Chapter Three
METHOD AND PLAN

The present study specifically addresses itself to look out for certain personality and social variables that may be linked to disturbances in the gastrointestinal tract, acting as the precipitators of perturbation in this rather normal physiological phenomenon. The methodology was adopted and plan chalked out in accordance with the objective of the study. Without any presumptions about whether the personality variables contribute to the gastrointestinal disturbance, two personality variables, namely, alienation and health locus of control seemed to hold promise of being meaningfully related to peptic ulcer and ulcerative colitis and hence, these were justifiably adopted in this investigation. The primary motivation of this work is intended to determine the role of alienation and health locus of control in the development of peptic ulcer and ulcerative colitis, and to extend the line of research and to establish relationship between alienation and health locus of control, on one hand, and each of these with peptic ulcer and ulcerative colitis, on the other. This information may be useful to understand the nature of these diseases and in building up a theoretical standpoint.

Sex differences in health and longevity has social and personality consequences by the differential interpretation of good and poor health for the two sexes. It should be
stressed, however, that the finding of statistically significant differences among patients with peptic ulcer and ulcerative colitis, strongly confirms the original hypothesis. So this is a comparative study of peptic ulcer and ulcerative colitis on two different groups (i.e., ulcer patients and colitis patients), of males and females, from two different and distant places i.e., Aligarh and Srinagar. With a view to finding out whether there are individual differences in the two groups in relation to certain personality variable such as alienation and health locus of control, and the role of geographical factors in ulcer and colitis formation, the study of interregional differences in pattern of peptic ulcer and ulcerative colitis may be useful in understanding the two diseases and in chalking out programmes towards its control and management. That is, it is proposed to determine the interacting role of personality and social variables in these disorders. This calls for selection of appropriate measuring tools, either working them out or adapting; drawing equated number of samples from Aligarh and Srinagar in terms of source of variation - sex and region - and analysing the obtained data by means of statistical techniques that promise the best results.

Alienation Scale:

The behavioural component of alienation scale can be considered in terms of its form and its effects. The form of
response to felt alienation may be characterized as 'Despair', 'Psychological Vacuum', 'Unstructured Universe', 'Narcissism' and 'Disillusionment', (Kureshi and Dutt, 1979). The hostility or intensity of a person's behaviour would convey the quality and strength of his/her feelings. Regarding its effects, behaviour can be viewed as an action which alleviates or intensifies person's experience of alienation. Thus, the situation which elicits frustration and provides cues for helplessness as well as a specific target for person's counteraction, is highly conducive to alienated behaviour (Berkowitz, 1965; Buss, 1961). It has been found by Levine and Scotch (1970); Mcgrath (1970); and Lazarus (1966), that when person is unable to alleviate his experience of alienation, and this experience extends over a prolonged period of time, two general syndromes of stress may ensue: psychophysiological stress as reflected in certain physical disorders, and self-destructive or anti-social behaviour as manifested in person's self-disparagement or alienation towards others.

Seeman (1959) was one of the first to conceive of alienation as a multidimensional construct of five components and developed a scale for measuring alienation in terms of five categories: powerlessness, meaninglessness, normlessness, isolation and self-estrangement. Srole (1956) developed anomia scale, as a measure of alienation, which appeared to
be a measure of despair and dependency, was a more generalized form of self-to-others alienation. Dean (1961) developed a set of scales to measure three dimensions of alienation: powerlessness, normlessness and social isolation. Dodder (1969) attempted to verify the multidimensionality of Dean's alienation scale by subjecting them to factor analysis. Reddy (1973) developed alienation scale of Seeman. It is a 14 item inventory, using a five point rating system, i.e., strongly agree, agree, uncertain, disagree and strongly disagree. Sinha and Sinha (1974) factor analyzed Seeman's variants of alienation and found five factors, normlessness, conformity, nurturance, unfairness and morality.

The personality measure of alienation (Kureshi and Dutt, 1979), used in the present study was intended to measure some crucial aspects of personality which seemed to be meaningfully related to gastrointestinal disturbances. This measure had to do with a syndrome involving certain subdimensions along which individuals were likely to show some differences. The five dimensions constituting alienation were five factors extracted from a number of scales generally used in sociology and psychology, embracing the feelings and attitudes about one's own self in relation to the environment. Some of the subdimensions of the alienation scale were the ones used in other scales while others were identified on the basis of a study carried out on college and university samples. The five factors namely, 'Despair', 'Psychological Vacuum', 'Unstructured Universe', 'Narcissism' and 'Disillusionment', distributed in twenty one items, gave a
composite score on alienation and the placing of an individual along the continuum. Each statement of the scale was to be responded in terms of either of the four categories: 'Always', 'Often', 'Sometimes', 'Never', indicating in a declining order the intensity of the feeling. While most of the items were phrased in a way that response in affirmative indicated the feeling of alienation, some items were phrased in the reserved order so that responding in negative terms pointed to the intensity of alienation.

The scoring would be 'always' as 4, 'often' as 3, 'sometimes' as 2, 'never' as 1. While the scoring for negative items (3, 12, 18, 21) would be 1, 2, 3, 4, for 'always' 'often', 'sometimes', and 'never', respectively.

Since a well-worked out measure of alienation was available in the form of the aforementioned description of the dimension (Kureshi and Dutt, 1979), it seemed to be most acceptable scale and hence was justifiably adopted in the present study.

Health Locus of Control Scale:

Health is one of the many areas in which there has been a significant amount of interest in relating locus of control beliefs to a variety of relevant behaviours, (Strickland, 1978; Wallston and Wallston, 1978). Wallston and Wallston
(1978) saw locus of control orientation as an individual differences variable that might be related to information exchanges between patients and health care professionals. They conceptualized the intent of many health education efforts as internality training programmes, by means of the health-related measures of locus of control beliefs. They referred to Rotter's writings (Rotter, 1960; 1966) in which the situation was an important consideration in devising measures of expectancy for their rationale in developing a health-specific measure.

The original health-related locus of control scale (HLC Scale), (Wallston, Wallston, Kaplan, and Maides, 1976) consisted of 11 items in a 6-point Likert Format. These 11 items were product of an item analysis based on the response of 98 college students to a pool of 34 items written as face-valid measures of generalized expectancies regarding locus of control related to health. The HLC scale was scored so that high scored indicated agreement with externally worded beliefs. Individuals with scores above the median were labeled "health-externals"; they were presumed to have generalized expectancies that the factors that determine their health are ones over which they have little control (i.e. external factors such as luck, chance, fate and powerful others). At the other end of the dimension, scoring
below the median, were the "health-internals" who believe that the locus of control for health is internal and that one stays or becomes healthy or sick as a result of his/her behaviour. Internally worded items are 1, 2, 8, 10 and 11. Externally worded items are 3, 4, 5, 6, 7, and 9. The 11-item devised scale has a potential range of 11 to 66.

The HLC scale was published in the Journal of Consulting and Clinical Psychology, 1976, (Cf. Ward and Lindeman, 1978). Concurrent validity of the HLC scale was evidenced by a .33 correlation (P < .01) with Rotter's I-E scale for the original developmental sample. The mean score for the original developmental sample was 35.57, with a standard deviation of 6.22. The alpha reliability of the scale (.72) and the HLC scores did not reflect social desirability bias, as seen by a -.01 correlation with the Marlowe-Crowne Social Desirability Scale. Bloom (1979) factor analyzed the HLC scale responses of 115 women who had undergone a mastectomy within the past two years. She found two factors: Fate (six items involving good fortune and dependency) and Self-Blame (four items involving carefulness and self-blame). One item, "I am directly responsible for my health", did not load on either factor.

There are six response categories in front of each statement of the scale: 'strongly disagree', 'moderately
disagree', 'slightly disagree', 'slightly agree', 'moderately agree', and 'strongly agree'. The scale is scored in the external direction, with each item being scored from 1 (strongly disagree) to 6 (strongly agree) for the externally worded items and in the reverse order for the internally worded items.

Sample:

It was an interesting task to select the sample for this investigation. Although some subjects who were approached refused to cooperate, satisfactory rapport was achieved in most cases with subjects by meeting them personally before the actual administration of the scales. To ensure comparability of the treatment groups - peptic ulcer and ulcerative colitis patients, the samples were so drawn both from Srinagar and Aligarh that each group of the ulcerative colitis and peptic ulcer patients had the male and female subjects from both Aligarh and Srinagar in equal strength. That is each half of the peptic ulcer patients was held from Srinagar and Aligarh and this was also the case with ulcerative colitis patients. The average age of the total sample 45.3.

After the alienation and health locus of control scales were ready for administration, a representative sample of male and female patients was drawn following appropriate
statistical criteria from Srinagar and Aligarh, with a view to determine the role of the social variables of sex and region in the nature and pattern of peptic ulcer and ulcerative colitis. A sample of 600 patients suffering from gastrointestinal disturbances, who attended the out-patient clinics of the gastroenterology department from Shere-Kashmir Institute of Medical Sciences-Srinagar, and on the same criteria, 600 patients initially approached from J.N. Medical College - A.M.U. - Aligarh. Necessary medical examinations like barium meal x-ray confirmed clinic diagnosis, acid studies and endoscopy were also carried out to confirm the diagnosis of peptic ulcer.

It was found that 171 patients from Srinagar were suffering from peptic ulcer (98 males and 73 females), while 152 patients from Aligarh, were found with peptic ulcer (87 males and 65 females). On the basis of the X-ray report, clinic diagnosis and protoscopy, it was found that 147 patients from Srinagar, were suffering from ulcerative colitis (75 males and 72 females), while 160 patients from Aligarh, were having ulcerative colitis (79 males and 81 females). Then, by following the systematic purposive sampling technique, 100 male-female subjects out of each group of peptic ulcer and ulcerative colitis patients were finally selected. Thus, 400 patients belonging to the two
psychosomatic gastrointestinal disease categories viz., peptic ulcer (male = 100, female = 100) and ulcerative colitis (male = 100, female = 100) who attended the outpatient clinics for the above disorders, from Srinagar and Aligarh, formed the sample. Thus the total sample (N = 400) used in the present study, was evenly represented in terms of number of subjects in each of the comparison groups formed on the basis of sex and region. Further, the sample of each group (N = 100) was divided into two equal halves in terms of sex (50 males and 50 females) and region—Srinagar and Aligarh. The break-up of the final sample in terms of sex and region is as under:

Due to practical considerations the number of patients in each category of peptic ulcer and ulcerative colitis was
restricted to a maximum of 200. In all categories the data of those patients with doubtful diagnosis and/or with above normal lie scores, and those patients who never turn again, in the measures used, were rejected.

In order to study and identify the subjects suffering from peptic ulcer and ulcerative colitis, believed to be of psychosomatic origin, there could be two options: we could approach male and female subjects that we came across and interviewed them about their feelings and complaints of ulcer and colitis disturbances, which would be a difficult alternative task for the investigator and for the respondent too because the subject himself/herself could not always confess or realize the vital clinical consequences, as well as, it could be a pretty time-consuming affair. A more economical and profitable way was to rely on the reports of the physicians and their categorization of patients under peptic ulcer and ulcerative colitis. To ascertain the psychosomatic character of these ailments the investigator used his own know-how of the psychodynamics of these ailments and his close study of the patients. On these subjects (which excluded the doubtful cases) the Alienation Scale and Health Locus of Control scale were administered to determine the role of these variables in the two ailments, the results of
which were likely to throw some light on the psychosomatic nature of peptic ulcer and ulcerative colitis.

Procedure:

Having identified samples of male and female patients experiencing some kind of disturbances of gastrointestinal ulcer and colitis, representing populations from Srinagar and Aligarh, the subjects were approached individually and the two measures of the study were administered on each of the subjects. Good rapport was established with the subjects by meeting them personally and ensuring maximum cooperation on his/her part, after giving a word of honour and promise that their responses will be used only for research purpose and no one but the investigator would have an access to these. The subjects were requested to be truthful in responding to the statements of the scales on assurance of confidentiality.

Although some subjects who were initially approached, refused to cooperate, the four hundred patients who have been selected for the present study appeared to give reliable accounts of their responses. Many of them were interested in the nature of the investigation, which was briefly discussed with them before the administration of the alienation and health locus of control measures. At the end of sessions, subjects were thanked for their participation.
Statistical Techniques Used:

Looking to the main aim of the study and nature of the data collected, appropriate statistical techniques that promised the best results, were selected for analysing the scores. Each of the scales comprised the two levels of sex of subjects (male vs females), and two levels of region (Srinagar vs Aligarh), a 2 x 2 factorial design was used. As the factorial design was planned according to a 2 x 2 one, in this study, the main and interacting effects of the variables were determined by means of analysis of variance. The analysis was aimed not only at the individual differences on alienation and health locus of control among male and female subjects hailing from Srinagar and Aligarh, but also to determine significance of differences between the groups formed on the basis of the external variables. t-test seemed to be most appropriate for this purpose. The data were also analyzed by means of Pearson Product Moment correlation method and the significance of difference between two correlation coefficients (Zobs). The statistical analysis and results thereof are presented in tabular form in the following chapter.