CHAPTER I

Introduction

The role of psychosocial factors in various disorders like bronchial asthma and peptic ulcer has been the subject of systematic investigation for many years. These factors include stressful life events and several personality variables (Chaudhury, Singh & Augustine, 1992; Douglas & Rayan, 1986; Feldman, Walker, Green & Weingarden, 1986; Hollaender & Florin, 1983; Khan & Husain, 1990; Magni, DiMario Rizzardo, Pulin & Naccarato, 1986a; Magni, DiMario, Trinciarelli, Conlon, & Donzella, 1986b; Oken, 1985; Sahar & Kureshi, 1990; Sharma & Nand Kumar, 1980; Sjodin & Svedlund, 1985; Sreedhar, 1989a; Sreedhar, 1989b; Steptoe, 1984; Walker, Luthar, Samloff & Feldman, 1988). In spite of the fact that both laymen and clinicians have pointed out their relevance, the psychophysiological aspects of bronchial asthma or gastrointestinal disorders, especially their influence on etiology and pathophysiology, have been a matter of controversy and a challenge to the researchers.

Psychological factors are accorded a mixed reception in modern medical texts, being acknowledged in some (e.g., Crofton & Douglas, 1981) but entirely ignored by others (Flenly, 1981). This is unfortunate since research on behavioural aspects is highly relevant to the general
understanding and management of the psychophysiological disorders. Asthma has traditionally been considered one of the major psychosomatic disorders. It is a respiratory disorder characterized by recurrent airways obstruction. The clinical manifestations of asthma include paroxysmal dyspnoea and wheezing, accompanied particularly in the middle-aged patients by cough and sputum (see Crofton & Douglas, 1981). While a considerable research has been devoted to role of psychological process in asthma, it has been contended that no consistent picture of the psychology of asthma has emerged. A group of Western studies (e.g. Imandescu, 1987, Kieruff, 1984, Plutchik, Williams, Jerret, Karasu & Kane, 1978, Weiner, 1977, Weiner, 1987) has documented that stressful life events may precipitate, exacerbate or maintain asthmatic illness in physiologically predisposed individuals. However, Spittle and Sears (1984) found no relationship between life stress and bronchial asthma. In India some studies have also been conducted to investigate the role of life stress or stressful life events in the development of precipitation of bronchial asthma (e.g., Jha, Udupa & Kumar, 1977; Ramachandran, Thiruvengadam & Zackria, 1977; Sampurna, Ansari, Agarwal & Udupa, 1979, see also Pestonjee, 1988, Sharma, 1988).

The role of personality factors in bronchial asthma has been the subject of interest in a number of studies (e.g., Parker & Lipscombe, 1979, Sainsbury, 1960, Weiner, 1977). The asthmatics have been characterized as immature, lacking in self-confidence, insecure, dependent, irritable, timid and
polite. Such inconsistencies in the personality profile of asthmatic are not unique to asthma, but emerge in the study of many groups of medical patients (see Steptoe, Melville & Ross, 1982). Several of the descriptors have been derived from unsystematic collection of clinical impression, others have been identified in studies that lacked suitable controls (Steptoe, 1984). In India the most frequent researched dimensions of personality of asthmatics have been neuroticism, dependency and adjustment (e.g. Desai, Gandhi & Shah, 1981, Indira & Murthy, 1977, Khan & Hussain, 1990, Ramachandran & Thiruvengadam, 1975, Shanmugam, 1979, Shanmugam & Kaliappan, 1982a, Sharma & Nand and Kumar, 1980). These studies highlight that the asthmatics have a neurotic, dependent and maladjusted characteristics.

The role of negative emotions like anxiety and anger, particularly suppressed anger, in bronchial asthma has been systematically researched for a number of years. It has been seen that the severity of the asthmatic condition and its clinical course are strongly influenced by such emotions (see Steptoe, 1984). Western studies have shown that the asthmatics as a group, are more anxious than their normal counterparts. This has been documented through the use of observer rating scales (Rees, 1956), psychological tests (Dekker, Barendregy, & DeVries, 1961) and psychiatric interviews (Teiramaa, 1979). Contrary to these results, Rosenthal, Aitken, and Zeally (1973) and Franks and Leigh (1956), using personality inventories, did not find any

Unlike the research on the role of anxiety in bronchial asthma, a few studies explored the role of anger in bronchial asthma. In fact, it is only recently that the role of anger has been included in the empirical research in the area. Some Western studies have, however, revealed that asthmatic patients manifested more anger (see Matus, 1981, Northup & Weiner, 1984, Teiramaa, 1979, VonRod, Durke, Knauss & Lolas, 1979, Zimet, Gregory, Dirks, Jerald & Kinsman, 1979). Moreover, another group of investigators has also observed greater suppression of anger in asthmatic patients (e.g., Alock, 1960, Florin, Freudenberg, & Hollaender, 1985, Hollaender & Florin, 1983). Two studies, however, showed
more expression than suppression of anger in asthmatics (e.g. Chiari, Foschino-Barbaro, Nuzzo, Pecci & Rossi, 1987, Marx, Zofel, Linden, Bonner, Franzen & Florin, 1986). It may be noted that systematic research in India on the role of anger in bronchial asthma is lacking. However, some researchers have attempted to study this emotion in asthmatics with inconsistent trend of findings.

Peptic ulcer disease (PUD) refers to ulcerating lesions in the stomach or duodenum. Peptic ulcers are associated with epigastric pain, usually occurring several hours after eating and relieved by food, although gastrointestinal bleeding and vomiting due to pyloric obstruction are often the presenting symptoms (Deckelbaum, Roy, Lussier-Lararoff, and Morin, 1974). Evidence that psychological stress has a role in the development of ulcer arises from a variety of sources. Epidemiological evidence has shown duodenal ulcer to be more common in war time than peace, in urban rather than rural populations, and in a number of stressful occupations including surgeons, air-traffic controllers and business executives (Cobb & Rose, 1973, Pflanz, 1971). In the last decade psychological research in peptic ulcer disease has focused on stressful life events, rather than on personality (e.g. Alp, Court & Grant, 1970, Christodoulou Alevizos & Konstantakakis, 1983, Piper, Greig, Shinnners, Thomas & Crawford, 1978, Thomas, Greig & Piper, 1980). However, stressful life events literature has provided rather mixed evidence of how psychosocial stresses may contribute to the
development of peptic ulcer disease. Some studies have reported high levels of acute stressors in peptic ulcer disease patients prior to the development of symptoms, compared with patients with other abdominal disorders or during periods free of ulceration (e.g., Sapira & Cross, 1982). However, a number of studies have failed to find higher number of stressful life events experienced in previous year by the peptic ulcer disease patients (Dinan, O'Kean, O'Boyle, Chua & Keeling, 1991, Feldman, Walker, Green & Weingarden, 1986, Gilligan, Fung, Piper & Tennant, 1987, Piper, McIntosh, Ariotti, Calogiuri, Brown & Shy, 1981, Thomas, Greig & Piper, 1980). Two studies, however, have found increased number of stressful life events reported by gastric ulcer patients (see Alp et al. 1970, Sapira & Cross, 1982). A group of studies have also reported a specific clustering of life events in peptic ulcer patients (e.g., Gilligan et al. 1987, Nasiry & Piper, 1983, Thomas et al. 1980). Some studies have shown higher negative impact of stressful life events when compared to healthy or patient-controls (e.g. Feldman, et al. 1986, Koller, Zidek, & Haider, 1986, Walker et al. 1988). The obvious inconsistency in findings may be due to the methodological problems that make it difficult to assess the true impact of life stress on ulceration owing to the use of insensitive life event inventories, long-term retrospective recall in a sub-population prone to recall bias (Minter & Kimball, 1978),
and poor control of investigator bias. Well-controlled prospective studies, whilst difficult to set up, may provide more substantive evidence in this area. In India, a few investigators have studied the relationship of stressful life events and ulceration (Chakraborty, Shah & Parikh, 1983, Khorana, 1983). Further, Dutta, Jha and Shukla (1976) did not observe any specific pattern of life events in peptic ulcer disease. However, two studies in laboratory settings, one on humans and other on animals, have found a positive association between stress and ulcer (Ahmed & Rao, 1977, Verma, Singh, Gupta & Udupa, 1977).

A number of personality factors at different times have been suggested as possible contributors to the genesis of peptic ulcer disease (e.g., Magni, DiMario, Trinciarelli, Conlon & Donzella, 1986b). More recently, attempts have been made in the West to overcome the element of subjectivity present in studies in this field by means of standardized evaluation tests designed to guarantee "objectivity" and "reproducibility." Despite the lack of complete agreement among researchers, the experimental data relating to peptic ulcer disease show that the psychological characteristics most frequently emphasized are marked dependence, neurotic type personality, a high degree of anxiety and emotional stability (e.g., Alp et al. 1970, Feldman et al. 1986; Langeluddecke, Goulston & Tennant, 1987; Magni et al. 1986a and 1986b, McIntosh, Nasiry, Frydman, Weller, & Piper, 1983; Piper et al. 1977; Walker et al. 1988). In India, some investigators attempted to identify the specific pattern of personality of
ulcer patients. These investigators most frequently observed higher degree of neuroticism, anxiety, irritability and obsessionality with introversion tendencies and maladjustment among the peptic ulcer patients than the controls (Dutta, 1978, Joshi & Banerji, 1979, Khan & Husain, 1990). However, in an earlier study, Dutta, Jha and Shukla (1976) did not observe any specific pattern of personality in peptic ulcer patients.

The role of anxiety in peptic ulcer disease has been considered in a number of studies. Researchers now consistently report that when compared to healthy or hospitalized controls, peptic ulcer disease patients are more anxious (e.g., Alp et al. 1970; Langeluddecke et al. 1987; Liedtke, Freyberger, & Zepf, 1977, Magni et al. 1986a & 1986b, McIntosh et al. 1983; Peters & Richardson, 1983; Sjodin & Svedlund, 1985; Talley, Fung, Gilligan, & McNeil, 1986; Walker et al. 1988). Indian studies also confirm the higher levels of trait anxiety in the peptic ulcer disease patients (see Chaudhury et al. 1992; Dutta, 1978; Jiloha & Vij, 1989; Shanmugam & Kaliappan, 1982b; Sharma & Rao, 1974; Sreedhar, 1989b).

The role of anger in peptic ulcer has not been investigated to the desired extent. A group of investigators showed that peptic ulcer patients manifested more anger, particularly suppression of anger (Funkenstein, King & Drolette, 1957; Hasenbring, 1987; Oken, 1985; Sahar & Kureshi, 1990; Walker et al. 1988). Another group of investigators has
dealt with aggression and hostility vis-a-vis peptic ulcer. These studies also showed higher aggression and hostility in peptic ulcer patients (Keltikangas-Jarvinen, 1987; Langeluddecke et al. 1987; Peters & Richardson, 1983).

Sharma (1988) highlighted the various methodological issues in the study of life stress in India. These include selection of events and formation of event lists, severity of rating of individual events, summation of event scores, reliability of reporting, provision of adequate control groups, and large within-group variance found in various studies. The necessary methodological modifications for life event research in India have also been emphasized. These include the issue of culture specific-specificity of events and relatively prolonged stress, reliability testing from a family member and the use of semi-structured interview method in preference to paper-pencil questionnaire. In addition to these, degree of impact of life events should be considered as well as specific clustering of life events in various psychophysiological disorders be identified. Further, a majority of the studies have considered normals as comparable groups, while it is desirable to have patient controls matching the situational factors or disease status.

With regard to the paucity of related studies on the role of anger vis-a-vis bronchial asthma and peptic ulcer, one reason is that researchers used the concept of hostility, anger and aggression synonymously. Moreover, fully standardized measures of trait anger and anger expression were
not available. However, the recent availability of State-Trait Anger Expression Inventory: STAXI (Spielberger, 1988) and its Hindi version (Krishna, 1988, & Rana, 1990) can stimulate research in this area in the West as well as in India.

The Present Study

The present research work considered the following:

(i) Two groups of psychophysiological disorders (bronchial asthma and peptic ulcer).

(ii) Control group of surgical / orthopaedic patients.

(iii) The use of systematically developed culturally relevant Hindi language versions of life stress Scale (Ghosh, 1989), A-Trait Scale of STAI (Spielberger, Sharma & Singh, 1973) and State-Trait Anger Expression Inventory: STAXI (Krishna, 1988 & Rana, 1990). Since, there are inherent problems of applying a Western-based knowledge to culturally distinct country like India (Sinha & Holtzman, 1984), it is necessary to certify the validity of such a research using culturally appropriate and well standardized and adapted tools of data collection. This will help in establishing the validity of the Western research across cultures.

Definition of Terms

(i) Bronchial Asthma: It is a respiratory disorder characterized by recurrent airways obstruction.
(ii) **Peptic Ulcer**: It refers to ulcerating lesions in the stomach or duodenum.

(iii) **Life Stress**: A life event is defined as stressful if it causes changes in and demands readjustment of an average person's normal routine. The life events are distinguished as negative life changes and positive life changes.

(iv) **Trait Anxiety**: Individual differences in anxiety proneness, i.e. differences between people in the disposition to perceive external events or internal cues (thoughts, memories) as personality dangerous or threatening, and a corresponding tendency to respond to such threats with elevation in State-Anxiety.

(v) **Trait Anger (T-Anger)**: Individual differences in anger proneness, i.e. the tendency to perceive a wide range of situations as annoying or frustrating, and the disposition to respond to such situations with elevations in State-Anger.

(vi) **Anger-in (AX/In)**: Individual differences in the frequency that angry feelings are held in or suppressed.

(vii) **Anger-out (AX/Out)**: Individual differences in the frequency that State-Anger is expressed in aggressive behaviour directed toward other people or objects in the environment.

(viii) **Anger-Control (AX/Con)**: Individual differences in the frequency that individuals attempt to control the outward expression of angry feelings.
(ix) Anger-Expression (AX/EX): Anger expression (AX/EX) comprises the responses to the 24 items of the AX/In, AX/Out, AX/Con scales, and provides a general index of the frequency that anger is expressed regardless of the direction of expression.

**Objective of the Study**

The present study addressed itself to the following research questions:

(i) To determine whether frequency of occurrence of recent life events (negative and positive life changes) and their impact differ for the patient groups with bronchial asthma and peptic ulcer when compared to their surgical / orthopaedic control counterparts.

(ii) What is the nature of the clustering of recent life events that distinguishes between the patient groups with bronchial asthma and peptic ulcer? How does such a specific clustering of life events for these patient groups differ from their surgical / orthopaedic control counterparts?

(iii) Do the patient groups with bronchial asthma or peptic ulcer differ between themselves and also from their surgical / orthopaedic controls in terms of the levels of trait anxiety and trait anger?

(iv) Do the patient groups with bronchial asthma or peptic ulcer differ between themselves and also from their surgical /
orthopaedic-controls in terms of the modes of expression of their angry feelings (AX/In, AX/Out, Ax/Con and AX/EX)?

(v) The identify a subset out of life stress (negative or positive), anxiety, state anger, trait anger and anger expression (AX/In, AX/Out, AX/Con & AX/EX) measures that could significantly differentiate among the groups of patients with bronchial asthma or peptic ulcer and the surgical/orthopaedic controls.