essential Eye Disease Condition.

Social cultural factors play a very significant role in the development of these diseases. As the lower socio-economic status group has no awareness of any disease. They do not come for follow-ups. Loss of communication is there. Hence patients become blind without treatment.

Cataract

In Cataract these lower socio-economic group people wait for a long time even after the Cataract gets matured, many a times, the eyesight also goes, and then they come to the Doctor for the treatment of the other eye. Such incidents are found more among the farmers, adivasis, bounded labourers, who are exposed to the sun rays most of the time, as the rays contain ultraviolet and infrared light. Also there women get victimize to Cataract at a very young age of about 38 years to 40 years.

Glaucoma

No such incident, but they are also unaware at times. They do not come for follow-ups, etc.

Retinal Detachment

Sometimes treatment is expensive for the lower socio economic group, and they are less aware of the symptoms so avoid going to aq doctor and hence get blind.
V. Role of occupational Stress

**Cataract**

Individuals working in the Glass blower factories are directly in contact with heat radiation which is dangerous for their eyes. These radiations can cause cataract condition in their eyes.

Farmers who are working in open fields are directly exposed to sun and ultraviolet rays which also cause cataract very fast in the eyes.

**Glaucuma**

This is not caused due to any external occupational conditions but pressure and emotional upset in work environment may lead to over activation of the parasympathetic system of the body and cause glaucoma later.

**Retinal Detachment**

In this eye condition, no occupational condition and stress is found to be causing the disease.

VI. Role of Environment

**Cataract**

In the tropical countries, where people get exposed to the direct sun rays, get cataract faster and the incident rates of such cataract condition are more in these parts of the world than in the other western countries where the sun rays are slant or not direct. Hence the cataract incident rates are very low in these zones.
In the polar countries, the incidence rate of cataract is seen to be high amongst the Eskimos, because the reflection of sunlight or its rays when falls on ice, also throws ultraviolet rays, which in induces cataract condition in people staying there.

**Glaucoma**

Stress is found to be affecting the western advanced cultural groups. And it has been proved that some stress is found in the glaucoma patients, but the incidence rate of Glaucoma is almost equal in all the countries.

**VII. Recent Advances in Eye disease and Psychology**

No study has been done in the recent times which can correlate Eye diseases and psychology. Except by Thakore et al. and Venkobarao in B.H.U. They studied the biochemical changes in the patients of Glaucoma.

**CATARACT**

**Biochemistry of the Lens**

Alpha crystalline, as detected in the anterior chamber by radio-immuno-assay is increased in eyes with heterochronic uveitis, and in eyes with hypermature senile cataract, compared to normal eyes. To initiate intraocular sensitization the rapture and release of (1) antigenic membrane material glycoproteins, etc.), (2) chemically denatured lens proteins, and (3) large amounts of lens proteins seems to be required.
Chemical Modification of Lens Proteins in Aging and Cataract

The concept of chemical modification of lens proteins during life has gained support from the studies of Bloemendal and coworkers who showed domination of crystalline chains. Stevens et al and Liang and Chakrabarti found lens protein glycosylation occurs on exposure to high glucose levels. The latter results in protein conformational changes somewhat similar to those that occurs in glycosylated haemoglobin (Hb). However, whereas (Hb) glycosylation occurs in terminal lysine amino acids, the amino acids terminal of α and β crystalline are blocked (acetylated). Thus, sugar attachment in lens protein occurs primarily by binding to α-amino groups of lysine and formation of sugar lysine bonds. Glycosylaline addicts result in conformational protein changes, protein formation of S-S bonds through oxidation of adjacent sulphhydryl groups, protein aggregation and epoxification.

These findings explain at least in part the protein aggregation that occurs in human diabetic cataract.

In fact the levels of ε-amino groups in diabetic senile cataracts are substantially reduced as compared to clear age motivated lenses.

Another chemical modification of lens protein includes carbamylation i.e. addition of cyanatge, which occurs secondary to accumulation of urea cycle, metabolites in uremia or secondary to dehydration (Cynader M., Gardner J. and Gouglas R., 1978).

Recently it has been shown that in India repeated bouts of dehydration increases the risk of cataract formation by 4 to 20 fold.
Furthermore, cataract develops in animals receiving cyanate. Putrescine and spermine (two end products of the urea cycle) are somewhat increased in senile cataracts and the urea cycle enzymes are active in human lens and cataracts (Hebbard F.W. 1962).

**Diabetic Cataract**

In human diabetic cataract is rarely seen in June miles, but may appear suddenly in adults with uncontrolled diabetes mellitus. Diabetes overt or border line, is prevalent among older patients with senile cataract. From 10% to 15% of patients admitted to hospitals for senile cataract surgery in Oxford, England, had abnormal plasma glucose levels or overt diabetes mellitus (Banker M.S., Ashin R.N. and Letson R.D.

**Galactosemic Cataract**

Results from an excess of galactose, which along with glucose is the result of the hydrolysis of lactose in the intestine. Galactosenia in humans is the result of an in born error of metabolism that leads to excessive galactose in serum when milk is ingested.

**Cataract and Oxygen or Peroxide Toxicity**

Superoxide anion free radical (O$_2^-$) or its derivatives, peroxide (H$_2$O$_2$) singlet oxygen (O$_2^*$ and OH$^-$ induce oxidative damage to a variety of cells. The lens is highly susceptible to these radicals (Bagolini B.....). And humans exposed to hyperbaric oxygen
develop cataracts (Grindley G.C., Fownsend V. 1965).

When deprived of glucose, lenses in culture will gain water and lose transparency. Cataracts can develop in infantile hypoglycemia, a ground of diseases in which low plasma glucose levels are present. However, evidence to support the widely circulated concept that human senile cataract may be caused by decreased glucose metabolism or lens anoxia is not available.

Metabolic Factors in Retinal Detachment

Evidence that metabolism contributes to adhesion.

The question of whether metabolic activity is necessary or even contributory to retinal adhesion is purely a passive event, dependent on glue and pressure, then therapy for detachments will be largely mechanical and the concept of tissue adhesion will be a problem more for the physicist than the biologist. To the extent that metabolism is necessary for adhesion, there is a linkage between the process of retinal attachment and the processes of life—a linkage that indicates a very different array of therapeutic options.

The first direct evidence for vital factors in adhesion was Zauberan and deGuilleban's (Zaubermann H. and deGuilleben H. 1972) demonstration that pulling of the living retina caused it to tear rather than detach, but within three minutes after death the same procedure tended the retina substantially before tearing occurred. Experiments in the laboratory showed (Endo E.G., Yao, X.Y. and Marua M.F.) showed that much of this postmortem loss of adhesion occurs within 1 to 2 minutes and since they do not know
the true adhesive strength in vivo the loss could begin within seconds. This finding is hard to explain on the basis of passive changes such as digestion of the IPM from the release of lysosomal enzymes or tissue swelling as a result of ischemia. We have noted that cellular swelling (after cold exposure) causes an increase rather than a decrease in adhesiveness (Marmor M.F. and Yao X.Y.). Some evidence exists for postmortem release of lysosomal enzymes from the RPE (Adler A.J. and Martin K.J., 1983; Kain H.L. and Libondi T., 1986) but whether they are released so quickly is unclear, and the fact that adhesion can be resorted by removing conditions that enhance enzyme activity takes this hypothesis.

For example, enzyme activity is generally enhanced by warm temperature, low PH and low calcium, all of which reduce retinal adhesiveness, however, loss of adhesion from also these conditions is rapidly reversible (Yao X.Y., Endo E.G. and Zarmor M.F., 1988) which could not occur if reversible degradation of the IPM had taken place and had been critical to adhesion. It seems more likely that postmortem loss of oxygen and nutrients causes arrest of some metabolic process that is critical to adhesion (e.g. subretinal fluid transport) or that induces a rapid secondary effect, such as alteration in local PH or calcium concentration.

Metabolic failure would also affect synthesis of IPM components and intracellular material critical to RPE processes such as ionic transport and microvillus, remodelling, but it seems unlikely that a loss of synthesis would be so quickly damaging to adhesion.
Retinal Detachment Types

1. Rhegmatogenous
   - secondary to retinal degenerations
   - Myopic degeneration
   - Aphakic vittraction

2. Tractional detachment
   - Diabetic retinopathy
   - post operative after cataract vitreous incarcere

3. Exudaline detachment
   - choroidal tumors
   - chorioretinitis

Psychiatric Diagnosis

Any research in simple words, depends upon diagnosis. It is only by diagnosing patients, and thus analysing groups of people with similar problems, that researchers can find out whether their problems do have a common cause and what treatment can help them.

Collection of Diagnostic Information

Modern diagnosis involves evaluation from several points of view and is achieved through the coordinated activities of the "Psychiatric Team" consisting of a psychiatrist, a clinical psychologist or psychiatrist social worker, and such other specialized personnel as condition warrants. The following types of information are collected:
1. Medical Data
2. Psychological Data
3. Sociological Data

Advances in medicine and elite sciences are contributing many new diagnostic procedures which are of great value in medical evaluation.

Psychological Evaluation

Psychological tests are specialized diagnostic procedures for determining the patients' intellectual capacity, motivation, conflict, ego, defences, environmental and self-evaluation and interest and aptitudes and general personality organization. Many such tests are available, for example:

1. Intelligence tests
2. Personality tests of 2 categories
3. Non-projective tests, and
4. Projective ones

Scoring and interpretation of the subjects' responses will reveal much about the subject's general personality structure.

The way he deals with his inner drives, his introversive and extroversive tendencies and so on.

Eysanck (1965) studied Neuroticism amongst individuals and developed single tests of the same nature of specific personality factors.
Mahendra et. al. and Venkoba Rao used similar self report inventories to study stress amongst the patients.

Treatment and Prognosis

The treatment of psychophysiological disorders by means of conditioning techniques also appear to show promise (Eysenck, 1960; Lesse, 1958). The basic objective here is to bring the functions of the bodily organs generated by autonomic nervous system, under systematic control, avoiding hypo or hyper functions of these systems.

When cataract is formed in the eye there is actually no treatment for it, then to remove it, after it matures, it has to be removed by surgery. There is no drug in allopathy which can dissolve the cataract within the eye itself.

As from the case studies presented here it has been observed that cataract can mature due to emotional upset though its onset is yet unknown. The maturation which occurs faster due to emotional factors can not be controlled by drugs but by conditioning techniques.

In cases of chronic simple glaucoma (the medical treatment consists of putting drops in the eyes like Pilocarpine (1 to 2%) - 3 to 4 times a day, these drugs stimulate the parasympathetic autonomic control of the eye. The other drug is Timolol mediate 0.25% to 0.5%, this drug is used once or twice a day. This drug blocks the beta receptors of the sympathetic autonomic nervous system controlled in the eye surgery in the form of providing additional drainage channels for the aqueous humor exist from the
eye is required when the tension inside the eye is not controlled by the drugs.

In order to understand how preventive treatment works, it is necessary to recall how a retinal detachment generally occurs. The eye may be compared to a camera, where lenses focus the picture on a sensitive film. In the human eye the cornea (transparent tissue resembling a watch crystal) and the lens focus images on the Retina, which is a thin light sensitive film located at the back of the eye. The picture which is registered in the Retina is transmitted to the brain by the optic nerve. The space between the lens and retina is filled with a transparent jelly called vitreous body.

Aging and other damage may cause the transparent, colorless vitreous body to shrink. If, in the process of shrinking, the vitreous body remains attached to the retina in one area, it may tear the retina.

The detached retina being separated from part of its blood supply becomes insensitive to light, thus resulting in gradual blindness.

The shrinking of vitreous often produces extensive flashes of light in the eye on the side of the temple. Sudden floaters or flies moving around in the eye may also be noted, but fortunately vitreous shrink age is seldom followed by further difficulties. Many retinal breaks develop without any warning signs. However, a retinal tear or a very early retinal detachment is something accompanied by a limited flicker of light which remains in a definite location in the field of vision. Tearing of the retina
may also be accompanied by bleeding which occurs brown or black specks inside the eye. Patients often compare this with falling soot or looking through a cob-web.

When the retina starts detaching a definite curtain may appear on one side in the field of vision. Later when the central portion of the retina becomes affected by an early retinal detachment, vision is distorted and it seems as though the patient is looking through water.

When is Preventive Treatment Possible?

In order to perform surgery aimed at preventing retinal detachment, it is necessary to find breaks in the retina before they have a chance to cause a retinal detachment. Once retinal breaks have developed there is a "grace period" before the retina actually detaches. The length of this period varies from a few hours to many years but in most instances it consists of several weeks or months. It is during this time that an opportunity exists to prevent retinal detachment by sealing the retinal breaks.

Preventive Surgeries

There are two types of surgeries done for the preventive treatment of the retinal breaks, located in the front half of the eye ball:

1. Photocoagulation
2. Cryosurgery
These can be used to seal retinal breaks before the retina becomes detached and in either case no cutting of the tissue is needed. For each patient the method preferred may depend on the location of the retinal breaks to be treated.

Photocoagulator is easily focussed on those portions of the retina which are located in the back half of the eye ball. Due to the curvature of the eye ball and the presence of the colored iris, light cannot be focussed efficiently on the front portion of the retina.

Cryosurgery is preferred for the preventive treatment of retinal breaks located in the front half of the eyeball. The tip of the cold probe, where freezing occurs, can be applied to the outside of the eyeball in the areas corresponding to the anterior half of the eye. The recess existing between the eyeball and the eyelid allows the cryoprobe tip to be applied to the eyeball as far back as its equator.

Preventive surgery often avoids more extensive types of operations which are necessary for the repair of established retinal detachment. These two techniques permit the ophthalmologist to seal effectively retinal breaks before a retinal detachment has developed, without having to cut the tissues. Preventive surgery requires early and accurate discovery of the retinal breaks, before they have had a chance to cause a retinal detachment.

Besides the medical treatment, so far conditioning technique for relief of stress, like Yoga, Biofeedback, Transcendental Meditation, autogenic training, progressive
relaxation and ZEN have not been applied for the cases of Cataract, Glaucoma and Retinal detachment.

Undoubtedly it is difficult to define cause and effect relationship in any disease process, more so in common eye disease patients. However, circumstantial evidence favours a hypothesis suggesting that stressful state is probably a significant factor for the predisposition of Cataract, Glaucoma, Retinal disease or basic common diseases related to eye.

In the end, we may emphasize the tremendous potentialities that the holistic approach holds for men's eventful conquest of all diseases. For as researchers have probed into diverse disease process, the crucial importance of biological, psychological and sociological factors in their inception and course has become increasingly apparent.

**Psychic Stress and Emotional Trauma**

Amongst Russian Clinicians G.F. Lang has insisted since 1922 on the importance of prolonged psychic (nervous) stress and so-called negative emotions (fear, anger, resentment) in the development of diseases related to tension and stress. Diseases related to tension is the consequence of this kind of disturbance as psychic stress and emotional trauma - which may, according to PAVLOV, be brought about by excessively strong or complex stimulus, overstraining of the inhibitory processes, or by the conflict of inhibitory and excilatory processes.

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CONCLUDING DISCUSSION

The present investigation is supported by certain theoretical framework.

The activation process which leads to the concrete exercise in developing the stress coping behaviour also turns into 'first order and second order defensive system. Somatization is a kind of defence which prevents the individual from the benefit of exercising a stress coping behaviour pattern.

Eye diseases condition can be the somatized condition, which probably is the consequence of some combinations of certain personality traits and the production of excessive stress on the part of the individual. The investigator is aimed at stressing these factors by preparing a personality profile of these eye disease patients.