CHAPTER III

REVIEW OF LITERATURE
A review of the literature, related to the problem is a prerequisite for the formulation of hypotheses in any research. Studies related to the present problem are reviewed in this chapter. This was essential in order to support the selection of variables and decide about the general framework of the study. Though a number of studies mentioned below may not be directly related to the present study but they are definitely essential for supporting the importance of the present study. The purpose of the present study, as already stated, is to do a comparative study of the personality variables of the allergic and non-allergic individuals.

The need to know whether certain psychological factors play a significant role in the causation of the allergic disorders and/or whether any psychological characteristics distinguish allergic and non-allergic individuals has encouraged many authors to explore more in this area from different angles. Some authors have explored this area by
using the psychological treatment of allergy patients, with the assumption that if a cure or improvement in symptoms was affected, psychological factors must have been important in the disease entity. A number of such studies with significant results have earlier been reported in the introduction. Some workers have reasoned, that, if emotional factors are important in producing asthma or hay fever it should be possible to demonstrate a specific role for such stresses in the precipitation of individual attacks. Some other investigators approached the same area by describing the personalities of allergic individuals and then made comparisons with non-allergic individuals. The main aim of such studies was to discover whether important differences exist on psychological dimensions between allergic and non-allergic individuals.

On the basis of research reports and clinical experience, it has been suggested that allergic disorders occur predominantly among persons who share with each other a certain common "core" of neurotic behaviour patterns in their personality structure, by which they distinguish themselves from healthy individuals and from patients with other diseases. The origin of this personality "core" is considered to be partly inborn and heredity, partly a result of a youth situation in which a combination of rejection and overprotection, designated as a "loving tyranny" on the part of the mother, played an important role (Groen & Bastiaans,1966).
The personality structure serves as the predisposing and an emotional conflict as the precipitating factor, both of a specific nature, in the production of the attack. This concept of a specific causal relationship between personality, predisposing for (a) an interhuman conflict leading to (b) a situation of stress on the one hand and a somatic disorder as a result, is still controversial.

These traits or behaviour patterns which constitute the "allergic personality core" are not in themselves specific. In fact each trait can also be found in patients with other psychosomatic disorders or in psychoneurotic individuals. But it is the combination in a certain quantitative proportion, which gives the allergic personality its specific nature.

Out of the common 'neurotic core' of allergic patients mentioned, the following are a few variables which are related to the present research.

1) A diminished capacity for adaptation to unfavourable life situation.

2) A great need for love and affection, which the patients are mostly unaware of and which is often hidden behind pseudo indifferent or even aggressive behaviour.

3) A difficulty in solving interpersonal conflicts by talking it over, by 'giving and taking' or another form of regulated aggressive discharge. Instead of this some are inhibited and shy, others are cheeky or
show an urge for speaking and debating, even during the attacks.

Thus allergic disorders are also considered as disease entities in which allergens are the cause but with a mechanism in the development and maintenance of which besides personality factors, emotional and psychological factors also play more or less dominant role in their etiology as evidenced by the clinical experience and experimental studies. Though most of the authors have usually avoided assigning a direction of causation i.e., whether psychological problems lead to allergic disorders or vice versa, because of a number of problems which arise in such comparative studies as mentioned in the need of the study.

The fact that there exists a relationship between life stress, emotions, and allergic disorders has been known since long but has not been adequately investigated. Wittkower and Petow (1932) found that emotional disturbances act as a catalyst on a dormant allergic predisposition.

Wolff et al. (1950) and Dekker and Groen (1952) demonstrated in their studies, experimental production of hay fever symptoms and asthma attacks through presentation of emotional and physical stresses. Holmes et al. (1949) and Wolff et al. (1950) demonstrated that the amount of pollen needed to produce hay fever reaction of the nasal mucous membrane is much smaller during a stress provoking situation or in a setting of conflict and anxiety than during peaceful
periods. This group of studies is notable for its explicit theoretical basis, some ingenious experimental techniques, and for attempting to tie physiology and behaviour together concretely. It is unfortunate that the frequency of their observations is not reported. At least in some patients, the kinds of summative effects they report can indeed be demonstrated, but without some idea of how often they were able or unable to obtain these results, it is difficult to generalize beyond the cases they have described.

Knapp et al. (1966) concluded from their study that, many asthma attacks are ushered in by a state of powerful emotional arousal and a breakdown of psychological defenses.

Block (1968) reviewed a study of somatic and psychological predispositions to allergic disorders. "The logic of ... (the) analytical procedures was questioned and a re-analysis of ... data was presented. This analysis failed to confirm (the) 'psychosomatic' hypothesis' which requires, according to ... formulation, the concurrence of both somatic and psychological factors in allergic patients and the absence of both these predisposing factors in non-allergic subjects."

Knapp et al. (1970), from notes covering 6 years in the psychoanalysis of a man with moderately severe perennial bronchial asthma, chose 81 episodes for the study. Two psychoanalysts and two medical judges were asked to separate "asthmatic" from "non-asthmatic" contexts. Post hoc study of the judgements helped refine the hypothesis that stress,
emotional arousal, and failing defenses activate a postulated "primitive core" of unconscious conflict to form the psychological context of asthmatic exacerbations.

Spiegelberg et al. (1970) examined 1001 patients of a psychiatric-neurological clinic for occurrences of allergy diseases. The total incidence amounts to 17.97%. They observed that allergy diseases affect with the same frequency neurologic and psychiatric patients as well as cases of psychoses and neuroses. Concerning the primary characteristics of ambitions, contacts, moods, drives, and emotions, no differences were ascertained between allergic and non-allergic cases. Neither were any significant differences found concerning various grades of broken homes, dynamic urges, inhibitions during childhood and religious and ideological influences. However, patients who had suffered from a slight motor inhibition during childhood, acquired allergies more frequently. It is noted that the psychosomatic problems of allergy diseases have not been solved as yet and that somatopsychic and psychotic theory will have to be considered besides the classic psychosomatic approach. Davis and Offenkrantz (1976) report a hypothesis seeking case study conducted on a 27 years old, white, middle class married female, an asthmatic patient seen 212 times in individual psychotherapy over a period of 32 months. There was a reciprocal relationship between the manifestation of physical symptoms and of affective reactions in this patient. In support of this hypothesis,
the therapist's observation and patient's reports of physical and affective reactions each independently indicated a much greater incidence of one reaction or the other occurring separately than of both together. This occasional occurrence of both together indicated that physical and the affective reactions are not mutually exclusive.

A critique and synthesis of diverse literature ranging from psychoanalytic group and behavioural oriented clinical reports to human and animal physiological studies is also presented. It is concluded that confirmation of the reciprocal hypothesis awaits further studies, but there is indication in the literature of support for such further study.

Benjamin (1977) demonstrated the respiratory state and mental health of a group of 47 asthmatics and 43 matched non-asthmatic controls. They were compared using standardized interview and respiratory function assessments. Despite physical impairment, the asthma group failed to show any significant excess in point prevalence or any difference in the diagnostic categories of mental illness suffered. There was a tendency for more positive ratings for psychopathology to be made for asthma group but this was not related to greater physiological impairment. It is suggested that this trend arose mainly due to over reporting of symptoms of all kinds by some members of asthma group. These results are considered in the light of similar findings in others with respiratory disorder.
Jacobs (1970) postulated respiratory illness for which treatment is sought (identified as sore throat, asthma and hay fever) to be associated with patterns of maladaptation (ego-weakness). Interviews with 178 male undergraduates indicate that subjects with respiratory disease are intermediate along a continuum of ego weakness statistically distinct from both S's with overt emotional disturbance and subjects free of all symptoms.

Silverman (1973) administered placebo medication (Saline & Lactose) to 44, 4-15 years, old asthmatic children. Twenty subjects had significant reduction after administration of active drugs. It is suggested that placebo blocking of the exercise response might serve to identify asthmatics with significant emotional factors in their disease. Other investigators who found that emotional factors play an important role in this disease are Purcell et al. (1972), Ramachandran et al. (1974), Weiner (1977), Agarwal and Sethi (1978), Nigam et al., (1979), Druva Kumar (1980), Teiramaa (1976, 1978, 1981), Tunsater (1984).

Matus (1981) suggests that psychological factors can enter into and affect the course of childhood asthma in a variety of ways. These factors can affect the course of the illness by precipitating and exacerbating it and by impeding preventive home care. An organizational schema is presented and guidelines suggested for clinical assessment of the significance of these factors.
In most of the studies of adult asthmatics, there is a common suggestion that certain personality traits may be found more frequently in these individuals than in comparable control groups.

Rees (1956a) attempted to estimate the importance of various etiologic factors—psychological, infective, and allergic, in 441 asthmatics of both sexes and various ages. He found that "psychological factors" were dominant in 37%, subsidiary in 33%, and important in 30%. He also reported that the emotional precipitation of attacks of asthma was definite in from 20-57% depending on the age group. In a random sample of 50 patients aged 60 or more, he found psychological factors dominate in 44%, subsidiary in 34%, and unimportant in 22% (Rees, 1956). In 338 children he found psychological factors dominant in 42%, subsidiary in 30%, and unimportant in 28% (Rees, 1964).

The study is not free from drawbacks. The definition of psychological factors is not clear, partly because of the common failure, mentioned previously, to distinguish states of the organism, i.e., emotions from external psychological stimuli. Apparently, both the extent to which patients were "neurotic" and the finding of "emotional precipitants", were taken into account in the final judgements. Further, exactly how either of these was assessed is not explained, although presumably some attention was paid to external stimuli by emotional crises, and that asthma displayed more neurotic symptoms than did the
controls. Using similar methods, he found a somewhat higher percentage of emotional precipitation among elderly asthmatics. He contrasted hay fever patients with controls on a personality trait rating scale, and did not find differences between groups; however, hay fever patients with high neurotic trait scores were more often rated as having emotional precipitants for their symptoms.

Kourilsky (1965) also reports that allergy cannot be explained solely as a function of immunological mechanisms. In the absence of crises, bronchial mucosa of the asthmatic is not normal according to histological examination. Personality of the allergic patients as revealed by psychological tests and psychoanalysis indicates the presence of a conscious but unresolved conflict linked with affective frustration. The psychogenic stimulus of the frustration is not specific to an allergy. A predisposition towards allergies may be inherited along with genetic factors, including hypersensitivity to histamines.

Studt (1972) studied the eliciting situations of bronchial asthma by analyzing the depth psychological diagnostic anamneses of 36 males and 50 female asthmatic patients, 14-57 years old, under stationary psychotherapeutic treatment. Data were obtained through semi-standardized conversations and the diagnosis of structure and neurosis secured by experienced psychoanalysis. Eliciting factors are reported in relation to sex, age at the time of onset of
illness and at time of first admission, personality structure and type of critical conflicts. Results show that—

(a) 94% of subjects with mixed personality structure, about 50% obsessive compulsive, 40% depressive.

(b) Significantly more men with obsessive compulsive and women with hysterical structure.

(c) An influence of sex, structure, and type of conflict on onset and time of first admission; and

(d) Men's eliciting factors more frequently related to education and occupation, women's to personal family and biological matters.

Blasser and Heim (1973) administered the MMPI and the Maudsley Personality Inventory to 21 normals, 22 asthmatics and 20 patients with psychogenic respiratory disturbances. The relative deviation between a self-rating of dyspnea and the respiration tests in a correlative and factor analytic analysis with the test variables revealed a personality relevant significance in the hystero-hypochondriac syndrome.

Rosenthal, Aitken, and Zealley (1973) administered the 16 PF to 68 asthmatics selected at random from registers of known cases, 14 asthmatics referred for psychiatric treatment, 22 neurotic and 22 healthy controls. The random asthmatics were significantly more submissive and humble (low factor E) yet more tough minded (low factor I) and more radical (high
factor Q) than a large sample of general population for whom comparable normative data was available. There was no evidence of relationship between personality factors and the index of asthma severity. A striking feature of the results was the wide variability of scores indicating that some asthmatics were as likely to be distressed by certain personality traits as by their pulmonary pathology.

Segraves's study (1971) reports controversial results regarding the personality. He selected 463 male students under age 30, who completed the Eysenck personality inventory or the new Eysenck (P.E.N.) and family health questionnaire, failed to show any of the previously reported associations between personality and disease susceptibility. Application of this method to a much larger sample may be worthwhile.

Taneli and Ulrich (1976) studied anamnetic and psychodiagnostic data collected for 4 years from 50 patients (aged 4-14 years) with varying degrees of bronchial asthma. The frequent joint presence of specific personality traits and behavioural patterns was observed in subjects and their parents.

Standemayer, Kinsman, and Jones (1978) in their study of 159, 14-72 years old asthmatic patients administered a battery of psychological tests (Respiratory Illness Opinion Survey, Asthma symptom check list, MMPI, and the Panic Fear Personality Scale). Results show that the 6 attitudes measured by RIOS(a)
relate more clearly to general personality characteristics than to illness specific subjective symptomatology (b) enable types of asthmatic patients to be described on the basis of the patterns of attitude category scores (c) provide information about treatment outcome in asthma as indexed by length of hospitalisation during long term intensive therapy, the need for prescribed oral corticosteroids and the rates of re-hospitalisation and judged severity following discharge from treatment.

Groen (1979) also regards asthmatic breathing as a reaction of a predisposed personality to an ambivalent conflict with a key figure. A hypothesis is suggested for the ways in which the psychoneurogenic respiratory behaviour of asthmatics contributes to the so called bronchial hyperactivity and the secondary development of allergies. Maurer (1965) attempts to summarize in his study, what is known about the psychological concomittants of asthma with particular emphasis upon features especially relevant to child development and behaviour on one hand, and to the work of the educational psychologists on the other.

Hock et al. (1978) assessed the effectiveness of several modes of psychological intervention used with 43, 10-17 years old male asthmatic outpatients. Results indicated that both relaxation training by itself and combined with assertiveness training increased respiratory functioning and reduced the number of attacks. Assertive training alone failed to improve respiratory function and had a tendency to increase the frequency of attacks. It is concluded that most effective management in
male asthmatic children was achieved by the combination of medical and psychological treatment.

Chobotova (1980) also discusses the psychological factors related to bronchial asthma, especially in childhood.

**NEUROTICISM AND ALLERGY**

Dunbar (1938) concluded from the psychoanalysis of three asthmatics that they had certain personality problems in common. These were an intensive reaction to separation from the mother, a demand for love which combined a fear of love and a revolt against it and in the case of the woman, a repudiation of the female role. They had homicidal trends associated with an impulse to self-injury. They tended to hold others responsible for their difficulties. The final interpretation was that these asthmatics were compulsive neurotics who developed few phobias or rituals except in periods free from asthma. Analytically, it might be said that they had weak ego organisation with an inadequately assimilated super ego.

Schatia (1941) also found higher incidence of psychoneurosis in asthmatics and formed the general impression that a fairly definite personality type could be described, which was largely of a "compulsive" type.

Vles and Groen (1951) found that both the asthmatics and their non-asthmatic siblings showed more indications of neuroticism than did a control population of healthy adolescents.
Dunbar (1954) also found in asthmatic attacks, especially in children, an equivalence to a compulsion neurosis.

Leigh and Marley (1956) administered the Cornell Medical Index, an inventory of medical complaints including symptoms, to four groups; 65 out patient asthmatics, 77 hospitalised asthmatics, 118 neurotics in psychiatric treatment, and 118 department store workers. Comparing the frequency of admission of psychiatric symptoms, they found that asthmatics and neurotics in psychiatric treatment had similar scores; asthmatics in medical treatment mentioned fewer neurotic symptoms than the former groups but significantly more than the normal controls. The authors did not report any procedures to indicate whether the asthmatic subjects were in fact allergic.

Rees (1956) contrasted the histories of 441 asthmatic outpatients with 321 appendectomy, herniotomy and accident cases matched on sex and age. Ratings indicated that 50-60% of asthma attacks were precipitated at least partially by emotional crises and that asthmatics displayed more neurotic symptoms than did controls. Using similar methods, he found a somewhat higher percentage of emotional precipitation among elderly asthmatics. He contrasted hay fever patients with controls on a personality trait rating scale, and did not find differences between groups. However, hay fever patients with high neurotic trait scores were more often rated as having emotional precipitants for their symptoms.
Knapp and Nemetz (1957) selected 40 subjects with active, chronic, perennial bronchial asthma, aged range 17-59 years, and studied them from the psychodynamic point of view. Simultaneous study of pulmonary function showed a wide variation in physical manifestations, a feature characteristic of bronchial asthma. There was an equally wide variation in personality disturbance, some degree was present in all subjects, although there was no single personality "type". Seven transient psychotic like episodes occurred, six of them accompanied by an increase in asthma. Cortisone, though given to more than half the group, did not provoke such reactions. There was no simple reciprocal relationship between asthma and psychosis.

Asthmatics - as may be true of other psychosomatic patients appeared to range from mildly neurotic individuals with mild physical incapacity to severely disturbed subjects with drastic and crippling respiratory illness. To confirm this observation, the overall maturity of subjects was gauged on a roughly quantitative scale by two psychiatrists, and was compared with independent assessments by two internists of the severity of pulmonary disease. There was a high correlation between pulmonary disturbance, and the personality disturbance, which had often existed for many years before the development of asthma. They found no patient with asthma of severe degree who did not also have major personality problems. The reverse does not appear to be true. Their interpretation is that asthma is one among many ways in which emotional difficulties manifest themselves.
Neuhaus (1958) contrasted 34 asthmatic children and 25 of their siblings with three other groups i.e., 34 children with cardiac illness and 24 siblings, and 68 matched normal controls. Tests used were the Rorschach, Brown Personality Inventory, and Despert Fables. Based on test interpretations, the asthmatics were reported to be more neurotic, insecure, and dependent than the normal children. But they did not differ from children with cardiac illness or their siblings. The author concluded that there was no distinctive personality pattern for asthmatics; many previously reported psychological findings might be attributable to the experience of chronic illness.

Franks and Leigh (1959) gave the Maudsley Personality Inventory and conditioned the eye blink response to 20 outpatient asthmatics, 40 neurotics, and 20 normal adults. They found no differences in speed of conditioning or introversion-extraversion. But the neuroticism scores of asthmatics were between the neurotic and normal groups on the personality inventory. Again it is not known whether these asthmatic subjects were demonstrably allergic or not.

Sainsbury (1960) administered EPI to asthmatics, neurotic, and normals and found asthmatics to be above average on neuroticism scores. The higher level of neuroticism in asthma was considered to be a consequence of duration of illness.

Barendregt & Wilde (1961) report some investigations of psychological variables which are correlated with psychosomatic diseases. Three groups with a total of 120 supposedly
psychosomatic patients, three groups with a total of 218 neurotics, and five groups with a total of 174 "normals" were compared with regard to their neuroticism scores and extroversion scores, which were determined by Heron's Two-part Personality Measure. The psychosomatics, like neurotics, were found to have a higher neuroticism score than normals. The psychosomatic extroversion score, however, like that of normals, was found to be higher than that of neurotics.

In addition, an attempt was made to test the hypothesis of psychosomatic specificity by means of a vocational preference test which was administered to 45 asthma patients, 50 ulcer patients, and 45 normals. It was found that the asthma group showed a greater preference for and more often thought themselves capable of practising vocations with a high social status than the normal or ulcer group. The differences between the groups were not often significant but they were consistent.

Dekker et al., (1961) compared 79 adult female asthma out patients with 30 female normal subjects and 100 women patients at a Psychoanalytic Institute by use of the Heron Two-Part Personality Inventory. The authors reported no differences between asthmatics and neurotics on this test, but did find significant differences between asthmatics and normals. These findings seemed to support the hypothesis that asthmatics are neurotic. These authors are among the few to report careful classification of their sample, in this case by the use of the specific procedures of skin and inhalation tests.
The work of many of the researchers in this area has been reviewed by Musaph (1961) and presented together with his new findings. He found all 30 of his adult subjects distinctly neurotic, but with varying diagnoses. They exhibited a consistent tendency to a saddened, depressive mood, a generally passive attitude, sexual difficulties and considerable suppressed and unconscious rage predisposing them to guilt feelings.

Hock & Hess (1968) found that statistically significantly differences are shown between mean scores on the Maudsley Medical Questionnaire among normals, psychotics and neurotics, all asthmatics.

Retterstol and Sund (1961) compared 47 patients of bronchial asthma with 94 non-asthma clinical cases as controls to find out the incidence of any other psychosomatic disorder or psychiatric disorder, apart from asthma, among the two groups. The observations were, that other psychosomatic disorders were 50% amongst asthmatics and 20% in their family, while 20% psychosomatic disorders in the control group and 6.5% in their family. There was high incidence of neurosis and low incidence of psychosis in asthma group as compared to the controls, yet the differences were not statistically significant.

Rolf Jhoren (1967) studied 50 adult patients, 20 men and 30 women, suffering from bronchial asthma. Certain psychological traits were characteristic of some of asthma patients. This applied to obsessional neurotic traits of varying intensity. In some, there were slight indications only, in others they developed symptoms and obsessive neurosis. The occurrence of
depressive symptoms was also usual, 10 out of 12 women displayed such depressive symptoms. In respect of grave psychopathological symptoms, asthma did not differ from general population. Nor was any increase observed in neurotic conditions of such a degree or character that they lead to the continuous use of psychopharmacological drugs or required medical or hospital care. The duration of asthma did not affect mental health as some asthmatics who had severe asthma for more than 10 years did not show any neurotic symptoms.

Glassberg et al. (1969) conducted a study to determine any specific personality characteristics related to psychosexual development of asthma patients. Dynamic personality inventory was administered to 164 female subjects. The differences between asthma and allergic control did approach significant differences (P < 0.01) i.e., asthmatics differed significantly from other groups on neuroticism scores.

Vesely (1969) examined whether the behaviour of the asthmatic children differed significantly from that of healthy children. Data were gathered from 34, 7-14 years old children with bronchial asthma or related illness and 772 non-asthmatic children. Only 36 subjects showed symptoms of anxiety or depression. Results indicated the coexistence of neurotic symptoms and psychic trauma with bronchial asthma in the subjects studied. It was concluded by the investigator that the asthmatic child should be considered to be suffering from an emotional as well as physical disorder.
Kostyunina (1971) observed 100 bronchial asthma patients with light, moderate, and severe forms of the disease. The premorbid history of these patients could be related to several different personality types. The psychic disorders manifested themselves either as neurotic disturbances and conditioned reactions of the personality to the disease or as somatogenic psychic disorders of a neurasthenic like or hysteriform character. In some instances they were complex and polymorphic and contained elements of both types. Sometimes it was possible to speak of a neurotic personality development.

Zealley (1971) administered the E.P.I. and the Hostility & Direction of Hostility questionnaire to 2 samples of 11 bronchial asthmatic women. Subjects attending a hospital clinic revealed significant psychological disturbance, in contrast with subjects sampled at random from a register listing all new asthmatic patients at the clinic. The clinic attenders had high mean Neuroticism Score (EPI) and hostility scores when tested the first time. Two years later their neuroticism scores were similar but their hostility scores had decreased, especially on the extrapunitive hostility subscale, and criticism of others. The trend towards normality coincided with a reduction in frequency of clinic attendance, though the reason for this association may be related to other factors. The other group of asthmatics returned to normal scores for both neuroticism and hostility. Results show the bias that can be introduced by the Patient Selection Method.
Heim (1972) observed the relations between emotions, speech and breathing during 39 hours of therapy with 4 asthmatic patients with neurotic disturbances.

Jones et al. (1976) studied 155 hospitalised asthma patients and administered on them the MMPI in order to evaluate the existence of common personality characteristics. When subjects were divided into subgroups according to age, sex, and duration of illness, patterns emerged that appeared largely explicable by these variables rather than the asthma per se. The single most frequent pattern observed across these subgroups was a V-shaped configuration of a "Neurotic-triad" (Scales 1,2,3). This pattern is not unique to asthma but is also characteristic of other chronic illness population and seems to represent a defensive stance in coping with the problems of chronic illness. Findings refute any stereotypic asthmatic personality.

Ramachandaran et al. (1977) studied parental loss and emotional factors in 100 asthmatic patients, 100 tuberculosis patients, and 100 normals were selected as controls. MMQ and CMI were administered to all the patients; 31% of asthmatics, 25% of tuberculosis patients and 26% of normal population suffered parental loss in childhood. Maternal loss, paternal loss of both parents, age at which parental loss occurred were also non-significant. Emotional precipitation of asthmatic attack was reported by 56% of the patients. Neurotic traits and emotional disturbance were observed. Forty five per cent of asthmatics showed anxiety or depressive symptoms. Thus parental loss in
childhood is not higher than in the control population of tuberculosis patients and normal subjects.

Rutter (1977) investigated 30 chronic bronchitic patients matched with non-bronchitic controls from the general population. The comparison of the two groups revealed that chronic bronchitic subjects were both more psychiatrically disturbed and more neurotic in personality than were matched controls. But there were no differences between the 2 groups on the personality trait of extraversion or on measure of social desirability response set. Results are discussed in the context of both chronic bronchitis specifically, and chronic illness in general.

Agarwal & Sethi (1978) investigated relationship between psychogenic factors and asthma. The sample included 10 normals, 20 asthmatics, 10 cases of allergy other than asthma, and 6 siblings of asthmatics.

On the sixteen Personality Factors Test, asthma subjects scored low on factor C (emotionally less stable) and factor F (sober, serious), and scored high on Factor Q_4 (tense, frustrated) as compared with normals. Allergic subjects were almost identical with asthmatic subjects except that they in addition scored higher on factor I (tender minded, dependent) than normals and siblings of asthma subjects. On the neuroticism scale, a statistically significant difference was observed between normals and asthmatics, and between normals and allergic subjects. Asthmatic subjects revealed significantly higher anxiety levels as compared with normals. On the Sentence Completion Test,
70% of Asthmatics and 60% of Allergic subjects showed a disturbed attitude while only 20% of Normals showed disturbances.

Saner & Schnetzer (1978) administered the Freiburg Personality Inventory and the MPI to 30 asthmatics to measure the impact of a 4-week treatment courses on their personality structures. Subjects showed a close agreement with the personality profile of neurotics with psychosomatic tendencies. Subjects then received either the treatment course alone or in combination with autogenic training. Effects of autogenic training were not significant but the treatment course was highly effective.

Sethi et al. (1978) studied 60 psychosomatic patients and assessed them on Eysenck's PEN Inventory, 80% of the patients suffered only from four of psychosomatic disorders namely Hypertension, CHD, Bronchial Asthma and Dermatitis. Mean score on sub-scales of extraversion and neuroticism were markedly higher than those of the normal subjects.

Teiramaa (1978) investigated 100 asthmatic patients aged 16-52 years and divided them into 2 groups, favourable vs. unfavourable prognosis. The patients who were most extraverted and/or lacked psychic symptoms almost always fell into the favourable group. The amnestic data suggested that these patients already differed psychically from the other asthmatics in the pre-asthmatic phase by showing more extraverted tendencies and better psychosocial adaptation. In general, poor psychosocial adaptation, obsessive neurosis, immature personality and alcohol problems were associated with static or deteriorating trends in asthma.

Ansari et al. (1979) tested the hypothesis that psychosomatics in their attempt to cover neurotic tendencies behind a facade of
good adjustment, physically suffer the effects of psychological conflicts. Sixty psychosomatic, psychoneurotic and normal subjects in age range of 32-47 years completed the Maudsley Personality Inventory and other tests. Psychosomatics were the least neurotic, but their mean scores on the Introversion-Extraversion dimension were not significantly different from those of the other subjects. Intergroup comparison of goal discrepancy scores revealed that the psychosomatics appeared to be the most realistic. Thus the investigator of this study concluded that psychosomatics are socially outgoing and reality oriented. Although psychosomatic disturbances are regarded as manifestations of neurotic tendencies, psychosomatics do not appear to be neurotic.

Czubalski et al. (1979) recorded EEGs and performed psychiatric examinations of 275 patients (mean age 34.3 years) with various allergic diseases. Neuroses were found in 49 subjects (17.81%), most frequently in cases of vasomotor rhinitis (34.37%) and least so in allergic contact dermatitis (8.82%).

Sharma and Nand Kumar (1980) interviewed 25 bronchial asthma inpatients (As) and 25 normal controls (Cs) aged 15-54 years and then administered the Rorschach, the Eysenck Personality Inventory and a Sentence Completion Test. Compared to Cs, As had covert aggression, neurotic constriction and greater affectional and dependency needs. As also showed significantly greater anxiety, excessive dependency on the mothers, sexual disturbances, irritational fears, guilt feelings, and insecurity.
Relatively very few investigators have studied alienation and anomie amongst allergy patients. Smith (1962b) studied the responses of 76 allergic and 76 non-allergic individuals to inventory items. He found that items which discriminated between allergies and nonallergics as a whole, allergic and non-allergic females, and allergic and nonallergic males were pattern analyzed in terms of family relations, social reactions, social conflicts and self reactions. Allergics are more dissatisfied than non-allergics with family life and exhibit a greater desire to get away from their home environment. Male allergics tend to be more timid and shy in social relations than females and less inclined to assert themselves. Both male and female allergics tend to alienate their friends by disparaging them. Males seemingly possess a need for acceptance; which they defeat by alienating their friends without realizing that they are doing so. Both male and female allergics maintain a more cynical, suspicious attitude toward society than non-allergics manifested in disrespect for the law and lack of concern for others.

Hinkle and Wolf (1953), Hinkle (1961) found that there is a very significant relation between a person’s evaluations and reactions concerning his life situations and the number of illnesses he experiences. Thurlow (1967) concludes that disharmony with the environment is a general process relevant to disease etiology. Rahe and Ransom (1968) too found a build-up of life stress prior to the onset of a variety of physical illnesse
Freeman et al. (1967) studied 132 women patients with asthma, rhinitis, or hay fever. They found that with minimal evidence of hypersensitivity on skin tests (non-reactors and weak reactors) expressed significantly more personal discomfort and unhappiness than women with clear evidence of hypersensitivity (moderate and strong reactors). Non-reactors described themselves as more passive, negative, withdrawn and complaining feelings of both self and social alienation than the relatively satisfied and confident stronger reactors.

Jacobs et al. (1970) tested the hypothesis that life situations, characterised by failure, unresolved role crises and social isolation are associated with presence of respiratory illness. They assessed 106 male college subjects with various severities of dysfunctioning and 73 normal subjects in terms of life change and levels of manifest distress with the life change inventory, the manifest affect rating scale and Boston University personality inventory. The results supported the hypothesis.

Moss (1973) found that the alienated are generally more likely to be susceptible to disease than any of the other forms of involvement. Their alienation indicates that they have encountered a disruptive incongruity. This in itself would make them likely victims of illness. Thus they expect disease episodes to cluster around periods of alienation.

Shirffel (1975) said that in regard to the clinical epidemiological concepts, the concept of "life-changes"
(biographic adaptation) permits quantitative evaluation of the psychosocial load of an individual and the probability of an illness. In clinical biographical concepts, medical patients register an emotional state of helplessness and hopelessness. This is linked to the characteristic biological state of conservation or withdrawal which appears in every illness and often in severe loss. Behavioural factors have to be included in the medical approach just as somatic factors do.

McCreary _et al._ (1980) treated 102 chronic low back pain patients. Factor analysis revealed 5 factors: distrust and alienation, somatic concern, vulnerability, extraversion and social desirability. These accounted for 71% of the total variance among subjects. Subjects with above average pre-treatment distrust and alienation scores more frequently failed to return the follow up form than subjects with below average scores. Low scores on somatic concern were related to good outcome. Results suggest that subjects high on alienation and distrust may be prone to poor compliers.

Mathai _et al._ (1981) and Srivastava _et al._ (1983) studied psychiatric morbidity in patients with tuberculosis. They found that in such patients, the nature, severity and greater incapacitation often led to social isolation and greater helplessness. The characteristic attitude exhibited by these patients towards crises situation is one of being hopelessly overwhelmed, despite a vigorous effort to resolve the problem.
There is some evidence that anomic people or the degree of anomie a person experiences is related to susceptibility to illness.

Holmes (1956) and Cassel (1970) found tuberculosis rates higher among more marginal people such as ethnic groups who were in the minority in their neighbourhood and people who lived alone, poorly understood their social milieu and felt threatened with being walled off and helpless.

**HOSTILITY & ALLERGY**

Large number of investigators have found that suppressed hostility or anger plays important role in patients with psychosomatic disorders. Gurarson (1950) said that with routine psychiatric examination, 53% of a sample of 58 asthmatic children seemed to exhibit "psychic disease" especially repressed aggression and pathological fixation to the mother.

Millar & Baruch (1950) studied hostility in 90 allergic and 53 non allergic children. They found that blocking of outgoing hostility characteristically turned against self was significantly more common in the allergic children. The allergic symptoms are seen as a part of this general pattern.

Miller & Baruch's work had very important impact on this field. But one of the major flaw in their work was lack of explicitness about how they arrived at their findings. They did not
describe the criteria for ratings of hostility expression. It is difficult to know whether other workers would make similar interpretations from the data or not because the bases for judgements are not specified.

Wolf et al. (1950) found that subjecting pollen-sensitive individuals to a non specific physical threat led to nasal symptoms. When a chronic rhinitis patient with temporarily normal nasal function was reminded of anger-provoking material, nasal hyperfunction, and almost complete obstruction resulted. Harris et al. (1950) and, Grace & Graham (1952) conducted detailed interviews with patients exhibiting several kinds of psychosomatic disorders. They noted that suppressed hostility played a major role in virtually all the syndromes, but the special feature of atopic eczema patients was their severe frustration.

Leigh (1953), a theorist, classified seven groups of emotional precipitants; the category "sudden intense emotion—usually rage" seemed important among asthmatics referred to him for psychiatric evaluation. Crying, sexual conflicts, disturbances, of a dependent relationship also had importance.

Coolidge (1956) opined that asthma is a special type of inter communication. In cases where mothers also have asthma, the child's conflict largely reflects those of the mother. Asthmatic children show clinging, controlling relationship to the mother and inability to deal with feelings of sibling rivalry and express hostility openly.
Some investigators have found that patients with respiratory problems show more evidence of hostility as compared to patients with other psychosomatic ailments.

Barendregt (1957) in attempting to demonstrate a comparative specificity between the asthmatic and the peptic ulcer personality, concludes that the former shows, interalia, much more evidence of hostility and impulsive behaviour than the latter.

Creak & Stephen (1958) reported that among 15 "routine referrals" of allergic children to a psychological clinic, many exhibited maternal over protection and fears of hostile expression.

Sanger (1960) believed that no single psychological explanation was sufficient to explain asthma, and he cited cases with various precipitating stresses: aggression by others against oneself, envy, resentment guilty over sexuality. Alcock (1960) investigated 100 children ranging in age 7-11 years, sample was divided into four equal groups of (a) asthmatics; (b) emotionally disturbed children; (c) children suffering from chronic physical disorders other than asthma and (d) normals. Repressed anger and consequent depressions are major features in the psychogenesis of asthmatic personality predisposed to asthma. The factor of chronic illness did not appear significant in determining the personality characteristics of asthmatics.

Epstein (1963) attempted verbal conditioning of neutral and hostile verbs among 100 asthmatic boys. Those with a high need for approval were more readily conditioned to hostile words, while non-approval motivated children were more readily conditioned to
neutral words. His evidence suggested that approval oriented asthmatic children were intensely concerned with hostility and so were sensitized to the reinforcement of hostile words.

Fink and Schneer (1963) evaluated 18 hospitalized asthmatic adolescents half of whom had psychotic diagnosis. For 7 patients, asthma onset seemed related to major life events such as separations or birth of siblings. Both parents and the child reported intense emotion, usually, hostile as an important precipitant of attacks.

Evidence of hostility in somatic symptoms had also been found by Block et al. (1964), Foulds (1966), DewSenry (1972), Ikemi (1972) and Rimon et al. (1975). Fould's study suggested that somatization might be a form of intrapunitive ness.

Weiss (1966) studied 17 males and 15 females chronic asthma children. Mood adjective check list measurement was obtained from each subject during 15 asthma attacks and 10 control periods. Results showed increase in anxiety, inability to concentrate and decrease of energy level during asthma, but no change was found on scales measuring depression or aggression. This study reports results on relationship between aggression and asthma. Males appeared more aggressive than females.

Pierloot and Vanroy (1969) studied a sample of 30 adult female asthmatics, 30 psychoneurotics and 30 healthy women matched on age, intelligence, and socioeconomic status. The Rosenweig Picture Frustration Test was used in this research. The number of impunitive 'ego-involved' reactions were considered as a measure for the deficiency in the elaboration of aggressive
propensities on a mental level. Asthmatics gave a significantly large number of impunitive, 'ego-involved' responses than the psychoneurotics and healthy subjects. The number of extrapunitive reactions was significantly smaller than with healthy subjects. This confirms the opinion that asthmatics are inhibited in managing their aggression against their environment. On this point, however, the difference with the psychoneurosis was not significant.

Zealley and Aitken (1971) conducted a study on 68 asthmatics, 22 neurotics and 22 normal with age range of 18 to 58 years. Two thirds were females. The prevalence of neurotic personality disorder in asthmatics did not suffer from that in the general population with the exception that women with mild asthma scored statistically significant higher mean scores on Eysenck Personality inventory 'N' scale. The neurotic personality disorder was not related to the severity of asthma. As regards personality traits, one in six asthmatics, was found to be markedly obsessional, sensitive, anxious, hostile and under-confident.

Knoblach (1971) explored the etiology of asthma in a study of senatorium patients. Three hypotheses are presented:

(a) Personality disruption during the oral phase in which the objective confounding of the self with one's mother occurs and the attempt to throw off asthma is unsuccessful (confirmed by the TAT).
(b) A regressive neurosis, results from this disruption which is similar to psychogenetic depression (proved with the help of the Rorschach test).

(c) A further result of fusing of the child's identity with the mother and the resulting frustration is the turning of his aggression against himself (made through the TAT and the Rosenweig P-F test). It is concluded that the study enhances previously existing knowledge, but that the line of demarcation between somatic and psychic causes remains indeterminate.

Musaph (1974) also noted that the role of repressed aggression in the onset of a somatic symptom remains ambiguous. Straker and Tamerin (1974) studied 28 boys and 14 girls, 5-16 years old, with a diagnosis of chronic perennial asthma. A manifest aggression score was derived for each subject by utilizing a modification of the teacher's rating scale. Results reveal a statistically significant negative relationship between the severity of asthmatic symptomatology and aggressive behavioural expression.

Bentley (1975) compared four asthmatic children who made rapid improvement when placed in a residential treatment centre with 4 children who made little progress in the treatment. Projective tests and clinical observations were used to distinguish the 2 groups according to their emotional awareness. The rapid improvers recognized their own angry feelings towards parents and wanted nurturance while the children who did not improve had repressed all feelings of anger and need for nurturance.
Abramson's theory (1963) that children whose asthma begins in the anal stage will have the greatest difficulty giving up asthma symptoms, was valid for non-improvers in this study.

Tinkleman (1976) conducted a comparative psychological study for 9 months in weekly group discussion of asthmatic children, between 11 and 14 years, who remitted symptoms when separated from home with non-remitters. Remitter's group expressed hostility and/or rejecting feelings towards parental figures and longings for a person providing nourishing care or guidance while non-remitters did not show signs of emotional disturbance and were well-behaved.

Indira & Murthy (1977) made a study of the hostility and direction of hostility underlying psychosomatic illness. A battery of tests (e.g., TAT, and Hostility and Direction of Hostility Questionnaire, HDHQ) was administered to 28 psychosomatic patients. Fourteen neurotic patients and 14 normal adults were selected. Findings showed that both groups had a significantly higher general punitiveness score and were more significantly intropunitive than the normal group on the HDHQ. On the other tests, there were no significant differences among the 3 groups in direction of aggression type, type of reaction, hostility and guilt. No significant differences emerged between patients with varied psychosomatic conditions.

Bentley (1975) presents a case history in which individual play therapy was used to treat eczema and asthma in a 9 years old
boy in a residential treatment centre for asthmatic children. Therapy helped him to work out his fears of his own aggression which dated from severe environmental deprivation in infancy, while the patient remained on some steroids when discharged after over a year of residential treatment, including weekly therapy, his asthma had decreased and his condition seemed stabilized.

In brief, the studies indicate that suppressed rage, aggression, and hostility may be considered as an important variable in the etiology of asthmatics, allergic patients. Consequently, allergic patients should have more aggression, hostility or suppressed anger than normals; they should be more hostile and aggressive than the normals.

**HOSTILITY AND NEUROTICISM:**

Some investigators have found close relationship between hostility and neuroticism. Hess (1965) correlated hostility with neuroticism and psychoticism in one of his studies. He obtained overt and covert hostility scores on Bending, T.A.T. and Rorschach tests. He found that overt hostility was highly correlated with psychoticism and covert hostility with neuroticism. He explained that "individuals with neurotic tendencies are likely to be covertly hostile. They run angry feelings upon themselves and suppress or distort their own hostile needs. Individuals with psychotic trends tend to direct their hostile feelings against others. They assign blame, in assaultive terms
and seek to punish their associates for real and imagined slights”.

In another study Mohanty and Mishra (1967) tested 97 undergraduate students to explore the relationship between hostility and neuroticism. They compared three neurotic groups high, middle, and low-on the basis of neuroticism scores obtained on Eysenck Personality Inventory. They obtained hostility score on Manifest Hostility Scale. All the three groups differed significantly in respect of mean hostility scores. The correlation coefficient between hostility and neuroticism scores was found to be .34.

ADJUSTMENT AND ALLERGY:

It has been reported by some investigators like Abramson (1950) & Herbert (1965) that allergic group as a whole expresses dissatisfaction with family life and greater adjustment problems in their interpersonal relationships. It is also suggested that allergic persons being extremely sensitive react emotionally to the family problems, as reported by Woodhead (1946), in a study on children with skin allergy and by Rogerson (1937) on children with allergic asthma.

Smith (1962b) concluded that allergics tended to be more insecure in their social relationships, needed constant reassurance and are generally not the type of people who have many friends. The pattern of social conduct was also observed by Wittkower (1953) in his study of psychosomatic criteria.
Freeman et al. (1967) classified the allergic patients on the basis of greater or lesser skin reactivity to allergens and reported that weaker reactors described themselves as depressed, often withdrawn and uneasy about their capacity to deal with their environment. They see the environment as acting or impinging on them. Stronger reactors, on the other hand, appear to be relatively more satisfied with themselves and their adjustment and less critical of people around them. Recent work with Rorschach protocols of non and strong reactors corroborated these descriptions that the stronger and the weaker reactors express themselves in markedly different ways. Although Harris and Shure (1956) and Dekker et al.'s study (1961) does not report any significant results between the two groups.

Herbert (1965) planned a study to test the hypothesis that there is a personality type specific to asthmatic and related to the specific nature of illness. The experimental group consisting of 77 asthmatic children was compared with two control groups (normal and stammerer) matching in age, sex and intelligence. The results did not show any evidence for specific personality type peculiar to asthma, (although symptoms of maladjustment and dependency traits were prominent in asthmatics).

Few investigators have found that the asthmatics suffer from highly unsatisfactory adjustment in other areas also i.e., personal, emotional, social, and occupational. However, Mitchell (1946) found that personality maladjustment was the
common denominator along with other multiple complaints in the group of patients which showed negative skin reactions.

It has also been found by Symons and Coleman (1968) Arnds (1969), Pinkerton (1970), Jacobs et al. (1971), Muller (1971), Rawls et al. (1971), Aminon (1973) and Schwab and Schwab (1975) that asthmatics show greater emotional turmoil and also a variety of social, situational, educational, and vocational problems.

Rawls et al. (1971) compared 6-11 years old children with and without allergic reaction on their intellectual ability, academic performance, social interaction patterns, medical history, TAT responses, and scores on a number of other psychological tests. Results indicate that subjects who did not exhibit allergic reactions were otherwise healthier and were rated as superior on a number of academic, social, and emotional adjustment dimensions. Results are related to studies of Psychosomatic children.

Ulrich and Tanali (1976) also emphasized on the family and social environment of the asthmatics. For treating the asthmatic children they used combined intensive psychotherapeutic methods, and obtained quick results especially in these subjects. They emphasized on the importance of intensive psychotherapy and suggested that such a method must include family and social environment as part of the therapy.
Benjamin (1977), Teiramaa (1977) and Panides & Ziller (1981) also while emphasizing on the social or situational factors in the process of adjustment, suggest on the bases of their studies, that asthmatics show slightly greater impairment in social adjustment than controls. The asthmatics had childhood milieux less favourable for personality development than controls and had lower levels of self esteem and quality of life. Other situations in which asthma had begun included occupational stress and marital conflicts.

Ago (1979) concluded that although allergic disorders occur in individuals who have a hereditary or congenital allergic constitution, clinical symptoms often disappear due to changes of the individuals life situations and/or their adaptive patterns.

A comparative study of allergic predisposition in 45 university students with asthma and 57 students who had been completely free from childhood asthma for more than 3 years (without specific treatment) found no significant differences in allergic predisposition between the two groups. The same tendency was also found between 91 patients (20-64 years) with allergic disorders (asthmatics) and persons who had shown complete remission for more than 3 years following psychosomatic treatment. Findings suggest that allergic predisposition does not influence the prognosis of allergic disorders as much as do psychosocial factors. It is suggested that the effect of psychosomatic treatment reconditions socio-psychological factors that disturb homeostatic balance and facilitate the clinical
manifestation based on the allergic predisposition.

In Shanmugam and Kaliappan's (1982) study, asthmatics, ulcer patients and normal subjects (N=50 each) were administered Bell's Adjustment Inventory. The results show that the asthmatic group is very poor in emotional and health adjustment. The cause is considered to be their high trait anxiety apart from their frequent exposure to stress. These studies indicate that allergic patients do have adjustment problems.

Since adjustment is an active process that occurs as the individual lives in his family situation, advances educationally, pursues vocational outlets, engages in social relationships, family, emotional, personal, occupational and health, maladjustments are evident in one or more than one area of his life. Many investigators have studied family relations, intra-family tensions and attitudes of the parents. They found that family psychodynamic relations have great influence on psychosomatic illness, and certain family emotional patterns seem to favour allergic manifestations as will be evident from the following mentioned studies:

**ADJUSTMENT AND ALLERGY**

**Family relations/Intra-family tensions/attitudes of parents:**

Many investigators have stressed on the complexity and mutuality of relevant family interaction, as evident from the following mentioned studies.
Dubo et al. (1961) reported a study of relationship between family situation, bronchial asthma, and personal adjustment in children. Twenty families showing best adjustment and twenty families with poor adjustment were compared on 23 variables including those dealing with severity of asthma and response to treatment. The study revealed no positive relationship between the asthma situation, onset, severity, response to treatment and the family situation - (quality of family relationship, identification opportunities, care and handling) but a positive relationship between level of disturbance in child's personality and/or behaviour and level of disturbances in family relationships, care, and handling.

Rees (1963) found that a significantly higher number of asthmatic children had an unsatisfactory family life compared to a control group of normal children. There was less stability, security, warmth, affection and encouragement in the families of asthmatic children. Jacobs (1965) in a study to determine the incidence of psychosomatic predisposing factors in allergic disorders (asthma, hay fever, and atopic dermatitis) predicted that both a somatic factor and a psychological factor (disturbed parent-child relationship) must be present in order for an allergic disorder to develop, that neither is sufficient and that both are necessary conditions. The somatic factor was identified as a hypersensitivity to antigens as measured by wheal reactions. The psychological factor was identified as a faulty parent-child relationship consisting of maternal domination and paternal ineffectiveness. In 75.5% of the cases involving
allergic illness, both a somatic and a psychologic factor was evidenced. Furthermore, in 75.0% of the non-allergic group, both of these factors were not present. It may be concluded that both a somatic and psychologic predisposition are necessary in order for allergic illness to develop.

Vidal and Ruiz (1969) examine the influence of intra-familial dynamics on psychosomatic illness. Fourteen psychosomatically ill subjects, 7 organically ill controls, and 4 neurotic controls were included in the sample.

It was found that the psychosomatic subjects tended to negate conflicting familial situations, whereas neurotic and organically ill subjects treated them openly. The initial hypothesis that the family structure and relationship is related to the appearance and duration of illness in psychosomatic subjects was confirmed.

Maclean & Ching (1973) & Luban & Comazzi (1973), Manroker (1977) and Florez (1980) emphasize on intra-family relationships. Luban & Comazzi (1973) describe in their study the psychological dynamics within the family and discuss the need for the physician to acquire a valid picture of the family unit with its strength and short comings in mind and body. Continued flight from pressure of vital issues can lead to family neurosis. It is argued that physicians are in a good position to recognize these signs. A therapeutic method of "psychosomatic confirmation" is introduced.
Meissner (1974), Peshkin (1974) and Stierlin (1977) also stress on the relationship between patterns of illness and aspects of family interaction, which can lead from family patterns of interaction to the occurrence or intensification of physical illness in family members, or emotional climate in the home which might have led to the intractability of the asthmatic syndrome.

**Faulty Mother/Child relationship:**

A faulty mother-child relationship underlying the allergic disorders has been found by number of authors as is seen in the following studies:-

McDermott and Cobb (1939) in their study found that asthmatics were frequently the oldest child and occupied a special place for the mother who was in conflict about closeness or separation. The conflict was intensified when the child was with the mother and lessened, for the child when she was away.

In 1941, French and Alexander were among the first to comment upon the disturbed mother-child relationship, with the emphasis on the ambivalent attitude of the mother towards asthmatic child. Asthma is a response to the fear of separation from the mother. It is a wish to be protected, to be encompassed by the mother or the maternal figure. The asthmatic attack is a repressed cry for mother's help in response to a threat of separation; that the attack expresses opposing tendencies, the protest against the
separation from mother and protest against wanting to re-establish a dependent relationship with mother. This conflict seems to be the deepest and most primitive substratum of asthmatic attack.

Harris et al. (1950) compared 22 asthmatic children with 17 children having allergic rhinitis and found that asthmatic children had more fear of maternal separation, were more fearful generally, and less aggressive. Some asthmatics had difficulty crying and confiding, and the mothers of these children were rigidly angry over misbehaviour. These interpretations from interviews and teacher's reports appeared to support French and Alexander, but findings from the battery of psychological tests were not reported.

Maternal overprotection as a potential etiological factor in asthmatics has been highlighted by many investigators (Little & Cohen, 1951; Mitchelle et al., 1953; Morris, 1959)

Studies by Little and Cohen and Morris are notable for attempting to derive hypothesis amenable to experimental verification from analytic formulations. Even though lot of work has been done regarding the psychogenic aspects of bronchial asthma, after the original writings of French & Alexander, there has been no adequate test for their hypothesis. In surveying the literature, one gets the impression that lack of skepticism has been largely responsible for this state of affairs; investigators have often used their data to confirm
or illustrate analytic formulations rather than to test their validity. Even though the testing of hypotheses derived from psychoanalytic interviews of unconscious conflict is not a simple matter but carefully designed studies should be undertaken which would permit conclusions about the validity of Alexander & French's ideas instead of simply asking the mothers whether they have overcontrolled or rejected their children as previously such approaches have been attempted.

Jansen (1965) reported contradictory findings and concludes that studies indicating that mothers of asthmatic children are rejecting, overprotective and over anxious may be invalid due to:

(1) different opinions of the meaning of terms.
(2) Investigations made outside of the family situation. 
(3) Inexplicit definition of the role influence and function of the mother.

Jacobs (1972) asked 73 healthy male under graduates and 106 reported hay fever, sore throat, asthma or neurotic symptoms to describe the quality of their family experiences while growing up. Questionnaire and interview techniques were employed, 3 clusters of faulty parent child interaction were examined; mother seen as demanding, cold, and harsh; mother seen as over protective and ineffective; father seen as inadequate, cold, and harsh. As expected, healthy subject
evidenced least signs of these clusters, while those who sought help for "neurotic" complaints were highest on each variable. Two patterns associated with respiratory illness were observed. Subjects who had sought care for allergic symptoms described their mothers as overprotective and ineffective whereas those subjects who presented acute infections, respiratory, symptoms were more likely to perceive their mothers as demanding, cold and harsh.

Parker (1979) determined if parental overprotection is an antecedent or a consequence of asthma in a child. Subjects were 50 asthmatics, 50 non-asthmatic siblings and 50 controls (mean age 33.8 years).

Results suggest that parental overprotection is a consequence of asthma in a child, but this was more clearly demonstrated for the fathers than for the mothers. Parental overprotection associated with asthma is likely to reflect an adaptational response by parents to a child with a chronic, unpredictable illness arousing high levels of anxiety in parents. Studt & Arnds (1968), Pinkerton (1974), Byrne (1977), Rubenstein (1979), Meijer (1981) also found mothers of asthmatics as overprotective, often in the same form of expression of anxiety. As children asthmatics found their mothers had overcontrolled them and they also experienced strong dependency needs.
Studies reported so far do not indicate whether or not the asthmatic subjects were in fact allergic. Also they provide little information about the relationship of the father to the dynamic of asthma. It may be pointed out that the individual personality characteristics and psychosomatic patterns of the sufferer should be understood, rather than simply attributing the 'blame' to the mother. Maternal rejection has also been considered as etiologically important in the development of allergic symptoms (Miller and Baruch, 1950, 1951, 1957).

As Miller and Baruch's work has had such impact in this field, it is important to study their research methods, and try to evaluate their strongly positive results in this light. The biggest single difficulty in their work is lack of explicitness about how they arrived at their findings. They have not described their criteria for ratings of maternal rejection. It is difficult to know whether other workers would make similar interpretations from the data because the bases for judgements are not specified. Safeguards to ensure that gathering of information and performing ratings were done independently, and without awareness of a subjects group membership (allergic or non-allergic) are not reported. Using a control group of children with a variety of behaviour deviations does not solve these problems.

Few other authors like Mitchelle et al. (1953), Bostok (1956), and Greenfield (1958) stress on the early genesis of the
symptoms and the frequency of maternal rejection.

Abramson (1954) found that disturbance in the parent-child relationship was not parental rejection but rather 'mutual-engulfment' where by the ambitions, willful and over-solicitous mother forces the child to be dependent on her and develop on the lines to satisfy her needs and wishes into a pre-conceived idealized notion of what she wants the child to be. Usually rejection follows and the mother, full of anger and disappointment, rejects the child in turn. The child being moulded into the preconceived role has become part of the pattern of the parents' character. The latter are abused to relieve with their children the patterns of their own childhood and thus the sins of the parents are carried into the 3rd or 4th generations.

Coolidge (1956), Williams (1975) and Meijer (1976) while investigating the mother-child relationship report that allergic asthmatics show a special need for clinging-possessiveness towards the mother and fixation on the mother. Asthmatic subjects also demonstrate an excessive dependence-independence conflict with an excessive mother-child bond and core anxiety around the threat of separation. Georgen (1975) considers the symbolic significance of breathing and asthmatic attack with a particular focus on the mother-child relationship and its symbolic importance.

Gauthier (1978) investigated a possible relationship
between allergic factors and psychological variables in 40, 14-30 months old asthmatic children and their mothers. Observations were made of the mother-child dyads at home and in the hospital during structured play and psychiatric interviews. In addition an allergist evaluated the allergy potential (AP) of each child. Seven ordinal point scales were developed to measure the psychological variables-5 for autonomy and 2 for self assertion (oppositional tendencies and autonomous strivings). Results show a much more harmonious mother child relationship than has been implied in the generally accepted concepts of infantile asthma.

Meijer (1979, & 1981) suggest on the bases of their findings that emotional disorders in asthmatic children are associated with pathogenic maternal family relationship patterns. They believe that family relationships particularly of the mother's childhood family, seem important in the evaluation of childhood asthma. Given a constitutional allergic pre-disposition and familial allergy history, significant differences among asthmatic and non-asthmatic children and their families have been found.

Manipulation of the environment has been used as one of the methods of treating personality problems presumed to be important among allergic individuals. Few authors suggest that in cases of children with severe asthma, removing the child from the conflictual situation, either outside or in the family would bring better results.
Murray and Bierer (1951) reported that a boy with continuous wheezing lost his symptom after removal from a competitive school situation, though previous medical treatment had failed. A series of papers by Peshkin (1960, 1959, 1956, 1964), Peshkin and Abramson (1958), Tuft (1957), Hallowitz (1950) and Nitzberg (1952) have described, success of a residential treatment centre in rehabilitating chronic intractably asthmatic children. Peshkin and his co-workers attributed the improvement mainly to the "Parentectomy", which transferred the child to a more favourable environment for medical management and psychotherapy.

Other such current studies have been reported by Ford (1968), Mascia (1976), Kapotes (1977) and Piazza (1981). It is concluded from these studies that this is a successful method of treatment particularly for the subject with a large emotional overlay to his disorder. The conditions of most of the subjects improved dramatically and many seem to obtain a long term benefit from such a separation.

Some authors advocated formal psychological treatment or psychologically oriented management of allergic patients and reported that symptoms such as anxiety, tension and to be able to solve problems and to adapt positively to their life situations could be handled successfully with psychotherapy and hypnosis. Abramson (1956, 1948, 1961) Miller & Baruch (1953), Lazare (1972-73) and Maher (1975),
Voorhorst (1977), McDonald et al. (1977), Arnoff (1975) also report such results. Other methods which have been used are emotional support and counselling, and behaviour therapy. Knapp & Wells (1978) suggested that relaxation training, systematic desensitization, and operant conditioning may produce significant improvement in the respiratory function of the asthma patients.

Thus for asthmatic patients family therapy, family oriented treatment, and family counselling has been found effective by investigators like Cermak (1973), Liebman et al. (1974), Peshkin et al. (1976), Sandler (1977), Voorhorst (1977), and Waring (1980).

Family Group therapy sessions in asthmatic adult patients, children and also with their parents has repeatedly led to improvements in allergic disorders as found by Reckless (1971), Reckless & Faunterloy (1972), Peshkin and Abramson (1974), Peshkin/Abramson (1978), Abramson and Peshkin (1979).

**ANXIETY AND ALLERGY:**

Symptoms of anxiety and tension have been observed frequently in both psychosomatic and allergic patients by many investigators (Rogerson, 1937; French and Alexander, 1941; Curran, 1948, Vles and Groen, 1951; Wilken-Jenson et al., 1951; Kraft, 1963; Schubert, 1969). These clinical observations agree in reporting that the personality of the asthmatic children shows the following traits with great consistency: over-anxiety,
lack of self confidence, and deep seated dependence upon the mother. Moreover, most of these authors stress the high incidence of psychoneurotic difficulties or behaviour problems in asthmatics.

Rees (1956) studied 762 persons, representing random sample. 441 were asthmatics and 321 subjects suffered from appendicitis or hernia. The age ranged from birth to 65 years. The results indicated that asthmatics as a group show significantly higher incidence of traits such as marked anxiety, sensitiveness, timidity, and obsessional traits. These traits in different ways were conducive to the state of emotional tension which in turn may act as precipitants of attack of asthma.

Lopez Ibor (1950) & Leigh and Marley (1956) employed the Cornell Medical Index Health Questionnaire in their study. They found male asthmatics manifested significantly more inadequacy, anger, and tension than normal controls. Asthmatics attending psychiatric clinic showed significantly more anxiety, depression, sensitivity and anger than asthmatics attending general practitioners. They differed from neurotics in that they were less tense. Female asthmatics manifested more anxiety, depression, and tension than the other control groups.

Mathew Mohan (1965) studied two asthmatic cases, one juvenile delinquent, and one normal boy. He administered Intelligence tests, TAT, Favourite story test, Free association test, Draw a person test, and Dream analysis interview. On
analysis of the results he found that both boys gave favourite stories with the central theme of separation anxiety. Both of them had high scores on aggression and repressed aggression. Both had thought of committing suicide several times. Feminine identification was glaring in these 2 boys.

Knapp et al. (1966) also found that asthmatic subjects demonstrated an excessive Dependence-Independence conflict with an excessive mother-child bond and core anxiety around the threat of separation. Often this acts as a powerful emotional arousal and a breakdown of psychological defenses and thus precipitating asthma attacks.

Faulkner (1969) using a standard psychiatric interview, found that 37% of an outpatient sample of 52 chronic bronchitics were psychiatrically disturbed and the majority of these were suffering from mild depression or anxiety states.

Williams (1975) also found that asthmatic subjects demonstrated an excessive dependence-independence conflict with an excessive mother-child bond and core anxiety around the threat of separation.

Aitken et al. (1969) studied 12 patients with chronic bronchial asthma which were matched for sex and age with 6 normal and 6 neurotic subjects. They were all given psychometric tests. (Taylor's MA Scale, Foulds Hostility and Direction of Hostility Questionnaire, Eysenck Personality Inventory and a brief intelligence test and a psychophysiological examination). The results suggest more psychopathology among asthmatics than among normals.
Vesely (1969) examined whether the behaviour of the asthmatic children significantly differed from that of healthy children. Twenty one asthmatics showed symptoms of anxiety and depression in their general behaviour and during the testing, twenty-six showed symptoms of neurosis on the Rorschach and twenty three showed psychic trauma. Only 36 subjects showed symptoms of anxiety or depression. Results indicate the co-existence of neurotic symptoms and psychic trauma with bronchial asthma in the subjects studied.

Anxiety is regarded as a principal factor contributing to physical symptoms in psychosomatic disorders (Cameron, 1963). The causation nature of anxiety in psychosomatic disorders has also been emphasized by Leigh (1968). He stressed the relationship between psychosocial disturbance and the occurrence of illness by emphasizing on the vulnerability of certain individuals to the stress of life changes which acts as an important causative factor of psychosomatic disorders. The forms the illnesses take are dictated by genetic, constitutional, and environmental factors and in this, anxiety plays a very significant role.

Robbins (1972), Kellner et al.,(1972) and Luborsky et al.,(1973), Cucu & Csögor (1973) also found that somatic symptoms are highly correlated with anxiety and tension. Kidson (1973), and Pestonjee and Bagchi (1979) obtained high scores on anxiety for hypertensive patients and coronary patients. Studies by Miklich et al.,(1973) and Kinsman et al.,(1973) show that panic fear and stress have marked effects on asthmatics.
Rosenthal et al. (1973) administered Catell's 16 PF to 68 asthmatics selected at random from registers of known cases; 14 asthma cases referred for psychiatric treatment; 22 neurotic cases and 22 healthy controls. They found that asthmatics scored midway between neurotics and normals on 6 source traits comprising anxiety factor.

Walter Tietz et al. (1975) reported psychiatric evaluation of three death cases of asthma which revealed that all the three patients had striking similar psychological characters. They had symbiotic (clinging and controlling) relationship with mother. Any attempt to break symbiosis were expressed as anxiety followed by asthmatic attack with striking change in personality beginning with mild to severe anxiety with panic.

Cohen et al. (1975) examined respiratory correlation of affect. Negative affects primarily of anxiety and hostility were induced by showing stress films. During stress film, the respiration times were longer and pause time shorter as compared to neutral film. It was suggested that these changes may be due to increased tension in respiratory muscle groups. Ramachandra et al. (1977) also found that asthmatics showed anxiety of depressive symptoms.

Singh et al. (1977) for their study selected 20 children suffering from asthma and their parents, 20 normal children and their parents and 20 physically sick children and their parents. Groups were matched for age, sex, and education. Children were
administered H.S.P.Q. and parents were administered 16 P.F. It was concluded from the results that asthmatic children did not differ from physically sick children on any factors except from normal group of children on factors A, Q4, Extraversion-Introversion and anxiety. Mothers of asthmatic children did not differ from mothers of physically sick children on any factors except from mothers of normal children on F, Q2 and Extraversion-Introversion. Fathers of all the 3 groups of children were compared and it obtained that on factors, C, F, H, O, Q2, Q+, Extraversion-Introversion, and anxiety normal group differed from asthmatic and physically sick, but there was no significant difference between latter 2 groups.

Biro and Frantisek's (1977) study indicated that there were personality traits which distinguished asthmatics from non-asthmatic controls, e.g., anxiety and a higher number of colour determined responses to the Rorschach. The individual spirographic measures - frequency of breathing, mean amplitude values of inspiration and oxygen uptakes did not yield any significant differences between the control and asthmatic groups, either at rest or in stressful phases of experiment.

Dirks et al., (1977 & 1978) studied the relationship of an MMPI derived Panic Fear (PF) scale to medical intractability in terms of length of hospitalization, in adolescent and adult subjects (63 with severe asthma and 83 with respiratory tuberculosis). Fifteen MMPI items were selected for the PF scale. Those asthmatics with lower PF scores required shorter hospitalisation. This was also true of subjects with greater
pulmonary capacity. PF scores were also related to the length of hospitalisation for tuberculosis subjects. Patients with low scores had shorter hospitalisation. There was no relationship between bacterial type of tuberculosis and PF scores. It is concluded that this scale does classify asthma and tuberculosis patients in terms of medical intractibility. Possible reasons for the relationship include physician's judgement, personality differences, physiological differences, and misuse of medication in high PF patients.

Evidence that anxiety is present more in psychosomatic patients and bronchial asthma patients than the other control groups has also been given by LoLas and Von Rad (1977) and Agarwal & Sethi (1978). The latter compared psychological test results in 4 groups of Indian adults (i.e., 20 with bronchial asthma, 10 with other allergies, 10 normals and 6 siblings of asthmatics). Asthmatics and allergies were more serious, tense, emotionally unstable, and neurotic than normals. They were also much more anxious than siblings or normals. On the SCT, asthmatics and allergies showed more disturbances than normals and siblings.

Chattopadhyay (1979) administered the Self Evaluation Questionnaire to 80 subjects (approximate mean age 30 years) with psychotic, somatic, or psychosomatic disorders and controls. Results indicate that anxiety was prominent in all subjects but it was transitory in somatic subjects and permanent in all others. In the somatic subjects anxiety seemed to be primary
due to subject's apprehension of a serious illness. Manifestation of somatic symptoms in psychosomatic subjects is an expression of their basic anxiety.

Vond Rad et al. (1979), Zimet et al. (1974), and Teiramaa (1979) studied psychosomatic patients and bronchial asthma patients to examine the relationship between characteristics of the patients and symptoms and some social indicators. Their subjects were matched for age, sex and intelligence. The results showed that on total anxiety (including the sub-scales guilt, shame, separation and diffuse anxiety), and on hostility, psychosomatic subjects showed lower values than the neurotic subjects, thus confirming the existence of psychosomatic phenomena. It was also found that asthma attacks were related to secondary affective responses like panic, fear, irritability, and anger, fatigue, hypertension, and hypocapnia. They also suggest that psychological properties connected with marked extraverted tendencies may prevent the inception of asthma. Inhibition, disturbances in self esteem, anxiety, fears (particularly in females) and depression were typical of asthmatics.

Asha et al. (1979) studied extraversion-introversion and anxiety in asthmatic children. The results are compared with other three groups of behaviour problem, somatic illness, and normal children. Findings reveal that asthmatic children are more introvert than the normal children and children suffering from behaviour problems and somatic illness. As regards anxiety, results reveal that maximum score is obtained
by the group with behaviour problems. And next to it are, other children with asthmatic problem.

Dirke et al. (1980) found that certain patient styles perpetuate chronic physical illness, defeat medical treatment, and increase the utilization of medical services. Two such extreme styles among asthmatic patients are indexed by the MMPI Panic-fear scale, reflecting either (a) helpless dependency and anxiety, (b) or excessive, inappropriate independence.

Sharma and Nand Kumar (1980) studied 25 bronchial asthma in-patients (As) and 25 normal controls (Cs) aged 15-54 years. The results indicated that As were significantly more inhibited than Cs. Compared to Cs, As had covert aggression, neurotic constriction, and greater affectional and dependency needs. As also showed significantly greater anxiety, excessive dependency on the mother, sexual disturbances, irrational fears, guilt feelings, and insecurity.

In Kleiger et al.'s study (1980), MMPI alexithymia scores and MMPI panic fear personality scores were calculated for 202 adult asthmatics. Findings suggest that alexithymia and panic fear may contribute to medical intratability in chronic Asthma.

Kinsman et al. (1980) showed in their study that anxiety in asthma has been measured in two ways. The MMPI panic fear scale is a measure of general non-illness specific anxiety and the panic fear symptom scale of Asthma. Symptom Checklist is a measure of illness-specific anxiety focussed
on the asthma attack. Both measures relate to response styles in asthma that contribute to the maintenance of illness.

In another study of 140 asthmatic patients (mean age 39.3 years), MMPI panic fear scores were highly related to trait anxiety measured by the Taylor Manifest Anxiety Scale (TMAS) even after partialling out check list Panic-Fear Symptom Scores. In contrast, Panic Fear symptomatology had a more moderate relationship to TMAS scores and was independent of them after partialling out MMPI Panic Fear Scores. Results support earlier findings suggesting that MMPI Panic Fear measures trait anxiety. In contrast, 'Check list Panic-Fear symptom reports' measure illness specific state anxiety that is not per se a measure of trait anxiety.

Matus (1981) and Teiramaa (1981) found that psychological factors (e.g., stress, emotional arousal) can enter into and affect the course of asthma in a variety of ways. These factors can affect the course of illness by precipitating and exacerbating it and by impeding preventive home care.

Meijer (1981) examined asthmatic and their parents and found that asthmatic subjects were seen by their mothers as more hostile and anxious, depressed and they saw their mothers as more overprotective and indulgent than did non-asthmatic subjects.

Shanmugam (1982) studied four groups of subjects namely, Normal controls, Ulcer patients, Asthmatics and Anxiety Neurotics (50 each). Taylor's Manifest anxiety Scale was administered.
Results show that there is a Trait Anxiety continuum on which normal controls occupy lowest end. The authors theorise that the psychic and somatic defenses might have contributed difference in the psychosomatic and psychological disease groups in trait anxiety level.

Some investigators have reported that, symptoms such as anxiety, tension or irrational fears, and depression in allergy patients could sometimes be handled successfully with psychologically oriented treatment methods. These investigators report that anxiety reduction procedures, when used as adjuncts to medical treatment, have been found very useful for these, especially asthmatic patients. Various methods which have been used are tranquilising drugs (anxiety reduction drugs), Major and minor tranquillisers, anti-depressants, stimulants for hyperactivity and agents used for personality disorders. Multidisciplinary approach as part of the treatment was also emphasized upon (Mascia, 1974). Psychotherapy, individual or group psychotherapy as anxiety reduction procedures, when used as adjuncts to medical treatment have been reported to benefit asthmatic patients, by a number of investigators (Selare & Crocket, 1957; Peshkin, 1959; Kraft, 1963; Aitken & Zealley, 1972; Groen, 1973; Joanne, 1974; Tetz, 1975). Hypnotic treatment of anxiety in asthmatics was used by Moorefield (1971), Van Pelt (1975), Majolino (1975), Smith et al. (1981) and Tunsater (1984). Operant conditioning procedures to treat panic/anxiety during the asthmatic attacks have also been used (Miklich, 1973;
It is clear from the above mentioned studies that nearly all treatment methods used with neurotic patients have been tried with allergics, too. There are enough accounts of successful psychological treatment with allergic patients to conclude that at least sometimes it proves to be of benefit in controlling anxiety associated with allergic symptoms. There are however, few clinical reports of success and many failures go unreported. An important question which arises is that what kind of patients benefit from psychological treatment? Are these patients really allergic or are they called allergic because of their present symptoms rather than immunological patterns? If the investigators carefully design the studies and aim at answering these questions, treatment studies could begin to contribute to an overall understanding of the field. However, it may be pointed out that the investigators must specify the criteria for assigning patients to psychotherapy or allergy management.

After the examination of the studies mentioned above, it is quite clear that anxiety plays a very significant role in the development of the allergic disorders. Thus a treatment method aimed at managing the patient as a whole would prove very useful for the individual.
Personality Variables and Allergic Skin Reactivity:

Clinicians sometimes observe that allergic factors appear to be the major cause of symptoms in some of their patients, while emotional factors seem relatively more important precipitants for certain other patients. They also note that some of their patients while suffering from symptoms suggestive of allergy, present negative immunological findings. A recent formulation notes that within a population of sufferers from allergy-like symptoms, a complex continuum of sensitivity to allergen exists, and along this continuum one can identify at least 2 large groups:

(1) Those persons with symptoms of allergic illness who demonstrate clearly an allergic constitution, as inferred from positive skin test results, family history and personal history; and

(2) Those persons who do not demonstrate a constitutional diathesis, or do so only minimally. The assumption is then made that psychological investigations which contrast these two groups will find important personality differences between them. The relevance of emotional behaviour events for the etiology and course of allergic symptoms may be quite different for the two groups. Very few studies have investigated the relationships between level of skin reactivity and allergens, type of allergic syndrome and personality features. The degree of skin reactivity although an important part of the diagnostic evaluation, tends to be ignored in psychological studies, and little is known
of the interrelationships, if any, between skin reactivity, personality, and specific allergic syndromes.

A few of the earlier studies have explored the view that groups defined on the basis of degree of response to various measures of allergic hypersensitivity will differ in personality characteristics. The intent of this work has been to see whether individuals with an allergic constitution differ in significant ways psychologically from those whose symptoms are less obviously due to measurable allergic factors. Most of these earlier investigations lacked careful definition of samples, did not use objective methods, and drew overly broad generalizations from their findings.

The following studies indicate that important psychological differences may exist within the population of patients with allergic symptoms. Also, it may be that the relevance of emotional factors for the etiology and course of allergic symptoms may be quite different for these groups.

Rees (1956) tried to assess the relative dominance of allergic, infective, and emotional factors in asthma from interviews and case histories. Fifty to sixty per cent of asthmatics were rated as having emotional factors in the etiology, usually along with allergic or infective factors. The proportion increased in patients over 60 years old.

Kraft et al. (1959) contrasted the Bell's Adjustment Inventory performance of 5 adults who died in asthmatic
attacks with 10 severe but non-fatal asthmatics; the former group appeared to deny all emotional conflicts and interpersonal tensions.

Controversial results closely related to the issue of psychological differences within the allergic population have been obtained by Fennell (1963) who distinguished between nasal allergy and vasomotor rhinitis on the basis of negative skin tests, nasal secretions, and blood eosinophil study. He gave librium to 45 patients in a double blind framework, reasoning that if psychogenic rhinitis symptoms should improve with such a drug. Rhinitis patients did not report more improvement with the drug than the placebo, so he concluded that rhinitis was not a psychosomatic disorder.

Purcell et al. (1961) compared asthmatic children whose symptoms showed relatively rapid remission after admission to a hospital for asthmatic children with children whose symptoms showed little abatement following hospitalisation and also continued to be dependent upon steroid treatment. These results have been interpreted by the authors, using independent psychological measures, as supportive of the hypothesis that "the asthmatic syndrome functions as a psychogenic symptom more often among the rapidly remitting than among the steroid dependent children."

It has also been suggested by some authors that
patients with lesser skin reactivity to allergens (weaker reactors) face more adjustment problems. These adjustment problems may be either social, familial or interpersonal or greater disturbances of adjustment on the whole as indicated in the following studies:

Mitchell et al. (1947) differentiated 100 patients with hay fever or perennial extrinsic asthma and positive skin tests from 147 patients with perennial vasomotor rhinitis, intrinsic asthma, or chronic urticaria. The latter group frequently had negative skin tests and did not respond to treatment. They were older and more often females, with many physical complaints and adjustment difficulties.

Kraft et al. (1959) also found that patients with lesser skin reactivity show more interpersonal tensions.

Purcell et al. (1960) studied two groups of children sent to a residential treatment centre for chronic, intractable asthma. With one group of 54, symptoms remitted rapidly after admission, while a second group of 59 required continuous steroid medication. Results of a parent-attitude test suggested that parents of rapidly remitting children more often subscribe to certain attitudes on child rearing and family relationships that are generally accepted as psychologically undesirable.

In a second study by Purcell and Metz (1962) there were no significant differences in age of onset for the rapidly
remitting and steroid dependent groups. For the rapidly remitting group, however, relatively late onset was positively associated with autocratic maternal attitudes.

Feingold et al. (1962) found significant differences in personality patterns related to severity of reaction to skin testing. Women who reacted slightly or not at all to allergy testing admitted to significantly more personal discomfort and unhappiness than did women who reacted strongly to skin testing.

In an earlier investigation, psychological test differences were found between groups of women with allergy symptoms who differed in degree of hypersensitivity on allergy skin testing. In a study by Freeman et al. (1967), the MMPI and other tests were given to 132 women patients with asthma, rhinitis, or hay fever. Patients with minimal evidence of hypersensitivity on skin tests (non reactors and weak reactors) expressed significantly more personal discomfort and unhappiness than women with clear evidence of hypersensitivity (moderate and strong reactors). Nonreactors described themselves as more passive, negative, withdrawn, and complaining than the relatively satisfied and confident stronger reactors. Differences between groups were found on several clinical scales, an item analysis, and a large number of experimental scales.

Another important study of Freeman et al. (1967) has tried to correlate alienation with or within the allergic
population (non reactors as compared to strong reactors). It was found that the differences between the two groups suggest that the non and weak reactors tend to have personality characteristics suggestive of greater personal discomfort than those of the stronger-reacting women. Thus, the results from the 12 clinical MMPI scales depict the weaker reactors as having more somatic complaints; greater feelings of pessimism, hopelessness, or worthlessness; difficulties in impulse control; abnormal fears and worries; excessively high personal standards and self-critical feelings; feelings of both self and social alienation, and greater anxiety.

Block (1963) developed a 15 items scale along which asthmatic children were rated for "allergic potential". It included such factors as family history of allergy patient, skin sensitivity, and total number of allergies. Thirty one children above the mean and the 31 below were compared on testing, interviews, and behaviour ratings. Interactions of parents with children and with each other were observed and parents evaluated their children. Children scoring low on the Allergic Potential Scale manifested more psychopathology than high scorers, and parents more often described as inadequate and anxious. Mothers of low-scorers were less secure and less well integrated. Interactions with their children were more negative, and with their spouses they were demanding and dependent. Thus, asthmatic children with low "allergy potential" and their parents scored more frequently in psychopathological directions than did...
Few other investigators conducted some studies to find out if there were significant differences in neurotic characteristic between the two groups. But they did not obtain results in the predicted direction, e.g., high neuroticism score in patients with low or negative immunological findings.

Dekker et al. (1961) stated that classifying asthmatics according to etiological factors depends on a negative correlation between allergic and psychological factors. They classified 79 adult female asthmatics as having "manifest allergy" or "no manifest allergy" on the basis of skin and inhalation tests. On the Heron Two Part Personality Inventory, they found no differences in neuroticism between groups and concluded that there was no evidence for differential etiology.

Purcell et al. (1962) likewise found no differences in neurotic characteristics between the two groups, as measured by Porteus Mazes, Children's Manifest Anxiety Scale, behaviour ratings, and Cattell's Personality Questionnaire. The authors posed a dual explanation for these findings within the context of intractable asthma. For the steroid dependent group, physical and allergic factors were of primary importance even though they exhibited as many neurotic symptoms and behaviour deviations as the other group. For the rapidly remitting group, asthma played a dominant role in dealing with psychological stress and may have been acquired to some extent as a means of reducing tension and conflicts.
In brief, the studies indicate that there is evidence regarding the measurable important psychological differences within samples of allergy patients, related to the degree of demonstrable hypersensitivity on skin testing. On the other hand there are also some contradictions in the literature. The studies are open to criticism and the number is very small. Hardly any such study has been carried out on Indian population. Therefore, to get a clearer picture it may prove worthwhile if this area is probed again.

**DURATION/CHRONICITY OF ILLNESS:**

It is reported by some authors that in patients with chronic allergic illness, emotional factors may play a more significant role. Though it is not certain whether emotional disturbances are peculiar to asthma or similar in nature to any chronic illness; scattered reports in the literature are presented. Sainsbury (1960) administered Eysenck Personality Inventory to asthmatic, neurotic, and normals and found asthmatics to be above average on neuroticism scores. The mean neuroticism scores of the neurotic group was significantly higher than mean of other groups. The higher level of neuroticism in asthma was considered to be a consequence of duration of illness.

Neuhaus (1958) contrasted 34 asthmatic children and 25 of their siblings with three other groups. 34 children with cardiac illness and 24 siblings, and 68 matched normal controls.
Tests used were the Rorschach, Brown Personality Inventory and Despert Fables. Based on test interpretations, the asthmatics were reported to be more neurotic, insecure, and dependent than the normal children, but they did not differ from children with cardiac illness or their siblings. The author concluded that there was no distinctive personality pattern for asthmatics; many previously reported psychological findings might be attributable to the experience of chronic illness.

Dekker et al. (1961) carried out an extensive investigation using Heron's two-part personality inventory as an objective criteria for the degree of neurosis in asthmatics. Test was administered to 79 adult female asthmatics, 100 female neurotics and 30 female normal control. Results revealed statistically significant differences between normal and neurotics and normal and asthmatics but no difference between asthmatics and neurotic groups. The findings were considered to support the hypothesis that asthmatics are neurotics but it was not possible to say that this was a cause or consequence of chronic disease.

Weiss (1966) studied 17 male and 15 female chronic asthma children, resident at children's Asthma Research Institute. Mood adjective check list measurement was obtained from each subject during 15 asthma attack and 10 control periods. Results showed increase in anxiety, inability to concentrate, and decrease of energy level during asthma but no change was found.
on scales measuring depression or aggression. Statistically significant decreases were found on positive mood scales in 11 out of 14, during asthma.

Controversial results regarding the effect of chronicity or duration of illness on the asthmatic's mental health has been found by Rolf Jhoren (1967). He studied 50 adult patients (20 men and 30 women) suffering from bronchial asthma, who were subjected to psychiatric examination by routine clinical methods. All the patients were admitted to the hospital as emergency cases in status asthmatics. Certain psychological traits were characteristic of some of asthma patients. This applied to obsessional neurotic traits of varying intensity. In some, there were slight indications only, in others they developed symptoms of obsessive neurosis. The occurrence of depressive symptoms was also usual, 10 out of 12 women displayed such depressive symptoms. In respect of grave psychopathological symptoms, asthma did not differ from general population, nor was any increase observed in neurotic conditions of such a degree of severity or character that they lead to the continuous use of psychopharmacological drugs or required medical or hospital care. The duration of asthma did not affect mental health as some asthmatics who had severe asthma for more than 10 years did not show any neurotic symptoms.

Ramachandran et al. (1974) also found that the incidence of psychiatric symptoms did not differ to a statistically significant level with duration of illness in
asthma group.

Evidence of the fact that chronic patients do show more behavioural disturbances, has been found by William et al. (1975). Behavioural disturbance was found to occur more frequently at statistically significant level in small group with severe and continuing asthma. The families of very severely affected group of children exhibited evidence of more stress than other families.

Rubeinstein (1976) studied behaviour in a medical clinic of patients with well controlled bronchial asthma. These patients exhibited irritating and sometimes unusual social behaviour more often than non-allergic healthy patients, patient with perennial rhinitis or patients being investigated for cardiac disease. Such behaviour may be just as much a sign of bronchial asthma as is coughing and sneezing.

To summarize, these findings indicate that chronic patients do show more behavioural disturbances and certain psychological traits than the normals. But they do not differ clearly from the patients with other physical disorders. It was not possible to conclude that this was a cause or consequence of chronic disease. Moreover, significant results were found frequently in small group with severe and continuing asthma. So it does not permit us to draw a general conclusion
that there is any significant relationship between duration of asthma and the psychological traits. Therefore, to get a clearer picture it may be worthwhile if this area is probed further.

TUBERCULOSIS: is a disease influenced by so many diverse factors - psychological and social in addition to tubercle bacilli. Emotional aspect of the disease is an important factor as suggested by the workers, working on psychosomatic aspect of tuberculosis. The interest in the investigation of tuberculosis from a psychological point of view is of recent origin in Indian literature. (Moudgil and Pershad, 1972; Dubey 1975 and Mathur, 1977).

To be afflicted with pulmonary tuberculosis is a unique and painful experience in the bio-psychosocial history of an individual. The emergent stress then very often contributes to the psychiatric morbidity. Thus, as has been pointed out earlier by some investigators, social, cultural, occupational and psychological factors play a role in the causes and pathogenesis of a number of diseases including tuberculosis. It has also been found by some investigators that hypochondriasis, egocentricity, emotional liability, depression, hysterical behaviour as a demonstrative indifference to oral restriction and reckless disregard of medical advice may individually or together, be found as a psychogenic reactions in tubercular patients (Mayer-Gross, 1960).
Very little work has been done in this area; the psychosocial aspects of pulmonary tuberculosis have been studied by a few workers (Moudgil and Perched, 1972; Dubey, 1975) and the syndrome of depression in this disease by some others (Verma 1974; Murthy et al. 1976; Purohit et al. 1973).

Purohit et al. (1978) found a correlation of depression with duration and severity of pulmonary tuberculosis.

The social stigma attached to the illness and the common symptoms like chronic cough and dyspnoea generate fear and other profound psychological responses. The characteristic attitude exhibited by these patients towards crises situation (defined as any event or experience requiring a major change is on going adjustment) is one of being hopelessly overwhelmed despite a vigorous effort to resolve the problem (Holmes, 1963).

The study of association of two (or more) diseases is of great practical value regardless of whether the association has similar etiological basis, or one is the manifestation of the other, or one disease is pathogenic or protective to the other.

By and large the efforts in this direction so far have been mainly concerned with studying the nature and prevalence of physical morbidity among psychiatrically ill individuals. Studies to delineate psychiatric profiles of physically ill individuals have received proportionately scant attention.
(Alexander et al. 1968). To start with, studies related to identifying psychiatric profile of physically ill persons should concentrate on a limited number of areas which are known to be vulnerable and can be studied in a systematic way. Though there are a few psychological studies on tuberculosis patients available in India, but there is hardly any comprehensive work done so far on this problem.

For the present study, tuberculosis patients have been used as one of the control groups for the allergic (Experimental Group). The following studies indicate the psychosocial aspect of the T.B. patients which include its relation to certain personality variables like anxiety, adjustment, hostility, and alienation the one's selected for the present study.

**EMOTIONAL ON PSYCHOLOGICAL PROBLEMS IN TUBERCULOSIS PATIENTS (T.B. PATIENTS).**

Dormic et al. (1965) describe psychological factors at the beginning and during the illness, the influence of tuberculosis on emotional problems and the psychological problems in treatment.

Forbes Sarosh (1974) discusses psychosomatic medicine using a case study to prove that emotional factors played a causative role in the tuberculosis of a male patient. The detailed psychodynamics of the case are discussed and the psychosomatic aspects outlined. The symptoms included
(a) tuberculosis (b) a type of claustrophobia (c) bodily ailments such as stomach ache, piles, dysentry, and worms. (d) many hypochondriacal anxieties. After 500 hrs. of treatment, the subject's psychosomatic "Tuberculosis" was inconclusively established.

In order to find out the prevalence of tuberculosis in mental hospitals, Krishnaswamy et al. (1976) selected 1,557 inpatients from Government Mental Hospital, Madras. Radiological, bacteriological investigations and for patients below 20 years tuberculin test was done. Results show that a prevalence of 10% among the inmates and 7% among the staff is noticed. This is in higher than 2% prevalence among the general population. The prevalence among the inmates is also found to rise with their duration of stay. Mentally retarded patients showed highest prevalence, 16.5%.

Tandon's study in 1930 describes demographic, social and psychological characteristics of 100 tubercular patients. The subjects were studied using Hamilton's Rating Scale for depression and a semi-structured proforma to record historical, socio-demographic and clinical parameters. Depression was observed in 32% of experimental subjects in comparison to 7% of controls. Test results also indicated significantly high scores on Hamilton Rating scale for depression among experimental subjects.

Aggression and hostility have been found to be related to tuberculosis, as one of the psychological factors. Kuha (1973) while studying the relationship between narcissism and
the development of tuberculosis, reports in his study that, according to the psychoanalyst Kohut (1971, 1977), a narcissistic disturbance is likely when parental figures do not provide enough acceptance and admiration for the child. This narcissism takes the form of either a strengthening of the grandiose self concept leading to self-sufficiency and aggressive ambition, or a strengthening of the idealizing part of the self, with a tendency toward submission and support seeking. To test this theory, 100, 20-45 yrs. old pulmonary tuberculosis patients were compared with healthy controls. Psychiatric interviews and psychological tests were used as well as questionnaires administered to persons close to the subjects. Narcissistic structures were observed in many subjects and half had experienced stress specifically related to their narcissistic satisfactions just before the onset of the illness. Fifty patients were re-examined 7-8 years later. In half of them, sound self-esteem had been maintained or established in the intervening years. Most of the others had integrated their narcissistic idealization into their life situation, but 10% showed pathological solutions. The theory of narcissism may thus contribute to an understanding of psychological factors in somatic illnesses.

Seth & Seth (1981) studied aggression in tuberculosis patients. They administered the Indian adaptation of the Rosenweig picture Frustration study to 50 tuberculosis (T.B.) patients, and 50 normal controls, matched on age, sex, education
and socio-economic status. They found that T.B. patients were more intrapunitive, ego defensive, and need persistent, though they admitted their guilt, they denied any essential fault by referring to the unavoidable circumstances. The results are by and large in conformity with earlier studies.

It has been pointed out that tuberculosis patients also have adjustment problems, which may be manifested in different ways, e.g., adjustments at home, interpersonal or even in hospitals. Such a study was carried out by Visser (1975) who points out an error in a report of findings on the adjustments of tuberculosis patients. In 1960, Evans reported a negative relationship between the powerlessness of such patients and their satisfaction with hospital care. In 1966 Rotter, citing this study erroneously reported a positive relationship. Seeman and Evans (1962) matched patients according to educational and professional levels. They found a high relationship between the socio-educational stratification of patients and their satisfaction with hospital services.

Some investigators have correlated the development of tuberculosis with anxiety as one of the important psychological variable. Fagerhaugh (1970) describes contrasting perception of mental illness by psychiatrists and tuberculosis specialists which created barriers to the management of institutionalised tuberculosis patients with behaviour problems. Most of the professional workers were older, had worked in the tuberculosis
field for many years and had used specific antitubercular drugs and routine treatment. The psychiatric professionals were young and were used to working with an array of deviant behaviours and groups. Mental illness is quite ambiguous and its therapy is not specific. The psychiatrists viewed the patient's behaviour as situational anxiety and felt that the staff was inept in inter-personal skills. Solutions should include inservice education programmes for the TB staff, reduction of factors contributing to patient's anxiety in a long term care facility and psychiatric consultation appropriate to the particular situation.

Bernard (1973) also found that "stress and strain" was an important factor in the tendency to assess consumption as a cause of death in unmarried women.

Jai Parkash and Siddiqui (1976) carried out a study mainly to identify the various factors that contribute to the enhancement of anxiety in T.B. patients. Anxiety level was measured in 30 patients of T.B. undergoing treatment and 30 normal persons by Taylor's Manifest Anxiety Scale. The level of anxiety was considered in both groups with reference to six environmental factors viz. (a) patients marital happiness, (b) childhood experiences (c) occupational satisfaction, (d) achievement, (e) marital status and (f) family adjustment. The comparison of anxiety scores of the two groups on these six variables, indicates, that anxiety level is to a great extent influenced by all these factors except marital status.
Jeth et al. (1977) administered the 16 PF to 50 hospitalised tuberculosis patients and to 50 normal individuals who had not had any illness during the past year. Subjects were matched on age, sex, and socio-economic status of the 15 factors under study (Factor B—lessVs more intelligence—was excluded). The tuberculosis patients were found to be significantly different from the controls on 9 factors, anxiety being one of them:

- A. (Reserved vs. outgoing)
- B. (Emotionally less stableVs. Stable)
- C. (Sober Vs Happy go lucky)
- D. (Placid vs. Apprehensive)
- E. (Emotionally less stableVs. Stable)
- F. (Practical vs. Imaginative)
- G. (Expedient vs conscientious)
- H. (Shy vs Venturesome)
- Q2 (Group dependent vs self sufficient)
- Q4 (Relaxed vs Tense)

Yadav et al. (1980) studied two hundred and seventy two patients at Pulmonary Tuberculosis (with positive sputum) contracting T.B. Demonstration and Training Centre-cum-Chest Institute, Agra. Ss selected through a specified sampling procedure and were subjected to detailed psychiatric screening. Those suspected to be suffering from a psychiatric condition were assessed by a second psychiatrist for diagnostic reliability. Eighty patients were found to be suffering from a psychiatric condition in addition to pulmonary tuberculosis giving a psychiatric morbidity rate of 294.12 per thousand, which is much higher than the rates in the general population of comparable age-group as found in various studies. Psychiatric
breakdown was more frequent among those patients who had concomitant physical illness, special strains and severe anxieties and were housewives than their counterparts.

Srivastava et al. (1983) also found anxiety related to the development of tuberculosis. Their study consisted of 60 patients of pulmonary tuberculosis, selected through a specified procedure, and were assessed by P.S.E. (Present State Examination). Results indicate that significantly more patients as compared to control subjects are worried, anxious, depressed, irritable, and have sleep disturbances. 41.6 per cent patients have symptoms related to all the six P.S.E. subgroups and could be considered as suffering from a diagnosable psychiatric illness.

Relationship between neurosis and tuberculosis has been pointed out by a number of investigators. Ramachandran et al. (1974) reported that significantly higher number of asthmatics gave neurotic responses as compared to pulmonary tuberculosis.

Seth and Seth (1978) compared 50 tuberculosis hospitalised patients with 50 non-tuberculosis individuals, matched on variables of sex, age and SES. P.G.I. Health Questionnaire N-2 was administered on them. Results showed that tuberculosis patients scored significantly higher than the non-tuberculosis group on the neuroticism scale.
Mathai et al. (1981) also found that the prevalence of psychiatric morbidity in patients with pulmonary tuberculosis is significantly high. Depressive neurosis is the commonest among them. The psychiatric morbidity is related to the duration of illness, the degree of incapacitation and the knowledge of sputum AFB positive status. More attention has to be paid to the psychiatric manifestations in chronic illness like tuberculosis in order to alleviate the mental sufferings of these patients.

Few investigators have felt the need of some kind of psychotherapeutic intervention for such patients, as is evident from the following studies.

Beigous (1965) observed the increasing difficulties for patients to accept their treatment and the growing amount of behavioural problems and psychotic reactions of approximately 40% of all cases have caused physicians to call in psychiatric help.

Psychoanalytical examination of these cases led to the supposition the PT (pulmonary tuberculosis) develops during a process of somatization which constitutes the ultimate defense mechanisms against depression. This defense depends on mechanisms of omnipotence and denial of psychical reality coupled with the respiratory reintrojection of a partly destructive object which is kept in the lung, separated from the rest of the persons, in order to safeguard the other parts
of the physical and psychic ego. Treatment and prognosis of the illness depends on the intensity of these psychotic mechanisms underlying the somatization process.

Ueno, Hitoshi (1971) considers methodological problems in psychological studies of patients with physical diseases. The internal world of 20 male pulmonary tuberculosis patients was examined from the point of view of "disease-image". It was hypothesized that the differences of disease image before and after the onset of the disease may influence the constitution of the patients internal world. Further differences in the way of being concerned with the disease may constitute different inner life worlds. It is suggested that the main goal of psychotherapeutic consideration should be to help the patient to an amicable relation with the disease.

Fagerhaugh (1970) also emphasizes on the psychiatric consultation, whenever required, for such patients.

Gupta et al. (1981) too emphasized on the need of some kind of psychiatric help for certain patients afflicted with tuberculosis. They selected 60 patients of pulmonary tuberculosis selected through a specified selection procedure from T.B.Hospital, Bikaner. The information necessary for the study was gathered with the help of Present State Examination Schedule and an Open Ended Life Event Schedule. The results showed that the patients who had experienced life events had significantly more psychiatric symptom scores as compared to
those who did not report a life event (p < 0.001).

Further analysis showed that the significant differences were among the patients who had more than one life event as compared to those who had no life event or only one life event (p < 0.01). Implications of the findings are discussed. These patients with physical illness who are presently living in the stressful conditions are in need of psychiatric consultation and help.

DEMOGRAPHIC VARIABLES (TUBERCULOSIS PATIENTS)

(i) Tuberculosis and Sex:

Stüdt (1973) outlines the type of conflict situation which initiates symptoms in asthma and pulmonary tuberculosis and analysed the situations with respect to 36 male and 50 female Ss representing each of the two illness, in terms of conflict type and sex of the subjects. Men fall ill significantly more often as a result of conflicts in the area of occupation and profession; women in the area of love, sex and reproduction, (p < 0.001). Tuberculosis patients in turn are significantly more often affected by certain "love" conflicts than asthamatics, (p < 0.001 to < 0.009), and asthamatics by deaths (p < 0.005). In both cases this is more pronounced in women. The significance of these results for diagnosis and psychotherapy are discussed.
(2) **Tuberculosis and Marital Status:**

Bernard (1973) studied the relationship between marital status and tuberculosis among women in Salem, Massachusetts in 1785-1819 by analyzing Parish death lists and family records. Findings indicate that consumptive women tended to marry at slightly later ages, were more often widowed, single or separated and had fewer children. Data also show that stress and strain" was an important factor in the tendency to assess consumption as a cause of death in unmarried women.

Jai Parkash and Siddiqui (1976) in their investigation to identify the various factors that contribute to the enhancement of anxiety in T.B. patients (30 T.B. patients and 30 normals) found that although in both the groups married and single, patients exhibit considerably more anxiety than the normals (\( F = 14.52, P < .01 \)) there is hardly any significant difference between the mean anxiety scores of the married and single subjects in normal as well as in the patient group (\( F = .61, P > .05 \)). Hence it can safely be concluded that marital status does not affect the level of anxiety in any group.

Yadav et al. (1980) in their study on 272 patients with pulmonary Tuberculosis (with positive sputum), found that psychiatric breakdown was more frequent among those patients who had concomitant physical illnesses, special strains and severe anxieties and were house wives than their counterparts.
ALLERGY AND DEMOGRAPHIC VARIABLES

The development of allergic disorders is not dependent on the organic or psychological factors but it is the result of dynamic interaction of a number of factors. Demographic variables like age, education, sex, and marital status may be also found closely related with the development of allergic disorders. Studies relating allergic disorders to certain demographic variables are given below:

(1) **Sex Ratio**

The incidence of a given psychosomatic syndrome is presumably greater in one of the sexes. There are data to sustain this assumption. Ulcers are more common in men, and neurodermatoses are more common in women. However, sex differences also occur in a variety of diseases that have no psychological components. For example, colour blindness occurs more frequently in men than in women. Therefore, in spite of evidence consistent with this assumption, it is not necessarily correct. Different sex ratios may be related to "personality" and emotions as they affect psychosomatic disorders but on the other hand sex ratio may be completely unrelated to psychological variables.

However, the following studies indicate that sex is an important demographic variable related to psychosomatic disorders like asthma and some personality variables like anxiety, aggression, and hostility.
Schwab et al. (1974) interviewed 1,645 households randomly selected from a sample of 37,000. Psychosomatic symptoms during the previous year were recorded with sociodemographic characteristics. Weight changes were noted in 40% of the interviews, indigestion 35%, other gastrointestinal symptoms (27-60%), headaches 9%, hypertension 6% and other symptoms. Differences in sex, race, income are reported.

Relationship between asthma and sex as a demographic variable and the need to study sex differences has also been reported by some investigators. Studies by Mitchelle (1947), Weiss (1966) and Glassberg et al. (1969) also found differences in male and female personality structure of asthmatics. Melett (1973) describes a newly developed true false questionnaire for asthmatics. The factor scores were somewhat related to demographic and illness variables.

Alexander (1975) pointed out the need to study the sexes separately. He compared the presently perceived past family interaction between mothers and maternal grandparents of asthmatic and non-asthmatic children. Subjects were 60, 6-11 years old and their mothers. All the children had a common factor in that they suffered from eczema in the 1st. year of life and in their families there were many cases of asthma, hay fever, and eczema. With the use of two different test instruments it was found that maternal grandparents of asthmatic boys had a highly positive relationship.
with the mothers of the boys and that the maternal grandfathers were perceived by the mothers as rejecting figures. There was a striking difference between the mothers of asthmatic boys and the mothers of asthmatic girls in both the tests. This fact, together with the established greater vulnerability of boys to asthma, seems to justify studying the sexes separately. It could be assumed that the asthmatic and non-asthmatic subjects had a similar constitutional-familial allergic predisposition and that the differences between them were mainly influenced by environmental factors. The mother's perception of the family relationship with their parents was considered to be minimally influenced by the asthma of their children.

Peckham & Butler (1978) obtained a history of asthma in 3.5% of a representative sample of 11 years old children from England, Scotland, and Wales. A further 8.8% had a history of wheezy bronchitis. In the 12 months before the interview, 2% experienced attacks of asthma and 2.9% attacks of wheezy bronchitis. Both conditions were significantly more common among boys than girls and a history of asthma was reported more frequently among subjects from non-manual than from manual social classes. Other studies also indicate that asthma occurs more frequently in males than among females (Purcell, 1975).

ANXIETY & SEX DIFFERENCES:
An important personality trait, i.e., anxiety has been correlated with sex as a demographic variable.
Devi Girish's study (1969) indicates that the female subjects had significantly more anxiety than the males. Contrary to this finding Cysewski & Weiner (1975) reported insignificant sex differences. Thirty male and 30 female undergraduates (2 categories of stress physical and mental) were examined as possible factors in previously mixed feelings of sex differences. Stress was induced by having subjects listen to tape-recorded descriptions of a car accident of taking a final examination. A self report checklist was used to obtain ratings of anxiety, hostility, and depression and a Likert type scale was employed to get subjects estimates of their own emotional reactions. All subjects showed marked increase in emotionality scores after scene presentation. Results did not support the view that there are sex differences in responding due to different stressful conditions. However females tended to express more emotionality than males to the stressful scenes. These differences are discussed in view of in vivo vs vitro presentation of stressful stimulate and the obtainment of sex differences as a function of where the measurement instrument, falls on a subtle obvious dimensions.

Hostility, Aggression, and Sex Differences:

It is generally reported that a relation exists between hostility, aggressiveness, and sex. A study by Jersild and Markey (1935) found amongst Nursery School children that
boys made more overtly aggressive responses than did the girls. The hostility the girls did display was largely indirect, i.e., somewhat inhibited, for they were more likely to use language instead of making more direct physical attacks.

Another study was reported by Sears (1961) who found that the twelve year old boys scored higher than the like-aged girls on a self report measure of antisocial aggression and were lower than the girls on the questionnaire measures, of aggression, anxiety, and prosocial aggression.

Livon and Muson (1957) made an experimental study to see the relationship between overt aggression and ego-control in both male and female subjects. They found a significant negative relationship between the amount of expressed aggression and ego-control. This study further suggested that girls developed greater ego control and less overt aggression.

A similar trend was also observed by Devi (1967) in her study on sex difference in reaction to frustrating situations. She found significantly different aggressive responses for males and females towards ten different situations incorporated in the test. Male subjects were found more overtly aggressive than females. As regards suppressed aggression, she found no significant difference between the responses of male and female subjects.

Prabhu (1968) chose 340 normals (260 men and 80 women) and 52 psychiatric patients and administered on them Hostility.
The results showed that women had a score significantly lower than that of men as far as aggression is concerned. Age showed a very low negative correlation with the scores on the questionnaire \( r = -.11 \). Hostility/aggression being clinically important traits, objective assessment of them have much of significance and practical application.

These studies suggest that males are more overtly aggressive than females.

AGE:

Some investigators have found that allergic disorders may also be related to, and influenced by factors like age as indicated by the following studies:

Teiramaa (1979) studied 100 adult asthmatics divided into 4 groups by age at the onset (0-16, 17-27, 28-35, 36-48 years); underwent a semistructured psychiatric interview and questionnaires and psychological investigations including the MMPI and the Beck Depression Inventory. Subjects in the 1st. and 3rd group (e.g., 0-16, & 28-35) most often belonged to the highest and lowest social strata and most frequently showed psychic disturbances, while subjects in the 2nd group had these least often (2nd group, 17-27).

Subjects in the 1st. group (0-16) had most often been either very lively or quiet and with neurotic symptoms as
Subjects in the second group (17-27) most often showed an improvement in their asthma and least often suffered from depression or obsession, inhibition or psychasthenia whereas obsession or depression and Schizothymia were characteristic of the third group.

The 3rd group had the fewest patients (28-35) with near relatives with atopic disorders.

Disappointments within a year before asthma had been experienced most often by subjects in the 4th group (36-48 years). Results indicate that the onset of asthma may be the end product of the synergic effects of various factors, the contribution of each group (somatic, psychic and psychosocial) probably differing according to age at onset.

Erskine et al. (1981) discuss the relationship between the psychological and physiological factors responsible for airways obstruction in asthma and indicates the mechanisms by which psychological methods of treatment may influence airway caliber. The effects of mental and muscular relaxation therapy, systematic desensitization, and biofeedback assisted relaxation are reviewed in children and adults with asthma. Muscular relaxation therapy alone appears to have no effect.

It is concluded that certain mental relaxation techniques (e.g., autogenic training and transcendental meditation)
systematic desensitization and biofeedback assisted relaxation can produce subjective improvement as well as clinically significant improvement in respiratory function and other objective parameters. As with any therapy the response is variable and is influenced by factors such as age and severity of asthma.

**Hostility, Aggression, and Age:**

It is generally reported that a relation exists between hostility, aggression, and age, as the following studies indicate:

Goodenough's (1931) study of aggression in young children clearly points to the development of internal controls with age. Her data, based upon forty-five mothers, reports of instances of aggression by their children during a one-month period showed, that violent outbursts within the first two years of life frequently are characterised by displays of undirected energy. Specific motor and language responses begin to increase as the child grows older, and indirect modes of aggression, such as peevishness and whining become more frequent.

Rosenzweig (1952) found that direct aggression, defined in terms of extrapunitive responses, declined with age, while the more inhibited intrapunitive responses increased in frequency.
Sears (1961) found that children showed their aggression in less circuitous ways and were more likely to attack physically than adults.

Rimon et al. (1975) performed the Buss-Durkee Inventory rating for measuring aggression on 125 consecutive female patients admitted to a Finnish General Hospital. The test scores of different diagnostic groups were all on an intermediate level, and with the exception of slightly lower scores in patients with blood disorders, only few differences reaching statistical significance were observed. Analysis of the test revealed 3 factors; in addition to aggression and hostility, a factor called remorse was identified. The patient groups divided according to their medical diagnosis showed no differences in these factors. The variance of factor scores could not be explained by such background variables as social-class, marital status or domicile. There was however, a highly significant negative correlation (-.33) between age and aggression. The concept of suppressed aggression and hostility and the role of aggression dynamics in the development of organic illness are discussed.

These studies tend to suggest that there is evidence of aggressive, hostile behaviour and it is noticed in varied forms at all age levels.

Anxiety and Age:

Anxiety has also been correlated with age. The studies carried out by Chapman and Jones (1944), Critchley (1956),
Cattell (1957), Gelhorn (1957), Hollingshed and Medlitch (1958), Maccoby et al. (1958) and Lyan and Eysenck (1961) showed that with the advancement of age anxiety declined.

**NEED FOR THE PRESENT STUDY:**

Foregoing review of literature makes it evident that there have been numerous studies which have been interpreted to indicate that there may be certain definite patterns of behaviour and emotions, characteristic of allergic patients. Analysis of these studies reveals that there are sharp differences of opinion and wide variations in the interpretation of material gained from the study of psychological factors. With the result there has been an equivocal picture in which the allergic personality has been described in contradictory terms and the psychological factors have been termed either causative, concomittant, resultant/sometimes irrelevant.

The different research (design) strategies which have been used so far are:

(i) To contrast a group of allergic persons with a group of normal individuals.

(ii) The second design compares groups within the allergic population such as asthmatic and rhinitis patients.

(iii) The third method compares different disease groups which have been labelled by some as psychosomatic disorders.
Authors have usually avoided assigning a direction of causation i.e., whether psychological problems lead to allergic illness or vice-versa.

The drawbacks which have often been observed are in regard to:

(i) Sampling procedures.
(ii) Techniques of investigation

(1) In many earlier studies, the criteria for the diagnosis of allergic patients was not clearly specified. Earlier methods used have been:-

(a) Mere self-description that one is "allergic" or on the basis of questionnaire on physical findings as found in Smith's (1962a, 1962b) study.

(b) Diagnosis not confirmed through other physical findings, history or skin test results. Often the skin tests were not correlated with positive history, the demonstration of reagin and other physical findings.

(c) Importance of bias arising from selection of subjects in research into somatic and psychic relationships (Benjamin, 1977).

Dekker et al., (1961) Leigh and Marley (1956), Franks and Leigh (1959) are among the few to report having used careful classification of their sample.

Research reports should clearly cite skin test results and other criteria used in establishing the diagnosis of
allergy i.e., positive skin tests correlated with positive history (the demonstration of reagin and other physical findings). The importance of correct physical diagnosis lies in the fact that until it is known to what extent investigators are actually dealing with allergic patients, and further with what kinds of allergic patients, conclusion about their psychological status will have little meaning.

(II) A large portion of all the allergic subjects studied earlier have been allergic patients referred for or already undergoing psychiatric treatment. As a result, only a very selected segment of the allergic population has been studied. One cannot generalize from a psychiatric sample to other samples with allergic symptoms. Such findings are evident in the study by Leigh and Marley (1956). Thus to achieve better results than before, it is very important that samples chosen for the study should represent a wide range of allergic population.

Further attempts to use control groups have been fairly unsystematic. To use a control group adequately requires that one be able to specify and measure one or a very few crucial variables on which the experimental and control groups are to differ. In this new area of research, however, specifying the important variables to be controlled is an extremely difficult matter. Control groups in allergy research have been children with various behavioural problems, unselected psychosomatic patients, non psychosomatic surgical patients, unspecified out-patients, and "normals", to name a few representative
categories.

Because there have been scarcely any attempts to cross-validate findings, inconsistencies and contradictions between studies remain unresolved. If a number of the more promising studies in the field were replicated, this would constitute a major improvement.

Also, variations in selection or assessment can be minimised by using objective psychological measurement.

(III) Earlier studies have often neglected the study of subgroups within an allergic population. Particularly the relationship between the level of skin reactivity to allergens, type of allergy syndrome and personality traits. Earlier, few well designed studies were carried out by Purcell et al. (1960, 1962, 1963), Block et al. (1964) and Feingold et al. (1962).

Main drawback in these studies is that the results underscore the need for a very precise description of the allergic characteristics of sample, being studied psychologically. This discrepancy suggests (i) the need for further exploration of the distinctions between individuals in an allergic sample; both the effects of variation along dimensions such as age, sex, diagnosis, effects of chronicity or severity of an illness need to be studied. Thus there is strong evidence that the allergy population is far from homogeneous either physiologically or psychologically. Many contradictions in previous research on asthma or other allergic syndromes may
well have resulted from inadvertent mixing of groups with differing demographic, physiological or personality characteristics.

In other countries, few studies have explored this view. Also, the sample taken earlier has been mostly females and (Feingold et al., 1962) children (Purcell et al., 1960, 1962, 1963). No such study has been reported in India and that too, the samples including both males and females. The present investigation covers both the aspects i.e. the sub-groups within the allergic population on the basis of levels or degrees of skin reactivity to allergens and also sex as one of the important demographic variable.

Few drawbacks have been observed on the psychological side too, when the (i) basis for a conclusion is not specified. It must be emphasized that these are only minimum criteria. But often the authors did not report any specific procedures by which rater's judgement of psychological characteristics were made and the failure to report the extent to which raters were actually able to agree in their judgements, are deficiencies which place severe limitations on the credence that can be attached to any study of complex psychological processes.

(ii) Measurement techniques - A wide variety of measurement techniques have been used in the studies in this area e.g., several personality inventories, projective techniques and subjective ratings from medical history or observation. The drawbacks which have been observed are:

i) Ratings of personality characteristics from medical histories.
(i:iii) Studies using such techniques should report the degree of agreement between raters and should use appropriate control groups.

(ii:iii) Other techniques used in most of the studies of personality and behaviour patterns have been dream analysis, study of life history, verbalisation, free-association, etc., necessarily involving interpretation by the investigator. These procedures cannot be completely free of subjective elements. Only few studies using the objective methods have been reported. Thus there arises a need for such a study which could evaluate more objectively the personality factors present in the individuals suffering from allergic disorders and compare them with the non-allergic individuals.

Other shortcomings have been:-

iv) Frequent use of a large battery of psychological tests and interviews followed by a report dealing with only a few items yielding positive findings.

v) Lack of proper instruments for testing the hypotheses or the instruments chosen may not have provided adequate tests of the hypotheses. To overcome such difficulties, a great deal of care in design is needed.

vi) Many authors refer to or imply the significance of emotional factors or personality correlates in the allergic disorders without providing numerical data or without systematic data analysis, as found in the studies by Tjosen et al. (1959)
and Miller et al. (1968). However, the group of studies by Fitzelle (1959), Cutter (1953), Margolis (1961) and Deb et al. represent important methodological improvements over many others cited, in specification of samples and selection of control groups.

vii) Few investigators found contradictory results and do not support the widely believed idea that asthmatics have a typical personality profile, (Fein and Kamin, 1965; Lindta and Goldman, 1961; Bristow, 1963; Stein & Schiavi, 1975; and on children Singh et al., 1977 and Nigam, et al., 1983).

Such variance in results can be due to the effects of chronic illness as Neuhaus (1958) and Singh (1977) suggest. Thus, they highlight the chronicity factor and it being responsible for psychological differences. They also suggest that subjects suffering from physical illness also display an emotional pattern that deviates from the normal.

To rule-out the effect of nature of illness, its severity and chronicity involves that the subjects be studied for their personality before the illness started and then after the illness. This has been quite an unwieldy work according to most authors because of the many problems confronted to gather such a data. Teiremaa (1972) also studied this area and came across almost similar kind of problems, like mentioned before.

Other important factors emphasizing more on the need of such a study are:-
1) The growing incidence of allergic disorders especially in India. As is seen from surveys done in Delhi and Patna in 1975 which reported that 1.2% of population of ours suffers from bronchial asthma and another 5% from common allergic colds and another 2.3% of the population suffers from allergic skin disorders (Shivpuri, 1975).

2) Therapeutic gains:

The particular value of this kind of study may be summed up in the following points:

i) Successful use of such studies as a predictive measure can help the raters to make physical diagnosis on the basis of psychological characteristics (Dunbar, 1943; Ring, 1957; Graham et al., 1962; Jacobs, 1965; Pollock et al., 1970; Cohen, 1975). Also, one can predict whether an individual will have favourable or unfavourable prognosis (Gilden, 1949; Teiramaa, 1978). Though it is often impossible to find out which factors are primary and which are secondary it is important to define medical and psychosocial risk factors which are of prognostic value (Bengtsson, 1984).

ii) The accounts of successful psychological treatment with allergic patients lead one to the conclusion that at least sometimes it proves to be of benefit in controlling allergic symptoms (Rakemann, 1950; Brown, 1951; Taub, 1961; Mayer & Laughman, 1962; Kinsman, 1974; Hock et al., 1978).

iii) A personality study can prove to be clinically useful in rapidly identifying patients in need of greater
psychological support (Abramson, 1975).

iv) Further, such studies may prove to be helpful in overall understanding of the psychological factors in allergic disorder, in enhancing the rate of recovery, and in forming certain impressions about case management and outlining the treatment programme.

Studies reporting various psychological treatment measures used successfully as part of the whole treatment have been reported by Moorefield (1971), Waden & Anderton (1982) using hypnosis and behaviour therapy; Rathus (1973), Erskine and Schonell (1981) with progressive relaxation techniques. A number of investigators feel that holistic approach towards the treatment of the patient would definitely enhance the rate of recovery. It has been stressed that for best results both by physician and/or expert allergic treatment and the psychological intervention are required (Miller & Baruch, 1960; Wittkower, 1960; Bieraman, 1969; Kaufman, 1972; Thirion, 1973-74; Kinsman, 1974; Ulrich & Tanini, 1976; Kurata et al., 1976; Abramson & Peshkin, 1980; Goyeche et al., 1980; Feldman et al., 1982).

Inspite of so many references reporting significant results in this area, controversial results and views regarding psychosomatic approach towards the respiratory allergic disorders still exist.

Investigators like Spiegelberg et al. (1970) and Davis & Offenkrantz (1976) noting such controversies express their views by saying that the psychosomatic problems of allergic disorders
have not been solved as yet. Zealley & Aitken (1970) also observed that psychopathology can be caused by the allergic disease or can co-exist without any etiologic relationship to the allergic disorders. The co-existence of allergic and psychiatric disorders can aggravate severity and complicate management of both as Falliers (1969) reported.

Patterson (1980) while critically evaluating previous psychosomatic theories of allergic patients summarized, patients with allergic disorders are heterogeneous in personality, psychodynamic characteristics, and family relationships. Generalizations regarding the entire spectrum or even individual syndromes cannot be made. The concepts of asthmatic personalities, asthmogenie psychodynamics, and asthmogenie parents are not supported by scientific studies. These disorders should not be considered to be psychosomatic in origin. Emotional problems in the patient and the family can result from allergic disorders or pre-existing emotional difficulties can be aggravated. Emotional problems can aggravate respiratory allergic disorders like bronchial asthma.

The more recent comment in this area has been by Bengtsson (1984). He puts forth his views as, "Bronchial asthma was early regarded as a nervous disease. Later on it was defined as an immunological disorder, but today asthma is regarded as a disease with a multifactorial etiology."
The causes are complicated and vary from patient to patient. Although we now have a rather comprehensive knowledge of different pathophysiological changes in bronchial asthma, the etiology of disease is still unclear. Many different trigger factors have been demonstrated and, in addition to allergies, infections, biochemical and hormonal factors, psychosocial factors also suspected initiating mechanisms.

In view of the review of literature and the above mentioned points, the investigator decided to carry out the present investigation.