Material & Methods:
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The present study included 30 patients with irritable bowel syndrome. The cases were selected from those attending the gastro-enterology clinic, medical outpatient department and inpatients of the Dayanand Medical College & Hospital, Ludhiana. The criteria of diagnosis were mainly clinical. The patients selected for the study had most of symptoms like pain abdomen, abdominal discomfort, disordered bowel habits (constipation or diarrhoea), passage of mucus along with stools and evidence of psychological disturbances for considerable durations without having apparent ill-health, evidence of nutritional deficiency or loss of weight.

A detailed history and findings of clinical examination were charted in the proforma as given in appendix no. one. Besides these, the following investigations were carried out in each patient.

(1) ROUTINE BLOOD EXAMINATION:

Routine blood examination like haemoglobin, total and differential leucocyte count and erythrocyte sedimentation rate were done in each patient.
(ii) **ROUTINE STOOL EXAMINATION**

Routine examination of stool on three consecutive days was done to exclude any parasitic infestation of the bowel.

(iii) **SIGMOIDOSCOPY**

Sigmoidoscopy was carried out with "Rigid sigmoidoscope supplied by a cold-light source" in every patient to exclude any pathology in the rectum or visible part of the sigmoid colon. Patient was not given any laxative or purgative but only plain water bowel wash was done to prepare the patient for sigmoidoscopy.

(iv) **BA ENEMA**

Barium enema examination was also done in every patient to exclude any organic disease and to provide evidence to support the diagnosis of irritable bowel syndrome. To prepare the patient, only a gentle bowel wash with plain water an hour or two before the barium enema was given. The examination was done with a plain barium suspension free from agents which can stimulate the colon. The patient was also screened along with. In the X-ray films, following were noted for interpretation:

(i) a segment of colon showing reduced lumen - "spastic segment".
(ii) any increase in number of haustral markings.

(iii) post-evacuation radiographs showing clumps of mucus outlined by barium.

Only those patients were included in the study who did not have any organic cause as investigated above. Each patient then participated in a comprehensive interview with the psychiatrist to assess the mental status. Each subject was then given a battery of the psychological tests which included:

(a) **The Hamilton's Rating Scale for Depression**

This most widely used observer-rating scale was developed by Hamilton (1960). It is one of the earliest scales and has been widely used to quantify the results of an interview to facilitate the assessment of the depth of depression. It is not a diagnostic scale in that it is to be used only on patients already diagnosed as depressed. This scale consists of 17 variables rated on a 5-point (0-absent, 1-mild, 2 and 3 moderate, 4-severe) or 3-point scale (0-absent, 1-slight or doubtful, 2-clearly present). Symptoms which are difficult to quantify eg, insomnia, agitation etc. are rated on the 3-point scale. Also included on the rating scale are four additional variables.
which are rated separately because, as in the case of depersonalisation, paranoid symptoms, obsessional symptoms, they occur very rarely, or as in the case of diurnal variation, it is deemed to characterise type of depression rather than intensity of depression. Significant correlation (0.83) between Hamilton's Rating Scale and the Beck Inventory in the measurement of depression was shown by Bailey and Cappen (1976). Knesevich (1977) also showed a high correlation (0.89) between the Hamilton Score and a psychiatrist's global rating, which further proves its validity. The scale is given in appendix no. two.

(b) **THE MAUDSLEY PERSONALITY INVENTORY**

The Maudsley Personality Inventory (MPI) is one of the most widely used personality tests in the investigation of a variety of clinical and psychosomatic problems. The MPI was constructed and standardised by Eysenck (1959) for the purpose of measuring the two dimensions of personality: Neuroticism and Extraversion. Neuroticism (N) is defined as the general emotional lability of a person, his emotional over-responsiveness and his liability to neurotic breakdown under stress. Extraversion (E) refers to outgoing social proclivities.
This personality inventory consists of 48 questions.
The average N score of normal subjects is 19.9 with a
standard deviation of 11.0. The average $E$ score for normal
is reported as 24.9 with a standard deviation of 9.7.
Eysenck considered that the response of subject to the
questions of MPI was relatively constant. It is because of
this investigation that there is reassuring evidence that
the scores obtained on the MPI remain stable, both for normal
and clinical groups. According to Eysenck, neurotic patients
suffering from anxiety states, neurotic depression or
obsessional neurosis had low extraversion scores, while
patients with hysteria or psychopathic personality had normal
or raised extraversion scores whereas neuroticism score of
neurotic patients was found to be significantly raised. The
split half reliability correlation coefficient is 0.85-0.90
for $N$ and 0.75-0.85 for $E$, which is quite satisfactory for a
test. This test was validated by Knales (1960) and Eysenck
(1962). The questionnaire used in this study, as given in
appendix no. three, has been translated in Hindi by Wig and
Sanatan, at the Department of Psychiatry, Post Graduate
Institute of Medical Education and Research, Chandigarh. The
Hindi translation was modified by Sanatan and Wig (1967)
and has already been used in this part of our country with
great success by Wig and Nagpal (1970), Wig and Singh (1970), and Dwarka Pranhad et al. (1972).

(c) **SIGH-HEALTH QUESTIONNAIRE-92**

It is a simple questionnaire of neurotic complaints in Hindi to record the responses of the patients in Indian set up. The total scores on this scale give the idea of degree of neurosis the patient is suffering from. There are 50 items in this self-rating scale which are related to neurotic complaints. This test has been specially designed for less educated people or rural population. The test has been standardised on 1500 persons from different areas by Wig and Verma at Chandigarh. As regards classification of subjects, there is no fixed number above which all neurotics will score on this test but in their study, the authors found that if a person scores more than 14 'Yes' responses, the chances are very high that he/she has marked neurotic trends. But the chances are also high if he scores are above 9. The split half and test-retest reliability have been found to be 0.92.
and 0.83 respectively, which is quite satisfactory for a test. The questionnaire has also been found to be highly cor-related with Sinha's Anxiety Scale (0.86) and Hamilton's Anxiety Scale (0.82), which also proves its validity. This questionnaire, as given in appendix no. four, is being widely used in the population of this part of our country.

By the above three psychometric tools, the psychological factors and the personality types of the patients were analysed and cor-related with their physical symptoms.