METHOD AND PROCEDURE
CHAPTER IV

METHOD AND PROCEDURE

The purpose of the present study was to determine alexithymia in patients suffering from somatoform disorders and to find its relationship with social support, life events, coping style, family functioning, and verbal fluency.

Primary aims of the study: -

a) To determine the prevalence of alexithymia in patients suffering from somatoform disorders, and their matched normal controls.

b) To determine the relationship of alexithymia with social support, life events, coping style, family functioning and verbal fluency in patients suffering from the somatoform disorders, and their matched normal controls.

Secondary Aim of the study:-

a) To examine the effect of age, gender, education and type of family on alexithymia in patients suffering from somatoform disorders, and their matched normal controls.

HYPOTHESES:

To fulfill the above mentioned aims, the following hypotheses were proposed and tested:

H1: There would be a positive relationship between alexithymia and somatoform disorders.

H2: There would be an inverse relationship between alexithymia and social support.
In view of inadequate research and theoretical framework, no hypotheses were framed with regard to the relationship of alexithymia with

a) Stressful life events,
b) Coping style.
c) Family functioning, and
d) Verbal fluency.

Thus, the nature of relationship between alexithymia and each of the above were to be explored.

TOOLS USED FOR THE PRESENT STUDY

In view of the fact that the data under study derives from the individual in question, the self-report modality was chosen. Taking a person centered orientation means that one regards persons as experts on themselves and uses their self knowledge extensively (Thomae, 1987). Other methods of observation are dependent on interpretations of apparent behaviour.

The tools were selected in accordance with the aims of the study. While selecting the tools, psychometric properties, nature of sample, competence of the investigator in scoring and interpretation were taken into consideration. All the tools used were in the local language (Hindi), those which were not so available, were translated for the purpose of the present study.

The tools used in the present study were as follows:-
a) General Health Questionnaire (GHQ) (Goldberg, Gater, Sartorius, Ustun, Gurege and Rutter, 1997).

b) 20 -Item Toronto Alexithymia Scale (TAS) (Hindi translation by Pandey, Mandal, Taylor and Parker, 1996).

c) PGI – Social Support Questionnaire (SSQ) (Nehra, Kulhara and Verma, 1998)

d) Presumptive Stressful Life Events Scale (PSLE) (Singh, Kaur and Kaur, 1983).


f) Family Interaction Pattern Scale (FIPS) (Bhatti, Subbakrishna and Ageria, 1986).

g) Verbal Fluency tests (VFT). It includes the following:

GENERAL HEALTH QUESTIONNAIRE (GHQ)

The General Health Questionnaire is a self administered screening questionnaire aimed at detecting individuals with a diagnosable psychiatric disorder (Goldberg 1972). The original GHQ consisted of 60 items from which shorter scales of 30, 28, 20 and 12 items have been derived. The 12 item version of the GHQ was used in the present study (Goldberg, Gater, Sartorius, Ustun, Gureje, and Rutter, 1997).

The GHQ is simple in its wording. Questions relate to present and recent complaints that the respondent may have over the past few weeks. Responses are to be endorsed on a four point scale. It has been recommended for even illiterate patients who require the questionnaire to be read out to them.
The GHQ scoring method (0,0,1,1) was used with a threshold score of 3 for the detection of a case. This tool was chosen as it is short, easy to comprehend and administer and provides an assessment of psychological distress in the community and in the patients.

The scale has been tested in 15 centres round the world with a total of 11 languages. It was translated and back-translated in each of the languages. It was found to be testing current mental status of a range of diagnoses including somatization and was comparable to GHQ -28.

It was found to be valid and reliable across languages, countries, gender, age, and educational level.

It has been found to exhibit Cronbach’s alpha of 0.89 and split half reliability of 0.91 on an Indian sample (Jacob, Bhugra, and Mann, 1997) using the Hindi version. It has been extensively used in India with good results.

20 - ITEM TORONTO ALEXITHYMIA SCALE (TAS)

(Pandey, Mandal, Taylor, and Parker, 1996)

It is a self-report measure of alexithymia as a personality construct. Using a measurement-based approach to construct validation, Taylor, Bagby, Ryan, and Parker (1990) initially developed the Toronto Alexithymia Scale.

It’s improved and revised version, the twenty item Toronto Alexithymia Scale (Bagby, Parker, and Taylor, 1994) was later introduced measuring a stable and replicable three factor structure of alexithymia namely,

a) Ability to recognize own emotions
b) Ability to communicate feelings.
c) Externally oriented cognitive style.

The Hindi translation used in the present study has high correlation with the original (r=0.85), has a Cronbach's alpha of 0.72 and test–retest reliability of 0.83. It is a five point Likert Scale having 4 of the 20 items, negatively worded. It provides a score on each factor as well as a total alexithymia score. Higher score indicates more alexithymia.

PGI – SOCIAL SUPPORT QUESTIONNAIRE (SSQ)
(Nehra, Kulhara, and Verma, 1998)

This is an 18 (eighteen) item scale modified and adapted for Indian population from the Pollack and Haris (1983) Scale of Social Support. It is a measure of perceived social support i.e., an indication of how much the individual feels cared, loved, esteemed, valued, and belonging to a network of communication and mutual obligation. Seven items are positively worded while eleven items are negatively worded. It is a four Point Likert Scale which is reliable and valid (Significant at p<0.01) Higher score indicates higher social support.

PRESUMPTIVE STRESSFUL LIFE EVENT SCALE (PSLE)
(Singh, Kaur and Kaur, 1983)

It is a checklist of common life events experienced as stressful by the Indian population making it highly culture specific and valid for our sample. It has 51 items which are further classified as

a) Personal or impersonal i.e., the degree of dependence on the individual's action (24 and 27 items, respectively).

b) Desirable or undesirable or ambiguous (10 and 32 and 9 items, respectively).

Further, the number of stressful life events experienced in the past one year are analyzed. It is a reliable and valid test for Indian patients and has been effectively used with anxiety neurosis patients (Sharma and Ram, 1987).
THE COPING CHECKLIST
(Rao, Subbakrishna and Prabhu 1989)

This checklist comprising of 71 items, was developed in the Indian setting based on the transactional perspective. This point emphasized that the way in which stressors are appraised determines the selection and utilization of coping responses comprising of a broad range of behavioural and cognitive responses. The checklist is kept open ended to allow the individual to report additional coping behaviors. Items are dichotomously scored.

The items can be grouped into nine coping styles, namely cognitive positive, cognitive negative, problem solving, distraction, magical thinking, avoidance, religious, help seeking and external attribution. (Daka, Varma, and Malhotra, 1995).

It is applicable to both genders and has test-retest reliability of 0.74. For the purpose of the current study, the Checklist was translated into Hindi. Five experts translated the checklist independently into Hindi. It was then back translated and the data was pooled to compile the translated version. The translated and the original checklist were then administered to 20 normal subjects. Ten normals were given the English version first and ten were given the Hindi version first. The alternate form was administered after a gap of at least one week. The test – retest correlation was found to be 0.89.

The Hindi version was then used in the current study.

FAMILY INTERACTION PATTERN SCALE (FIPS)
(Bhatti, Subbakrishna, and Ageria, 1986)

This scale is based on the epigenetic theory whereby there is an orderly development in the life of the family. FIPS is constructed based on the lines of model of evolution of the family system, giving importance to the time scale, type of system, evolution of the dominant characteristics, and the environmental inputs.
It is a 106 item scale with response pattern of four point Likert Scale, with each item reflecting a specific sub-variable of a definite dimension. The latter pertains to six subscales, viz leadership, communication, role, reinforcement, cohesiveness, and social support. The obtained scores are for each of the subscales and an overall score. Norms for each of the sub scores are provided by the authors.

The scale enjoys sound psychometric properties and has been used extensively in research in India. (Bharat, 1996)

VERBAL FLUENCY TESTS

To measure verbal fluency, following tests were administered.

WORD NAMING TEST

(Terman and Merrils, 1960)

This is one of the earliest tests of verbal fluency. It requires the subject to say as many words as possible in one minute without repeating the same word. It is part of the Stanford Binet test standardization by Terman and Merrils, (1960)

It is also part of the neuropsychological battery of tests developed at NIMHANS, Bangalore to measure verbal fluency.

It has accepted reliability and validity (Walsh, 1994).

SET TEST

(Issacs and Kennie, 1973).
In this test, the subject is asked to name as many items as he can from four successive categories: colours, animals, fruit, and towns. He names items in the first category until he recalls ten items or can remember no more at which point the next category is announced. His score is the total number of items recalled, 40 being the highest possible score. It has been found reliable when tested on healthy old people, those having symptoms of brain disease, and those who were depressed.

SAMPLE

Sample Selection

The study was conducted at two levels, namely the Psychiatry outpatient department (OPD) of Government Medical College and Hospital (GMCH) sector- 32, Chandigarh, and the general population. The method of purposive sampling was used i.e., the patient sample comprised of consecutive cases seen in the psychiatry OPD of GMCH who were diagnosed by a qualified psychiatrist to be suffering from somatoform disorder (ICD –10, WHO, 1992) and were referred to the researcher. If the patients fulfilled the inclusion and exclusion criteria, their informed consent was obtained and the relevant tools were administered by the researcher, assuring confidentiality. The normal controls were selected from the general population, such that the normal sample was comparable to the patient sample on the sociodemographic variables of age, gender, marital status, education, occupation, locality, income and type of family. Matching was done in order to avoid the effects of these variables on the main study. Four age categories were constituted and the comparability was maintained by it.

The inclusion and exclusion criteria used for sample selection were as follows: -
INCLUSION CRITERIA

i) Age between 18 and 65 years.


EXCLUSION CRITERIA

i) A Concurrent clinical diagnosis of psychosis, organic brain syndrome or mental retardation.

ii) History of major medical disorders.

iii) Patients hailing from broken families / single parent families.

ETHICAL CONSIDERATIONS

i) Informed consent was obtained before the assessment was made.

ii) Clients were assured confidentiality.

iii) Clients were given the right to opt out of the study.

DATA COLLECTION

While collecting the data it became evident that some of the patients were illiterate and by excluding them, the sample would not be truly representative of the somatoform disorders. Hence, the inclusion criterion of literacy which had been stated in the plan of the current study was dropped.

Further the completion of the tools took anywhere between one and a half hours to three hours per patient due to which some patients refused to become part of the study, while others left the responses incomplete due to rising anxiety. Patients being highly distressed, most of the times required counseling sessions and were sometimes given relaxation training after the completion of the forms.
Before taking a case to be normal, the General Health Questionnaire was administered and if the score exceeded three the subject was not included in the control sample. After collecting preliminary data, the chi-square for the sociodemographic variables was calculated which came out to be significant. Thus, some cases were excluded from the study while others were added till the two groups became comparable. The main difference was on the education level, which was then equated by collecting data from daily wage labourers, peons, and rural house-wives.

Specifically, 150 patients were examined of which 48 either refused or left the questionnaires incomplete due to paucity of time or increased distress. Thus, 102 patients could complete the tests. In the normal sample 220 individuals were interviewed 72 of them had high scores on General Health Questionnaire and thus were excluded. 32 of the normals either could not complete the questionnaires or were found incomparable to the patients sample, and hence could not be included. The final normal sample comprised of 116 individuals.

The sociodemographic details of the final sample which comprised of 102 patients and 116 normals, are described in table-III. They were administered all the scales, and the tests of verbal fluency were conducted on them by the researcher.
| TABLE III
SOCIODEMOGRAPHIC CHARACTERISTICS OF THE SAMPLE |
<table>
<thead>
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<th></th>
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<td>79</td>
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<td>Widowed</td>
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### Family

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<td>Joint/Extended</td>
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### Income (Rupees per month)

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<td>58</td>
<td>0.140 (NS)</td>
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<td>5000-10000</td>
<td>31</td>
<td>41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; 10000</td>
<td>12</td>
<td>17</td>
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### Locality

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<th>M</th>
<th>P</th>
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</thead>
<tbody>
<tr>
<td>Urban</td>
<td>68</td>
<td>81</td>
<td>0.146 (NS)</td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>34</td>
<td>35</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Patient Sample

(N=150)

- Completed the study (N=102)
  - Included
- Incomplete / refused Distressed (N=48)
  - Excluded

### Normal sample

(N=220)

- GHQ score higher than 3 (N=72)
  - Excluded
- Incomplete/incomparable (N=32)
  - Excluded
- GHQ score <3 & Comparable to patient (N=116)
  - Included
SOCIO-DEMOGRAPHIC CHARACTERISTICS OF PATIENTS

AGE

- 18-25 years: 10%
- 26-35 years: 26%
- 36-45 years: 45%
- 46-55 years: 19%

GENDER

- Males: 44%
- Females: 56%

EDUCATION

- Illiterate: 11%
- Less than Matric: 13%
- Matric: 15%
- Graduate: 27%
- Postgraduate: 34%

MARITAL STATUS

- Single: 20%
- Married: 78%
- Widowed: 2%

- 18-25 years: 19%
- 26-35 years: 26%
- 36-45 years: 45%
- 46-55 years: 10%
SOCIO-DEMOGRAPHIC CHARACTERISTICS OF PATIENTS

**OCCUPATION**
- 34% Agriculture/Business
- 16% Labourer/Semiskilled Worker
- 11% Skilled Worker/Office Worker
- 7% Unemployed
- 5% Retired
- 3% Student
- 11% Professional
- 7% Technical/Semiprofessional
- 14% Housewife

**LOCALITY**
- 67% Urban
- 33% Rural

**INCOME**
- 58% > 10000
- 30% 5000-10000
- 12% < 5000

**FAMILY**
- 72% Nuclear
- 28% Joint/Extended
Instruction and scoring was done as per the respective keys and manuals.

STATISTICAL ANALYSIS

The data collected was rendered to the following statistical analysis:

a) The normal and the patient group was compared for differences, on all the variables using the t-test.

b) Correlations were studied between alexithymia and the other variables, separately for the patient and the control group.

c) Intercorrelations were calculated between all the variables separately for the patient and the normal groups.

d) Regression analysis with alexithymia as the dependent variable and other variables as independent variables was calculated.

e) Stepwise regression analysis was done for the patient sample using alexithymia total scores; and also for each of the factors of alexithymia with other variables as the independent variables.

f) The groups were compared for differences between the genders on alexithymia using the t-test.

g) The effects of age and education were studied on alexithymia using analysis of variance (ANOVA).