CHAPTER-VII

SUMMARY

Background

While considerable research has been devoted to the role of psychological process in asthma, it has been contended that no consistent picture of psychology of asthma has emerged. A group of studies (e.g., Imandescu, 1987, Keiruff, 1984, Ramachandran, Thiruvengadam, Zackria, 1977, Sampurna, Ansari, Agarwal and Udupa, 1979, Weiner, 1987) has documented that stressful life events may precipitate, exacerbate or maintain asthmatic illness in physiologically predisposed individuals. The role of personality factors in bronchial asthma has been the subject of interest in a number of studies. The asthmatics have been characterized as immature, lacking in confidence, insecure, dependent, neurotic and maladjusted (Desai et al. 1981, Khan & Hussain, 1990, Parker & Lipscombe, 1979, Shanmugam and Kaliappan, 1982a also see Steptoe et al. 1982).

The role of negative emotions like anxiety and anger has long been seen to have implicated for bronchial asthma. Researchers have documented that anxiety plays a large role in the initiation, exacerbation and maintenance of asthmatic symptomatology (Erskine-Mills and Schonell, 1981, Frost, 1990, Jiloha and Vij, 1989, Nigam et al. 1983, Shanmugam and Kaliappan, 1982b, Sreedhar, 1989a, Teiramaa, 1978). However, some investigators did not find a strong relation between anxiety and symptoms of bronchial asthma (Franks and Leigh,
1956, Goreczny et al. 1988, Rosenthal et al. 1973). This inconsistency in findings calls for further research in the area by considering patient-controls.

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 however revealed that asthmatic patients manifested more anger (Hatus, 1984, Northup and Weiner, 1984, Weiner, 1984). Moreover, another group of investigators have also found higher suppression of anger in asthmatics Florin et al. 1984, Hollaender & Florin, 1983). Two studies, however, showed more expression of anger in asthmatics (Chiari et al. 1987, Marx et al. 1986). Some researchers in India have also attempted to study this emotion in asthmatics with inconsistent trend of findings (e.g., Ramachandran et al. 1977, Sharma and Nand Kumar, 1980).

Stressful life events literature has provided rather mixed evidence of how psychosocial stress may contribute to the development of peptic ulcer disease (PUD). A number of studies have failed to find higher number of stressful life events in previous year reported by PUD patients (Dinan et al. 1991, Gilligan et al. 1987, Piper et al. 1981). A group of studies have also reported specific clustering of life events in PUD (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 (Feldman et al. 1986, Koler et al. 1986, Walker et al. 1988). In India a few investigators have studied the relationship of stressful life events and ulceration (Chakraborty et al. 1983, Khorana, 1983).

Despite lack of complete agreement among researchers the experimental data relating to personality of peptic ulcer patients

The role of anger in peptic ulcer has not been investigated to the desired extend. A group of investigators showed that peptic ulcer patients manifested more anger, particularly, suppression of anger (Hasenbring, 1987, Oken, 1985, Sahar and Kureshi, 1990, Walker et al. 1988). Studies have also shown higher aggression and hostility in peptic ulcer patients (Keltikangas- Jarvenen, 1987 Langeluddecke et al. 1987, Peters and 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 controls. He also emphasized methodological modifications for life event research in India. These include the issue of culture specific - specificity of events and relatively prolong
stresses, reliability testing from a family member and use of semistructured 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 group, while it is desirable to have patient-controls for 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, and Rana, 1990) can stimulate research in this area in the West as well as in India.

7.1 Objectives of the Study

The present study addressed itself to the following research questions:

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

2. What is the nature of 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.

3. Do the patients 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?

4. 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 their angry feelings (AX/In, AX/Out, AX/Con and AX/EX)?

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

7.2 Hypothesis

1(a) Patients with bronchial asthma or peptic ulcer would report more number of stressful life events during the last one year than their surgical/orthopaedic
counterparts.

1(b) Patients with peptic ulcer would report more number of stressful life events during past one year than their counterparts with bronchial asthma.

II. There would be a disease-specific (bronchial asthma or peptic ulcer) clustering of life events during the past one year as distinguished from surgical/orthopaedic-control counterparts.

III(a) Patients with bronchial asthma or peptic ulcer would report more negative life changes than their surgical/orthopaedic counterparts. However, there would be no difference on positive life changes.

III(b) Patients with peptic ulcer would report more negative life changes than their counterparts with bronchial asthma.

IV(a) Patients with bronchial asthma or peptic ulcer would report more trait anxiety than their surgical/orthopaedic counterparts.

IV(b) Patients with peptic ulcer would report more trait anxiety than their bronchial asthma counterparts.

V(a) Patients with bronchial asthma or peptic ulcer would report more trait anger than their surgical/orthopaedic control counterparts.

V(b) Patients with bronchial asthma would report more trait anger than their counterparts with peptic ulcer.
VI(a) Patients with bronchial asthma or peptic ulcer would report more suppression of anger (anger-in), less expression of anger (anger-out) less control of anger (anger-control) and more overall anger expression (AX/EX) than their surgical/orthopaedic counterparts.

VI(b) Patients with peptic ulcer would report more suppression of anger, less expression of anger and less overall anger than their bronchial asthmatic counterparts.

VII. A subset of life stress, anxiety and anger measures would be a significant discriminator among the three patient groups (bronchial asthma, or peptic ulcer and their surgical/orthopaedic control counterparts).

7.3 Sample

65 non-selected out-patients with bronchial asthma. 65 patients with peptic ulcer disease and 65 surgical/orthopaedic patients participated in this study. All of them were under treatment at Indira Gandhi Medical College/Hospital Shimla. Their age ranged from 25 to 45+ years and all of them were married males and had middle class background. None of them had history of CHD or other non-CHD disorders.

7.4 Tools Used

1. Life stress scale (Ghosh, 1989).


7.5 Procedure

All the measures were administered to the patients in the following order: (i) STAXI Scale, (ii) A-Trait Scale of the STAI, (iii) Life Stress Scale, under standard instruction. A cover sheet elicited demographic data about age, gender, education, occupation and marital status.

Following standardized procedures, the scores for each patient were determined in respect of negative and positive life changes, frequency of occurrence of life events, traits anxiety, trait anger, anger expression ($AX$/In, $AX$/Out, $AX$/Con and $AX$/EX). Further event-wise analysis was attempted to identify a specific clustering of events for each of the patients groups.

7.6 Statistical Analysis

(i) The significance of differences among the percentages of total life events occurrence during the last one year in case of each patient group, was determined by two-tailed 't' test.
(ii) Events-wise analysis was attempted to identify the percentages of occurrence of life events which were specific to the patients with two psychophysiological disorders and patient-controls.

(iii) The life stress, anxiety and anger scores of the three patient groups were also subjected to one way ANOVAs and post-hoc comparisons were made by Duncan's multiple range test.

(iv) Step-wise discriminant functional analysis to identify a subset of potential discriminant variables which distinguished among the two patient groups (bronchial asthma and peptic ulcer) and surgical/orthopaedic controls.

7.7 Findings

The major findings are:

(i) Although a difference in the overall percentages of stressful life events was observed among three patient groups, none of these approached statistical significance.

(ii) Disease-specific clusterings of life events were observed. The patients with bronchial asthma predominantly experienced events broadly covered under personal, interpersonal and job related conflicts. In addition, the asthmatic patients were also more
bothered by retirement/pending retirement. Peptic ulcer patients predominantly experienced life events which were broadly related to financial problems, bereavement and change in eating habits. However, no such clustering of events was evident in surgical/orthopaedic-control group.

(iii) Patients with bronchial asthma or peptic ulcer reported significantly higher negative life change score than their surgical/orthopaedic-control counterparts. However, no such a significant difference was observed between patients of bronchial asthma and peptic ulcer. Rank order of the adjusted means revealed that with respect to negative life changes patients with bronchial asthma scored the highest followed by peptic ulcer and surgical/orthopaedic-controls in that order.

(iv) With regard to positive life changes no significant differences were observed among the three patient groups.

(v) Patients with bronchial asthma or peptic ulcer reported significantly higher level of trait anxiety than their surgical/orthopaedic-control counterparts. However, no such a significant difference was observed between patients of bronchial asthma and peptic ulcer. Rank order of the adjusted means revealed that in terms of trait anxiety asthmatic patients scored the highest, surgical orthopaedic-controls the lowest and peptic ulcer patients intermediately.
(vi) Patients with bronchial asthma reported significantly higher trait anger than the surgical/orthopaedic controls. However, no significant difference on trait anger was observed between peptic ulcer and surgical/orthopaedic controls as well as between the patients of bronchial asthma and peptic ulcer. Rank order of the adjusted means revealed that the asthmatic patients reported the highest trait anger followed by patients with peptic ulcer and surgical/orthopaedic-controls in that order.

(vii) Patients with bronchial asthma or peptic ulcer reported significantly higher suppression of anger (AX/ln) than the surgical/orthopaedic-controls. However, no significant difference on suppression of anger (AX/ln) was observed between the patients of bronchial asthma and peptic ulcer. In terms of suppression of anger (AX/ln) rank order of the adjusted means revealed that bronchial asthma patients scored the highest, surgical/orthopaedic-controls the lowest and peptic ulcer patients intermediately.

(viii) It was observed, however, that surgical/orthopaedic-controls scored significantly higher on expression of anger with the patients with bronchial asthma or peptic ulcer. No such a difference was observed between the two patient groups i.e. bronchial asthma and peptic ulcer. Rank order of the
adjusted means revealed that surgical/orthopaedic-controls reported the highest expression of anger (AX/Out) followed by asthmatic and peptic ulcer patients.

(ix) Surgical/orthopaedic-controls reported significantly higher anger control (AX/Con) than the patients with either bronchial asthma or peptic ulcer. However, no significant difference on anger control was observed between the patients of bronchial asthma and peptic ulcer. Rank order of the adjusted means revealed that surgical/orthopaedic-controls reported the highest anger control followed by bronchial asthma and peptic ulcer in that order.

(x) Patients with bronchial asthma or peptic ulcer reported significantly higher overall anger expression (AX/EX) than their surgical/orthopaedic-control counterparts. However, no significant difference on overall anger expression was observed between the patients of bronchial asthma and peptic ulcer. Rank order of the adjusted means revealed that in terms of overall anger expression patients with bronchial asthma fell in the intermediate range with peptic ulcer patients on the higher level and surgical/orthopaedic-controls on the lower levels. The findings with respect to various components of anger (T-anger, AX/In, AX/Out, AX/Con and AX/EX) have also been summarized in the form of profile
on STAXI. This representation provides an overall idea about the variations/differences on various components of anger with respect to patient groups vis-a-vis control.

(xi) Four of the nine variables emerged as significant discriminators among the two patient groups (bronchial asthma or peptic ulcer) and surgical orthopaedic-controls. These four discriminating variables in the order of their importance are: (i) Trait Anxiety, (ii) Anger-Control, (iii) Anger-Out, and (iv) Negative Life Changes.

All these findings have been interpreted in relation to earlier research. Clinical and other implications as well as suggestions for future research have also been put forth.