Chapter Two
REVIEW OF LITERATURE

A large number of studies have been carried out on peptic ulcer and ulcerative colitis. This may seem to have exhausted many possibilities on their physiological and psychological consequences and the moderating influence of certain external variables. Therefore, reviewing them all will not be any avail, nor will it be relevant. Keeping in view the objectives of the present investigation, however, certain studies which might be related to our purpose, having some implication for the study, can be taken up for review. It would be best to follow some common denominators in order to have a systematic and organized narrative of the literature.

Psychological Factors in peptic ulcer

The first reports of direct correlation between the reactions of the stomach and emotional factors made by Beaumont (1833) in his observations on his patient Alexis St. Martins who was left with an opening from his stomach as the result of a gunshot wound. Beaumont followed the course of digestion with different foods, under varying conditions of health, and with alterations in his patient's emotional reactions. Wolf and Wolff, (1942) were able to observe directly the stomach of a patient, Tom, for whom a permanent gastric fistula had become necessary after the burning of his
esophagus. In states of fear and sadness the mucous membrane of the stomach could be seen to pale, and at the same time, gastric secretion and peristalsis diminished. In anger, his mucous membrane blushed and swelled, secretion and stomach contractions increased, and the membrane was judged to be vulnerable to an injury and ulcer development.

Szasz et al., (1947) found that the wish to remain in a dependent infantile situation, to be loved and cared for, was in conflict with the adult ego's pride and aspiration for independence, accomplishment and self-sufficiency which lead to ulcer formation. Pepsinogen levels in urine and blood found to be correlated with emotional experiences. It was observed that most individuals who develop peptic ulcer have high pepsinogen levels from infancy as a result of emotional tension (Mirsky et al., 1952). It has been reported by Wolff, (1950) that ulcer symptoms are supposed to be related to conflicts over dependence or to vacillation between active and passive behaviours in order to obtain love and care.

The ulcer often develops in a situation involving actual or threatened loss, divorce, death of a loved person (Prugh, 1950). Alexander (1950) found that peptic ulcers are associated with frustration of the needs
for protection and love that give rise to anxiety and anger, in turn, these emotions would trigger excessive secretions of stomach acid-leading eventually to the development of peptic ulcers. Engel et al., (1956) reported that there are changes in acid secretion in different emotional states, such as outgoing aggressive responses were associated with increases in acid, that decreased during periods of withdrawal. Chronic stress or loneliness has its psychologic effect (Liebman, 1955), motor activity is decreased, loss of appetite and fatigue occur and sex drive is diminished (Becker, 1974).

The specificity of the dependency conflict in ulcer development has indicated in the work of Mahl (1953) that acid secretion increases with anxiety regardless of its origin. This finding was derived from the experimental induction of 'chronic fear' in dogs and monkeys with a resultant increase in hydrochloric acid secretion, and also from a study of hydrochloric acid secretion during psychotherapy in two patients. Peptic ulcer may be precipitated by any type of psychological stress, Brady (1958) produced ulcers in "executive" monkeys by prolonged amount of vigilance of stress combined with the necessity for appropriate action to avoid stimulation of unpleasant. In order to study stress, Sawrey and Weizs (1956) turned to laboratory rat. They kept their animals on dry land, but they placed in a severe approach-
avoidance conflict. They deprived the animals of food and water and then placed them in a cage where food and water were supplied, and they were exposed to electric shock each time they approached these supplies, eventually developing ulcers. Selye (1976) made the study of stress in human and animals showing that stress could lead to ulcer.

The likelihood of exhibiting withdrawal and helplessness were evidences in ulcer person who has no hope of replacing outcomes, (Wortman and Brehm, 1975). Job transfer was found to disrupt the routine of daily life accompanied by feeling of anxiety, uncertainty and powerlessness (Lazarus, 1978). The periods of greatest role of stress resulting from multiple demands are not the same for men and women (Reichard, Livson, and Peterson, 1962). It has been postulated by Weiner, Thaler, Reiser and Mirsky (1957) that an ulcer may develop in an individual under the following conditions: (1) a sustained rate of gastric hypersecretion; (2) the presence of conflict related to the persistence of strong infantile wishes to be loved and cared for; and (3) exposure to an environmental situation which mobilizes conflicts and induce psychological tension.

Wiseman (1956) observed that the symptoms of ulcer occurred in patients when the threat of depletion exceeded
the promise of replenishment and the angry protest was restrained. Comparing the specificity of oral conflict in twenty ulcer patients with that in twenty other psychosomatic patients, Streitfield, (1954) has found that oral aggressive tendencies were significantly greater in the ulcer group than in the control group. Castelnnovo-Tedesco (1962) reported immediate emotional antecedents in twenty patients to be related to perforated ulcer. Perforation syndrome might be a depressive equivalent of the climax of an emotion conflict in which the patient felt damage of his self-esteem.

Thirteen normal persons and ten patients suffering from ulcers, were subjected to stress interview by Mittleman and Wolf (1942), in all cases, hydrochloric acid, pepsin, and mucous secretion were increased, but the increasing was much more pronounced in the pathological group. Margolin (1951) analyzed a negro woman with a fistulous gastrostomy. He correlated total acid secretion pepsin, motility, blood flow with stomach activity to certain psychic patterns. In one of his studies, Alvarez (1932) considered chronic stimulation of the empty stomach as one of the factors in the development of peptic ulcer. The frequency of gastrointestinal symptoms in two hundred and twenty seven Norwegians ex-prisoners was reported by Eitinger (1969), the most common symptoms were
diarrhea and ulcer. Sommerschield and Reyher (1973) induced post-hypnotic conflicts in their subjects and found that various symptoms, including gastric distress, tension and anxiety appeared as the hypnotically induced repression weakened and the conflict threatened to enter consciousness.

Weiner et al., (1957) indicated that in human neither biological predisposition, nor personality constellation, nor precipitating stress is as ordinary as sufficient to produce ulcers, but rather a combination of the three factors is necessary.

**Biological factors in peptic ulcer:**

A number of biological factors have been found to be involved in peptic ulcers, directly or indirectly. Research by Gregory (1965) has shown that the brothers of ulcers patients are about twice as likely to have ulcers as comparable members of the general population. Coddington (1968), studied a single pair of identical twins discordant for congenital abnormality of the oesophagus. He noted that the correlation between mood and acid secretion was greatest during the early phase of development, and diminished later. Pilot, Lenkowaski, Spiro, and Schafer (1957) described the emotional onset in identical twins. Both had identical heredity and similar character such as shy, dependent and passive, and both had high blood-pepsin levels. A peptic
ulcer developed, however, only when each individual found himself in a typical specific precipitating conflict situation. One of the twins developed ulcers when his wife had a near psychotic breakdown and threatened violence to her children. The other twin, married to a protective maternal woman, developed an ulcer later when his wife lost her job and thought she was pregnant.

Wolf (1950) observed that some people can be classified as stomach reactors or developed weak stomach, depending on what kind of physical changes resulted from stress. He concluded that the person who reacts with inherited secretion of stomach acid will be more likely to develop peptic ulcer. Studies have shown that the frequency of ulcers in parents and siblings of ulcer patients is two to four times greater than expected on the basis of chance alone, such as people with blood group O are slightly more likely to develop ulcers, and the type of pepsinogen released in the stomach may also be a factor (Martin and Stiel, 1982). Mirsky (1958) discovered significant quantitative differences in the pepsin levels of newborn infants. The excess occurrence of pyloric stenosis among first born infants may be influenced by the mother's emotional tension during the period of pregnancy. It has been found by Miller (1969) that there is a high incidence of peptic ulcer in family histories. In some
families, members are more susceptible to develop peptic ulcer than others (Dash, 1987).

In the literature survey on peptic ulcer up to 1955, fifteen cases of peptic ulcer, concordant in identical twins, have been reported (Bauer, 1924; Leorat, 1951; Dell, 1949; Ramos, 1951; Freedman, 1947; Ivy, 1950; Goodrich, 1950; McHardy, 1944; Schindler, 1935). Three of these studies are of importance. Freedman (1947) described a pair of 30-year-old, one of them died of acute hemorrhage six weeks after discharge from service; within three weeks the other brother appeared, acutely lonely and depressed over the death of his brother, and with ulcer symptoms of duration of six weeks, also dating from time of discharge. Reicher (1946) described a pair of young women, the first developed an ulcer at the age of eighteen, four weeks after the delivery of her first child, and the second twin, two years later, developed an ulcer four months after the delivery of her first living child. Schindler (1935) collected seven pairs of identical twins; in one pair both twins had peptic ulcers, but the other six pairs of fraternal twins had concordance of ulcer in one set only. It was concluded that predisposition for peptic ulcer is a hereditary factor.
Diet appears to be as a significant factor in the formation of ulcers. The way food is eaten and the eating habits of persons that seem to play an important role in the disease. It was found that Negroes in Africa who were free from peptic ulcer while eating unrefined carbohydrates, were introduced in their diet, because of reduced intake of acid-buffering proteins in the diet. Milk diet can reduce gastric acidity to suppress gastric motor activity and maintain mucosal resistance (Khosla, 1928). People in India and Africa who eat high roughage food get fewer ulcers, but there is no similar evidence in some other parts of the world that eating more roughage will protect an individual from ulcer (Martin and Stiel, 1982). It was reported by Dash (1987) that people who subsist on coarse and rough food are less likely to have peptic ulcers than those who take refined and fireless food.

Occurrence of ulcers which used to be more frequent among males has now slightly increased among females. It could be due to dietary changes, since the number of women who drink and smoke has increased in the last two decades (Mausner, 1974). Many ordinary substances such as alcohol, aspirin, cigarettes, caffeine, spices and everyday foods stimulate hydrochloric (HLC) secretion. For example, physician advised ulcer-prone patients to avoid red meat and
eat only veal or chicken (Beeson, 1977). At least forty five and possibly as many as fifty dietary compounds are now recognised or recommended as essential for human being to live a full healthy life (Scrimshaw and Young, 1976).

A person's diet can be improper either due to lack of essential nutrients or because it is excessive to the point of endangering his health. In fact, one out of every eight persons on our planet is under-nourished. It was acknowledged that well-fed persons are not necessarily well-nourished ones (Mayer, 1976).

Socio-cultural factors in peptic ulcer

Within a single culture, sociocultural factors have deleterious effects on the organism, including the autonomic nervous system. Some societies are more favourable to the development of peptic ulcer than other (Burton, 1967). It seems improbable that a susceptibility to ulcer is lacking among Negroes (Field, 1960). Emotional tension is relatively less prevalent among the economically underprivileged (Dunham, 1959). The period of greatest role of stress resulting from multiple demands differ between men and women (Richard, Livson, and Peterson, 1962).

A number of studies have found a disproportionately high incidence of psychosomatic disorders at the two extremes of socioeconomic scale, for example, ulcer disturbances were
observed most common among executives (Passamanick, 1962). It has been found by Senay and Redlich (1968) that psychosomatic gastrointestinal ulcers were no respectors of social class or other major sociocultural variable. Similarly, it was reported by Kahn (1969) that only a small number of executives develop peptic ulcers; in fact, blue-collar workers who are dissatisfied with their jobs are more likely to develop ulcers than successful business executives who are moving up on the occupational ladder. Peptic ulcer of the stomach and probably also of other gastrointestinal disorders, differ markedly in frequency among different branches of industry and different echelons of employment. In general, it would be appear that any sociocultural conditions that markedly increase the tension of living seem to play an essential role with the human organism and lend to an increase in peptic ulcers as well as other gastrointestinal disorders (Coleman, 1976).

In different cultures men and women develop varying personalities and also in the same culture. The concept that psychosomatic gastrointestinal disorders is not new, and the relationship between certain emotions and certain organs has been observed by Alvarez (1931), and Draper (1942). However, the first systematic studies of correlation between
Personality type and certain organic diseases were carried out by Dunber, (1943). He concluded that it is often "more important to know what kind of patient has the disease than what kind of disease the patient has". The work of Dunber gave the hope of identifying specific personality characteristics associated with particular psychosomatic disorders.

Graham (1962) found that attitude and coping patterns to be fairly typical among ulcer patients such as the patient feeling deprived of what is due him, and wants to get what is owed or promised and to get even. Alexander et al., (1968) reported about relationship between personality and certain psychosomatic gastrointestinal disorders, observing that dependency needs, repressed hostility, with peptic ulcer.

Draper and his colleagues (1944) pointed out especially the differences in body build between gall-bladder and peptic ulcer patients. Sheldon (1940) described a low rating for the first component of body build in both duodenal and gastric ulcer patients. In a very thorough investigation of peptic ulcer patients with carefully chosen normal subjects, conducted by Wretmark (1953) shown that ulcer seems to occur particularly in individual of tall narrow body build. He concluded that there is a relationship between body build and the course of ulcer "the more tall-narrow the body build, the worse the course".
Some clinicians have described the ulcer patient as: the 'man who needs to overcome obstacles' type of Hartman (1933), and the 'go-getter' of Alvarez (1931). Factors in the personality which were found to be active in the causation of peptic ulcer have been investigated by Alvarez (1931), who spoke of the efficient type, active Jewish business man, the go-getter type, as being particularly disposed to obstacles which prove to him trail and handicap which he must, because of his nature, endeavor to overcome the difficulty. He claimed that the Indians of Latin America and the Chinese coolies never have ulcer, as a result of the almost apathetic attitude, the lack of strain and ambition which are characteristics of these races. Alvarez, described ulcer as a disease of the civilized world and afflicts mainly the striving and ambitious men of western civilization.

Poser and Gilmore (1963) conducted five TAT cards to thirty ulcer patients, thirty ulcerative colitis patients, and thirty normal subjects, and the protocols of the test were subjected to a blind analysis. The significant differences between the three groups were that ulcer patients had high achievement needs, a reluctance to relate to their social group, and a lack of creative imagination, and that ulcerative colitis patients exhibited complaint attitudes, passive and an exaggerated tendency to avoid stressful
situations. Dutta (1978) has examined the personality of ulcer patients and compared it with personality of normal subjects. He has reported that ulcer patients manifest a higher degree of anxiety, neuroticism, irritability and obsessionality with introversion tendencies as compared to the normal group. Dutta, Jha, and Shukla (1976) did not observe any specific differences in diagnostic pattern between ulcer patients and normal controls.

The ratio of males to females is very different for peptic ulcer formation. Men more frequently have ulcers. At the present time peptic ulcers occur much more often in men than in women, but the reverse was true two generations ago, prior to 1900, as it has been reported by Mittleman and Wolff (1942) that a progressive increase in the male incidence of ulcer, a ratio of twelve to one, between the year of 1931 and 1939. Khosla (1982) has suggested that changes in the social role of men and women may have influenced this ratio of sex. He hypothesized that women eat less and take a longer time over their meals, but emotional tension is the main reason for the individual differences in interpretation of reinforcement behaviour in the occurrence of peptic ulcer.

In school-age children and adolescents, the symptoms of peptic ulcer are different from those in adults (Miller,
1969). Acute peptic ulcers are probably more frequent in children than has been believed and more common than in adults (Prugh, 1950). Duodenal ulcers are more common than gastric, and both are more common in boys than girls. Tudor (1954) observed that adults who develop peptic ulcers have difficulty in handling feelings of anger. Halliday (1948) has reported that in the year 1900, perforated peptic ulcer had been more frequent in younger women and second more in older men. By 1930, peptic ulcers were very much frequent in younger men and second in frequency among older women. The burden that results from frustration has not only shifted from women to men but also to younger rather than older men and to older rather than younger women.

A rate of 0.5 per 100,000 children was recorded in the 1947-1949; and by 1956-1958 this ratio had increased to 3.9. A challenging finding was the marked increase in incidence of peptic ulcer among fifteen-year-olds, who were almost exclusively male. It was found that the youngs were responding to the stressed characteristics of modern urban society, and further, that in the upper socioeconomic class, the high number of mixed marriage and the occurrence of peptic ulcer among parents were additional risk for the formation of childhood peptic ulcer (Mahoney, 1980).
The definition of what are the disturbances associated with gastrointestinal system varies with each society and even within subgroups of any society (Binstock and Shanas, 1976). One essential consequence of good health in life is the opportunity to remain active. Remaining active in both physical and social activities is generally associated with happiness, reinforcement and rewards, higher morale and life satisfaction (Neugorten, 1968). Men and women may utilize different copying techniques. Women have increased rates of use of outpatient facilities, of visiting doctors, and of psychotropic drug use (Mazer, 1974). Men are reluctant to admit being alienated or to seek treatment for such feeling and mitigate this by drinking or smoking as treatment for their loneliness. The environment factors may render it difficult for women to smoke or drink excessively (Winokur and Clayton, 1967). It has been observed by Keznur et al., (1951) that among peptic ulcer patients, women often appear emotionally sicker than men.

The remarkable change in peptic ulcer has been found in its frequently periods of history. For example, in United Kingdom, duodenal ulcers were more frequent in the
eighteenth and nineteenth centuries, but gastric ulcers were more common especially in younger women. At the present time, however, two changes occurred. Firstly, duodenal ulcers become more common and particularly in men, about three times than women. The second change was that gastric ulcers have become relatively less common and seem to affect an older age group. In general, peptic ulcers are more common in older people (Martin and Stiel, 1982). Statistical research of US army on peptic ulcers in the two world wars have provided data that from the first to the second war, duodenal ulcers almost increased twice but gastric ulcers decreased about 35 percent. Duodenal ulcers may be more responsive to emotional and sociocultural factors, whereas gastric ulcers may be responsive to some purely physical causes. A possible explanation is that diet and other physical factors were better in the second than the first war (Coleman, 1976).

Peptic ulcer is observed almost all over the world, it varies from place to place, and in places where humidity is high, the ulcer occurrence also goes up, as compared to the dry places. Thus, it has been found that in South India and coastal districts, the green and wet parts of Nigeria, Scotland as compared to great Britain and the wet areas of Africa, Germany, Norway, and Kashmir, ulcer occurs in high incidence (Khosla, 1982). In India and Africa, geographical
variations occur between regions of different eating habits, however, within the cities themselves variations also exist between people with different standards of living (Martin and Stiel, 1982).

Psychological factors in ulcerative colitis

It has been known that psychic factors can influence gastrointestinal secretions and, in turn, these secretions play some role in the development of ulcerative colitis. It is a chronic disease characterized by remission and relapses. Ulcerative colitis patients, both men and women, view their mothers as powerful and overwhelming figures who set high standards of demand and made them feel helpless and dependent on either both of parents or their mothers. Any disturbance in this relationship may cause an exacerbation in their symptom (Khosla, 1982). Ulcerative colitis usually found in a situation involving actual or threatened loss of emotional support from a key figure, as a parent. The onset of an insidious colitis is more likely to be associated with the amount of stressful forces (Prugh, 1950).

Lindemann (1945) described eighty-seven patients with the colitis disturbance and believed that the loss of a key person followed by a grief morbidity reaction, was the important etiologic factor. He was interested in study the
similarity of the affect of ulcerative colitis patients to that of people suffering from morbid grief reactions. Engel (1955) and Brown (1963) have found psychological factors to be involved in the precipitation of the onset of colitis and in later exacerbations seemed to be of two major kinds: the fantasied and threatened, or actual loss of a relationship with a parent or other key figures upon them the individual was very much dependent, or a situation in which the patient found himself/herself helpless to cope independently or achieve satisfactorily, particularly without parental approval or support.

Sperling (1946) has described a characteristic mother patient relationship in which the mother manifests a contradictory attitudes of unconsciously attempting to keep him/her in a state of lifelong dependency on her, so that she may satisfy her own needs and simultaneously showing strong unconscious destructive impulses towards the patients, which become intensified if he fails to satisfy the wishes and needs of his mother, or if his attempt to do so provokes anxiety and guilt in her. Avoidance of disease depends on the patient's willingness and ability to find a replacement solution for the unsatisfactory or loss of love object. If the patient is unable to accomplish this, intense anger and frustration ensue, with an acute increase in repressed
destructive impulses which are discharged through the symptoms of diarrhea and bleeding. Sperling has equated ulcerative colitis with a "somatic dramatization of melancholia" in which the destructive and elimination of the object through the mucosa of the colon would appear to be the specific mechanism.

Mohr, Joselyn, Spurlock, and Barron (1958) studied six patients with ulcerative colitis. All mothers of the patients felt a lack of care and maternal warmth from their own mothers, and thus were unable to develop their own effective roles of mothering. Murray (1930) reported about the character and the emotional immaturity of patients suffering from ulcerative colitis, pointing out the intensity of their relations with their mothers, and conceptualizing diarrhea in the illness as a response to fear and anxiety. Sperling (1946) viewed ulcerative colitis as a disease in which conversion mechanisms are operative, its symptoms representing the struggle for independence against the incorporation of the frustration maternal figure and the effort to destroy and eliminate mother.

Engel (1955; 1956; 1958) has emphasized the primary etiologic importance of the impaired vascularity of the mucosa and submucosa of the colon in ulcerative colitis.
Engle stresses the role of the symbolic nature of the mother-patient relationship in the development of the disorder due to real or fantasied or threatened loss of this key object, with a typical loneliness as a consequence. Thus the essential psychological situation leading to the occurrence of ulcerative colitis is an effective state characterized by helplessness and despair. The mother-patient relationship is one in which the mother can be warm and succoring only if the patient's behaviour does not mobilize anxiety and guilt in her. The basic needs of the patient such as bowel activity, feeling and motor activity seemed to evoke shame, guilt and anxiety in the "colitigenic" mothers. As a result of this, the patient relinquishes a considerable amount of autonomy over the bodily function to the mother in order to obtain love, care and security. The major part of the ego of the patient remains within the symbiosis mother, producing a state of helplessness. Any separation is then traumatic for the patient.

Prugh (1950) has reported about the conditioned hypermobile response of the rectosigmoid region of the large bowel to emotional stimuli of a specific type. He observed a basic emotional conflict in which a patient who intensely wishes to be accepted and loved by his parents, finds in himself/herself unacceptable feelings of resentment and anger.
toward them because of their inconsistent and confusing handling of him. The formation of the disease starts when emotional security and support lost and when overwhelming, guilt-provoking anger or resentment is aroused in the patient.

Sullivan and Chandler (1932); Palmer (1971); Groen (1947); Karush et al, (1955); Groen and Bastiaans (1954), have described acute emotional experiences of a certain type that have taken place twenty-four to forty-eight hours before the onset of illness. The patients were suddenly deprived of a loving care with which they had been surrounded; simultaneously those persons who were in doubt about the value of their personality had to suffer an injury to their self-esteem. The patients who had undergone to humiliations, was the harsh, abrupt, often alienated and rude in behaviour. Many patients felt hurt particularly if the assault on their self-respect took place in the presence of others, or that others knew or heard about the disturbance of their health. In an attempt to solve this trauma, aggressive patients would have taken action or would have attacked their opponents, in others there might have a sense of alienation.

Ulcerative colitis patients have ambitious parents who wished to realize their own aims and goals through their
children at an early age. Acceptance and love of the patient is based upon performance and living up to high parental standards, which often unclear and ill-defined to him. Since the failure in achievement is equated with worthlessness or loss of love, the patient strive desperately to please parents through achieving. When "good is not good enough", and the patient perceives failure in spite of all effort, his self-reliance and self-confidence are replaced by a feeling of desperation, powerlessness, futility and hopelessness. A period of loneliness or isolation characteristics may develop, followed by the formation of frank colitis symptoms (Paulley, 1956).

Daniels (1940) studied the frequent presence of fixation upon the mother among patients suffering from ulcerative colitis, and has described the crisis which frequently precipitate colitis attack as developing when the patient cannot cope with forward steps in the direction of emotional maturation, marriage, health, childbearing and engagement. Grace et al., (1951) have described the appearance of isolation as heralding the end of the attack of ulcerative colitis, although some degree of depression is usually observed during active colitis. Groen (1947) viewed ulcerative colitis as the result of chronic anxiety which
produce a motility imbalance to ulceration. The anxiety is due to inability to take action in life.

Fullerton, Kollar and Caldwell (1962) studied forty-seven ulcerative colitis patients with the following conclusions: (a) diarrhea is a secondary process and thus not an important etiological factor, (b) a consistent pattern existed of weak fathers, and controlling, hostile, domineering and overprotective mothers, (c) ulcerative colitis is a complex psychological condition which occurs in predisposed individuals as a consequence of actual or fantasied object loss.

Arthur (1963) tested nineteen patients with ulcerative colitis (10 males and 9 females) with the Thematic Apperception Test to find out the role of perception of the self and various members of the family group in terms of the incidence of three needs, n Dominance, n Nurturance, and n Succorance. Her finding was that the males viewed the mothers as being less dominant than the females did, and as being more in need of succorance. The females perceived their mother as primarily dominating but as capable of giving nurturance if stimulating in doing so.

In a psychophysiological study during psychotherapy, Karush, Hiatt, and Daniels (1955) have shown evidence of
organ activity as related to emotional and ideational patterns. Thus fear related to conflict over dependent attitudes produces frustration or a threat to security and provokes intense fear and anxiety which causes persistent autonomic excitation that leads to the activation of the colon.

Some experimental studies are available on the influence of emotions on the activity of the colon (Dunber, 1946). Using X-ray observations, Alexander (1934) has shown that the tonus of the colon and emptying time change concomitantly with emotional variations. The colon may become spastic (extremely tense) or atonic (completely relaxed) in periods of emotional stress. Ulcerative colitis was found to be correlated with anxiety, resentment, and guilt in fifty-three out of fifty-seven cases studied and to be considered a psychosomatic condition (White, Cobb, and Jones, 1940). It was reported by Daniels (1940) that a common stress situation of frustrated dependency, with hostility and suicidal trends may make ulcerative colitis as a very serious disease and may end in death.

Alexander (1946; 1950) and Alexander and French (1968) have made certain specific observations regarding the conflicts of ulcerative colitis patients preceding the occurrence and exacerbation of the disease. Two emotional factors were reported; (1) the frustrated need to carry out
an obligation, whether it is biological, material or moral, and (2) the hopeless attitude of the patient about his capacity to accomplish something which requires concentrated expenditure of energy. In women this most frequently has to do with emotional conflicts about giving birth to a child or living up to maternal responsibility, whereas in men the conflict may be over realization of financial or professional goal.

Emotions can produce changes in the colour of the colonic mucosa in dogs. And in man, White et al., (1939), and Grace at. al. (1951) have studied the influence of emotional factors on the vascularity, peristalsis, tone and mucus secretion of the colon in human subjects. Their observations were conducted on four patients with colonic fistulas, in whom segments of the mucosa that prolapsed through the abdominal wall, could be seen directly, and measurement of the colour could be made (showing degree of hyperaemia), size (tone), peristaltic contractions (measured by balloons introduced into the colon), visible haemorrhages and mucus production. They also could determined the lysozyme content of the mucus obtained. Two of the patients who were studied had ulcerative colitis. Although all four subjects have shown some reaction patterns when in emotional tension, the changes were fundamentally of the same nature, but much
more pronounced and sustained in the ulcerative colitis patients, than in the other subjects. Almy, Kern, and Tulin (1949) found a relationship between the magnitude of stress perceived as personality threatening and magnitude of colonic reaction, in healthy volunteer subjects.

Biological factors in ulcerative colitis

It has been evidenced in a number of studies that modifications of biological structure by the environment correspondingly influence behaviour of ulcerative colitis patients. Alexander (1950) has cautioned against the interpretation of psychological findings in ulcerative colitis as causative in nature since organic symptoms such as diarrhea may be utilized by patients symbolically to express fantasies or feelings. The fantasy of eliminating a bad mother, assumed to be a psycho-genic factor (Sperling, 1946), may be a secondary utilization of the symptom for unconscious needs rather than the cause of it. This is especially so when one considers that diarrhea is not evident as an initial symptom in many cases.

Sarason (1972) reported that ulcerative colitis is a bowel disorder characterized by alternation diarrhea and abdominal cramps, constipation, and increase mucus in the stool. There is evidence (Lachman, 1972) that the typical
symptoms and physiological changes in the colon are the result of parasympathetic influences (parasympathetic innervation serves to reduce cardiac activity, reduces secretion of epinephrine or adrenalin and increases intestinal motility), on that organ and that the colons of some individuals react excessively to parasympathetic stimulation. Sarason also noted that in the majority of the chronic conditions, the entire colon is eventually affected; the lesions may be restricted to the rectum.

Ulcerative colitis may be of chronic diarrhea. It affects the rectum and lower part of the left colon. There are loose bowels with blood and mucus. The disease varies in its severity and pain. The symptoms may range from the passage of small amount of stools with rectal bleeding or there may be severe fulminant diarrhea accompanied by considerable anaemia, weight loss, colonic bleedings, tachycardia and toxaemia (Khosla, 1982). Similarly, Mahoney (1980) has emphasized that ulcerative colitis is a condition marked by inflammation of the colon. Its first sign is often the presence of mucus in the stool. If the inflammation continues over a long period of time, the colon may suffer structural damage in the form of lesions and the condition of ulcerative colitis may develop. Hemorrhaging and perforation
of the colon are some of the complication of the disease, and sometimes prompting surgical removal of the affected section.

Almy and Tulin (1947) have found that ulcerative colitis may be caused by a variety of agents, such as infections of dietary indiscretion. These factors must be excluded before a case can be diagnosed as colitis disorder. They also added that ulcerative colitis is a frequent bowel movement or constipation, accompanied by pain and discharge of mucus and blood, resulting in formation of small ulcers, with a rise in temperature and considerable loss of weight.

The initial onset of ulcerative colitis involves bleeding more frequently than it does diarrhea (Prugh, 1950). An acute, mild onset may occur with bleeding for few days or weeks. Engel (1954a; 1954b) reviewing the literature on the systemic physiology of ulcerative colitis, emphasized that bleeding rather than diarrhea or constipation is the first symptom of the illness in 60 per cent of the cases. The somatic manifestations may be the expression of a basic severe psychobiological reaction due to helplessness and object loss. Engel viewed that frustrated or inhibited externally directed effort mobilizes bowel activity (peristalsis and/or hyperemia) which is strongly supported by clinical observation.
Engel (1956) has described headache as the common alternative symptom experienced by ulcerative colitis patients. He observed fifty-six headache periods during the therapy of nine patients. The occurrence of a headache during an episode of colitis was often found to mark the end of the attack. In the patient with different somatic responses, the feeling of helplessness being associated with ulcerative colitis. Murray (1930) reported that organic disorders of the colon, characterized by damage in the tissues, can be caused by organic pathogenic factors. Wolf and Wolff (1951) described the association of sustained hyperfunction of the colon in its vascularity, secretion and motility, resulting in increased fragility of the colonic mucosa with bleeding and ulceration.

Khosla (1982) has noted that a mild form of colitis is the most common form of the disease and is present in about 90 per cent of the patients. There is generally bleeding in the absence of diarrhea or there are short episodes of lower abdominal discomfort and fatigue or inability to take interest in normal activities. In severe form of ulcerative colitis, the patients have a severe form of diarrhea with excessive bleeding and frequent passage of bloody and watery stools. The patient looks very ill and rapidly looses weight.
Sullivan and Chandler (1932) has emphasized the effects of the liquid contents of the small intestine that carried down into the colon as a result of an environmental conflict induced hypermotility of the bowel. He reported that the enzymes in this liquid may be of a higher digestive power than the normal, or what the natural protective powers of the mucosa of colon may lowered, which leading to a digestive of the mucosal surface of the colon, thus facilitating an invasion of bacteria and acute ulceration.

**Socio-cultural factors in ulcerative colitis**

Ulcerative colitis was first described by white in England in 1888, in all age group infants to the elderly. Burton and Harris (1947) have reported a case of ulcerative colitis with a girl of 12 years old. Her first acute attack was characterized by loose stools with cold due to social relations of being poorly equipped to meet competitive situation in the school. Cameron (1963) reported that a boy three and a half years of age had his first attack of ulcerative colitis at the end of summer school day, when his nurse was devoted departed. McDermott (1967) has studied forty nine young patients and found that social and emotional factors played a potential part in their illness. Khosla (1982) noted out that ulcerative colitis appears in adult and early middle age of twenties, thirties or forties. This may
vary from culture to culture and from place to place within the same culture.

Prugh (1950) has observed that exacerbations are frequently related to family crises or to other intensifications of inadequate interpersonal relationships. The families of these patients, generally, exhibit problems in communication, especially around the negative feelings. Jackson and Yalom (1966) have pointed out the individual differences in interpretation of the reinforcement of social changes, as severe difficulties in dealing with separations and communication of affect with marked cultural restriction.

Although the presence of severe physical disturbance appeared to contribute to the emotional problems, the personality disturbances antedated the onset of the ulcerative colitis (McDermott, 1966). Patients with ulcerative colitis are generally overdependent, passive, inhibited and show some tendencies of a sensitive individuals, timid in nature and unable to act to aggressive situations (Khosla, 1982; McDermott, 1967). Kaursh et al., (1968) have identified two types of ulcerative colitis patients - an active group of independent and controlling, and passive who perceive themselves as helpless victim of others.
Graham (1962) postulated the attitude of ulcerative colitis patient as being disregarded, neglected, humiliated, wished to rid of the responsible figure and wanted the difficult situation to be finished. White, Cobb, and Jones (1939) viewed over-conscientiousness, anxiety, guilt, dependency, sensitivity and resentment are the emotional characteristics found in patients with ulcerative colitis. Patients suffering from ulcerative colitis have been described by Sarson (1972) as obsessional, rigid and compulsive people seem to keep tight control over their impulses as accounting, filing, book keeping and library work. They worry and fret about their duties and obligations and seem overconscientious, and they harbor a great reluctance to express themselves in any systematic and strenuous work.

Submissiveness, polite, sensitivity, limited capacity to keep warm, genuine friendship, craving for orderly, neat, punctual and stubborn standards of behaviour that lead to problem of ulcerative colitis due to the severe psychological stress sustained by the patient (Gottschalk, 1975). Ulcerative colitis patients, compared to those of peptic ulcer, are rarely prominent or active members of clubs or societies (Groen and Van Valk, 1956). Lindemann (1949) pointed out that ulcerative colitis patients may reach the point
where they preach honesty and loyalty but their attitudes toward the value of their own personality is hesitating and uncertain, and as a result of this the behaviour of some patients alternated from manifestation of self-assertion and vanity to expression of inadequacy and dependence in a more difficult situation.

Interesting observations reported by Groen (1964) about ulcerative colitis patients indicated that there is a marked tendency towards exaggerated decency in words and manners. They do not like vulgar or absence expressions in conversation, they hate vulgar jokes and rough words. The tendency towards neatness is often displayed in their dress and the choice of their clothes. In the choice of their friends, they try to associate with people of a higher social rank. Groen (1964) also reported that the female patients are compulsive and conscientious in the performance of their domestic duties and in the upkeep of their furniture. They continue to work in the household for a long time, even after the illness has undermined their strength. In the male patients a certain pseudo-virility may or may not cover the same female "housekeeper-neatness".

Mahoney (1980) has found that both male and female patients think of love as a sublime adoration, harmony and
attachment between husband and wife. They consider the contact of sexual body as something inferior so they are unable to maintain a normal harmony between their erotic and ideal love-life. Many of them marry after long hesitation or long period of engagement. Impotence often occurs in the male patients under the influence of an emotional conflict. The female patients, if married, seldom experience a normal organism, frigidity preceding the onset of the disease is common.

Hecht (1952) has worked on aggressive tendencies among ulcerative colitis patients and found that some of them used a safe outlet for their aggression in the form of gossiping. They hardly ever attacked on opponent directly, rather tried to do so through the intermediary of an authoritative of a protective figure. This aggressive role is different from the competitive or aggressive behaviour of peptic ulcer patients. Barendregt and Groen (1953) have found that patients with ulcerative colitis seem to regress more easily more than normal individuals when they fail ill. Their regression may become so marked that the selfish behaviour, inability and hypersensitivity to adapt themselves to the situation of being hospitalized, make them lose the sympathy of the medical and nursing staff. When they aware this, it has
unfavourable effect upon their mental state and on their physical condition or if the doctor instead of helping them, lets them feel his disdain for their neurotic behaviour or when a nurse make a deprecating remark.

Groen (1958) has emphasized that the characteristic nature of the personality structure of ulcerative colitis patients is based on the combination of features in a certain proportion of behaviour pattern. Goren and Van Valk (1956) have found that the relationship between the ensuing disturbance of the colon and the constellation of causal factors is appeared to be specific in three aspects: (a) through some peculiarities of a predisposing personality structure, which keep the patient more vulnerable to (b) a certain environmental or interpersonal stress-situation, against which (c) the subject does not, or can not defend himself/ herself by words or action.

Personality characteristics of peptic ulcer and ulcerative colitis patients:

Peptic ulcer and ulcerative colitis occur especially among people who are "tense", i.e., who are emotional but have also a strong tendency to control or inhibit the discharge of their emotional stress (Groen, 1947). Krasner
(1953) did not observe any significant differences between the responses of thirty peptic ulcer patients and those of twenty-seven ulcerative colitis patients on the Guilford Martin Factor Inventory. On the basis of the description of Alexander (1950), clinical observations of peptic ulcer patients and ulcerative colitis patients were made by Hecht (1952) as follows: "When confronted with a challenging situation, the ulcer patient is active in trying to resolve it, while the colitis patient is more accepting of the fact that it may be too difficult for him". Keeping this characterization, Hecht administered an inspiration test to thirty patients with peptic ulcer and thirty patients with ulcerative colitis. The peptic ulcer patients consistently had too high a level of expectation for their performance, while the ulcerative colitis patients, on the other hand, had too low a level of expectation for their performance after a few trials.

Daniels et al. (1962); Dorfman (1961); Crile (1960) and Wolf and Wolff (1953) have reported some common personality and stress patterns between peptic and ulcerative colitis patients. They have found that peptic ulcer (more common among males) as ambitious, driving individuals with underlying dependency problems; overemphasis on independence and tendency to react obstacles with anxiety and sustained
hostility. Ulcerative colitis (more common among females) as thin, pale person with marked muscular tension associated with hypersensitivity, obsessive trends, a tendency to be intropunitive in handling hostility and depressive trends. Often hostility and anxiety following lack of needed maternal care are the key factors in ulcerative colitis in children.

Groen (1951), has compared the mechanisms of emotional restrain of peptic ulcer patients and ulcerative colitis patients with requirements of their parental, occupational, marital and social environments. Ulcer patients are self-assertive, tense, ambitious, driving, hard-working, tense, honest, competitive, dominating, active, living up to ideals, loyal to partner and rigid. Colitis patients are neat, mild moderate in diligence, responsible and ambitious, overtly dependent, often frigid or less potent, gratifiers of aggressive tendencies by transference to a parental figure, imitating, humiliated, fearful of opinion of other people.

The studies reviewed would perhaps provide a matrix in which the present study may be placed for being evaluated, highlighting the studies in terms of greater weightage being given to the psychological and personality variables. The methodology to be adopted in the study form part of the following chapter.