The primary objective of this research is to study the psychosocial, behavioral and familial profile of children with learning disability. It also attempts to compare learning disabled children to their typically achieving counterparts on various psychosocial, behavioral and familial variables. Further learning disabled children with behavioral problems and learning disabled children without behavior problems were also examined and a distinction was sought between these groups based on various familial variables like parenting stress, coping strategies and family environment. Therefore the data was collected keeping in view the demands of the research. In the subsequent pages necessary information regarding the sample, the tools and the procedure employed for obtaining relevant information has been given. The current chapter is hence arranged in the following order:

3.1 Sample
3.2 Psychological test/measures
3.3 Procedure
3.4 Statistical analysis

3.1 SAMPLE

In the present study the sample consisted of participants drawn from various schools from the city of Chandigarh (U.T). The total sample consisted of 200 children and 200 mothers (100 students with learning disability (LD) and their mothers and 100 students with a non learning disability (NLD) and their mothers). The LD and NLD students were all in the age ranging from 6-10 years (Mean for LD =8.27 years and Mean for NLD was 8.42 years). The school authorities were asked to refer children who were known to have a learning disability and were attending resource rooms. The subjects that were chosen for the study had received a previous diagnosis of LD from reputed clinics. NIMHANS index for specific learning disabilities (SLD) battery and tests of Intelligence (Malin’s Scale for Indian Children and Standard Progressive Matrices) were used to obtain a diagnosis of learning disabilities along with other
necessary procedures. To draw comparisons among LD and NLD on selected familial variables, mothers’ of LD subjects were also studied along with their NLD counterparts. Efforts were made to maintain homogeneity on the variables of education, socio-economic status and age. Table 3.1 shows the frequency distribution of age of the subjects in both the groups. The sampling technique was purposive. The study used a non probability sample i.e. a combination of random and convenience sample. For the selection of the sample the following aspects were taken into consideration.

**Inclusion Criteria:**

1. Parents’ informed consent was achieved for administrating the tests and children of those parents who agreed to participate in the study were chosen.

2. Only those children who had a diagnosis of learning disabilities from a reputed clinic were included in the study.

3. Care was taken that all the Children included in the present study had normal vision, normal auditory ability and no other neurological deficits.

4. To study familial variables the families were approached. The fathers’ showed little inclination towards the daily activities and stated work pressure as a reason mothers’ were however more involved in the upbringing and day to day activities of the child. Hence the maternal responses were incorporated in the study.

**Exclusion Criteria:**

1. Care was taken to not include children who were slow learners, autistic or who had severe neurological deficits.

2. Children of the help staff who are able to attend school as part of the philanthropy effort by the school were also excluded to maintain socio economic homogeneity.
Table 3.1: Showing age wise distribution of LD Children and NLD Children.

<table>
<thead>
<tr>
<th>Age (rounded to the nearest year)</th>
<th>$f_1$ (Learning Disabled)</th>
<th>$f_2$ (Non Learning Disabled)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6yrs</td>
<td>24</td>
<td>15</td>
</tr>
<tr>
<td>7yrs</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>8yrs</td>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td>9yrs</td>
<td>21</td>
<td>26</td>
</tr>
<tr>
<td>10yrs</td>
<td>32</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>N=100</td>
<td>N=100</td>
</tr>
<tr>
<td></td>
<td>M = 8.27years</td>
<td>M = 8.42years</td>
</tr>
<tr>
<td></td>
<td>SD = 1.58</td>
<td>SD = 1.42</td>
</tr>
</tbody>
</table>

3.2 PSYCHOLOGICAL MEASURES

Followings tests were used in the present study to collect the required information from the subjects:

2. Loneliness and Social Dissatisfaction Scale (Asher et al., 1984).
3. Screen for Child Anxiety Related Disorders (SCARED) (Birmaher et al., 1997).
4. Conner’s Parent Rating Scale Revised (s) (Conner’s et al., 1998).
7. Family Environment Scale (Moos & Moos, 1986).

To measure the psychosocial profile of the subjects scores were obtained on the Self Concept Scale; Loneliness and Social Dissatisfaction Scale and Screen for Child Anxiety Related Disorders. These measures were administered on the learning disabled children and the control group (NLD). Whereas, to obtain the behavioural and familial
profile Conner’s Parent Rating Scale Revised (s), Parenting Stress Index. Ways of Coping and Family Environment Scale were administered to the mothers’ of LD children and their NLD counterparts.

1) **Self Concept Scale for Children (Singh and Singh, 1977)**

The self concept scale for children was used to obtain the self concept score of children with learning disabilities and the control group. This measure is a self-administering tool that can be administered to a group or to an individual. Keeping in mind the characteristics of learning disabled children this scale was chosen; as the adjectives used to assess the self concept is part of the children’s everyday language repertoire. Hence they are easy to comprehend by the children and they can give appropriate responses. The self concept scale contains 22 trait descriptive adjectives presented here in the order used in the scale: Friendly, happy, kind, brave, honest, likable, trusted, good, proud, lazy, loyal, co-operative, cheerful, thoughtful, popular, courteous, jealous, obedient, polite, bashful, clean, and helpful. Each of these adjectives was prefaced by the phrase “I am …” and was followed by a five point rating scale. Nineteen were considered socially desirable attributes while three were considered negative (italicized above). A score of 1-5 was received accordingly on an item that was marked, and the scores were reversed for the three negative adjectives. A score on the self concept scale is obtained by summing up the ratings ascribed by the children to themselves on each item. Lower score, will presume to reflect a degree of self-disparagement.

The authors obtained the means and standard deviations for the scale for each grade and sex separately. The analysis of variance was performed and neither the main effects of grade or sex nor the interaction of these two variables was found significant. The six means were pooled to obtain an estimate of a mean score common to the combined population of fourth, fifth and sixth graders. This mean is 86.75 with a standard deviation of 8.18. Test-retest reliability coefficients for self concept was also done and all the correlations were found to significant beyond the .001 level. This tool has been successfully used on Indian children by Sankar and Reddy, (2014); Gupta and Sharma, (2014).
2) **Loneliness and Social Dissatisfaction Scale (Cassidy and Asher., 1992)**

Loneliness and social dissatisfaction is a self-report questionnaire that is used on children to their feelings of loneliness and dissatisfaction with peer relationships. This scale was used in the study keeping the characteristics of the learning disabled children in mind. The simple language used to form questions that make up the various items of the scale is easily comprehensible for children who may have problems with reading. This scale is made up of 24 items, 16 of these items are used to assess loneliness and social dissatisfaction (e.g. Are you lonely at school?). The 8 items that remain are fillers that include question that focus on the child’s interests like their hobbies and other fun activities. These filler items are designed to make the children feel relaxed during the interview. The children are required to respond to each statement by saying either “yes”, “no” or “sometimes” whichever of these responses they think is true for the given statement. A total score is then calculated by adding up all items which assess loneliness and social dissatisfaction and leaving out the responses of the filler items. The higher the score, greater is the indication of the experience of loneliness and social dissatisfaction.

Reliability- A satisfactory internal consistency reliability ($\alpha = .79$) Cornbach’s alpha was reported by the authors (Cassidy & Asher, 1992).

Validity- it was also reported by the authors that the self reports by children on this form were significantly correlated with the peer status derived from socio-metric measures and also on teachers report on child’s social behaviour (Cassidy & Asher, 1992). This scale has been successfully used on the Indian population by Devi et al. (2012)

3) **Screen for Child Anxiety Related Disorders (SCARED) (Birmaher et al., 1997)**

The screen for child anxiety and related disorders is used to obtain anxiety scores for children. It’s a self report questionnaire. SCARED contains 41 items that can be grouped into 5 sub-scales. Four of these subscales measure anxiety disorder symptoms as conceptualized in the DSM-IV-TR: Panic disorders, general anxiety disorder, separation anxiety disorder and social anxiety. The fifth subscale, which
measures school anxiety, represents a common anxiety problem in childhood and adolescence (Birmaher et al., 1997).

The subject is asked to read each phrase carefully and decide if it is “Not true or hardly ever true” or “somewhat true or sometimes true” or “very true often true” out of the response that describes the subject best in the last three months.

The authors of the scale reported that for the total score and each of the five subscales both the child and the parent SCARED demonstrated good internal consistency ($\alpha = .74$ to .93), test retest reliability (intraclass correlations co-efficient = .70 to .90). The SCARED shows promise as a screening instrument for anxiety disorders (Birmaher et al., 1997). This scale is used by many researchers (Wren, 2007). This tool has been used on Indian children by Mohapatra et al., 2014; Joshi et al., 2013)

4) Conner’s Parent Rating Scale-Revised - S (Conner’s 2001)

CPRS-R:S is a suitable instrument for reporting on children and adolescence, aged 3 to 17 years. The Conner’s rating scales R is a unique integration of theoretical knowledge, clinical experience and empirical sophistication, which results in a state-of-the art measure. It has many advantages like a large normative data base, it has multi dimensional scales that assess ADHD and comorbid disorders. It has both clinical and diagnostic relevance and also has excellent reliability and validity. The CPRS-R:S constitutes 27 items that includes the following subscales mentioned below:

(i) Oppositional
(ii) Cognitive problems/inattention
(iii) Hyperactivity
(iv) ADHD index.

For the purpose of scoring the raw scores obtained from the various subscales are then converted into t-score.

Reliability: The coefficient alphas for internal reliability were highly satisfactory for normative groups. For the long form there was a range from .72 to .94 and .85 to .93 for the short form of the CRS-R, indicating that the CRS-R subscales adequately measure
the construct they were designed to measure. The test retest reliability studies demonstrate the temporal stability of CRS-R.

Validity: Extensive and elaborate studies were conducted on the CRS-R, which demonstrated their factorial, convergent, divergent and discriminate validity. Research studies have leant weight to the theoretical scale structure of CRS-R and have shown that the scales correlate well with measures believed to tap related constructs. Findings are consistent with the diagnostic criteria for ADHD and definitions of CRS-R subscales. The results also showed that the CRS-R does adequately identify childhood and adolescent ADHD behaviour problems and psychopathology. This test has been successfully used on the Indian population by Kumar (2010).

5) Parenting Stress Index (Abidin, 1995)

Parenting stress index/Short form (PSI/SF) constitutes 36-item and is derived from PSI/full-length test. Responses are to be given on a 5 point likert scale and these responses range from 1 (strongly agree) to 5 (strongly disagree). The PSI/SF generates a score for total stress (TS) and three subscales: Parental distress (PD), parent-child dysfunctional interaction (PCDI) and difficult child (DC). The aim of the parent domain is to identify and measure the sources of stress that may be linked to the parent’s functioning. The aim of the child domain is to identify and measure the perceived child factors or specific characteristics of the child that may have an affect on the stress level of the parents. Additionally the PSI/SF also consists of a defensive responding scale that intends to identify the extent to which the parent's response may be given in a defensive manner. To obtain the scores, all items that are part of a particular subscale are added up. Higher the score is for a particular subscale, it indicates a greater presence of stress in relation to that particular factor. To calculate the total stress score (TS) the score of all the specific parent and child domains are summed. Parents who obtain a TS score above a raw score of 90 (at or above the 90th percent) are experiencing significant levels of stress.

According to Abidin (1995), the total scores (TS) gives an overall indication of the amount of parenting stress experienced by a person being tested. The component stress associated with the PD subscale are “impaired sense of parenting competence,
stress associated with the restrictions placed on other life roles, conflict with the child’s other parent, lack of social support and presence of depression”. The PCDI subscale focuses on the “parent’s perceptions that the child does not meet the parent’s expectations and the interactions with their child are not reinforcing to them as a parent”. The DC subscales focuses on “some of the basic behavioural characteristics of children that make them either easy or difficult to manage”.

Reported coefficient alpha and test-retest reliability ranges for TS were .84 to .95 and .68 to .92 for the subscale. Cornbach’s alphas for the PSI/ SF were .95 for TS and .86 to .92 for the subscales (Abidin, 1995). This test has been successfully used by researcher Kennedy (2012) and Shyam et al. (2014).

6) Ways of Coping (Folkman and Lazarus, 1985)

The ways of coping questionnaire is a research tool that is designed to study the coping process. The ways of coping questionnaire aims to identify the various thoughts and actions that are employed by an individual in order to cope with a specific stressful encounter. This questionnaire consists of a total of 66 items that make up it’s 8 subscales. These subscales are (i) confrontive coping (ii) distancing (iii) self controlling (iv) seeking social support (v) accepting responsibility (vi) escape avoidance (vii) planful problem solving and (viii) positive reappraisal (see table 3.2).

The individual gives the response to each item on a 4 point likert scale. The four points are to identify the frequency with which each strategy was used: 0 indicates” does not apply and/or not used, “1 indicates” used somewhat”, 2 indicates “used quite a bit” and 3 indicates, “used a great deal”. To obtain the raw scores the individual’s responses to the items that comprise a given score are summed up.

Folkman et al. (1986) used the ways of coping questionnaire to test 85 married couples at five different times across a period of 6 months and selected 50 items to be factor analyzed from the pool of coping responses. This analysis produced an 8 factor solution that was used to construct 8 scales: Confrontive Coping, Distancing, Self-Controlling, Seeking Social Support, Accepting Responsibility, Escape-Avoidance, Planful Problem Solving and Positive Reappraisal. This scoring system for the measure
was eventually adopted by Folkman and Lazarus (1988) in the test manual for the WCQ. The 8 coping scales had moderate alpha coefficients in the derivation sample, ranging from .61 to .79; however test retest reliability data for the WCQ has not been reported in the literature (see the test manual for the WCQ Folkman and Lazarus, 1988).

Folkman and Lazarus (1985) have suggested that the issue of test-retest reliability is difficult to apply to the WCQ because it assesses situations specific coping activity. Thus research about the reliability of the WCQ has been restricted to questions about internal reliability Zeidner and Endler (1996). This tool has been successfully used on the Indian population by Sinha et al. (2000) and Creado et al. (2006).

Table 3.2: Description of the Coping Scales (Folkman and Lazarus, 1985),

<table>
<thead>
<tr>
<th>Coping Scale</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confrontive Coping</td>
<td>Describes aggressive efforts to alter the situation and suggests some degree of hostility and risk-taking.</td>
</tr>
<tr>
<td>Distancing</td>
<td>Describes cognitive efforts to detach oneself and to minimize the significance of the situation.</td>
</tr>
<tr>
<td>Self-Controlling</td>
<td>Describes efforts to regulate one's feelings and actions.</td>
</tr>
<tr>
<td>Seeking Social Support</td>
<td>Describes efforts to seek information support, tangible support, and emotional support</td>
</tr>
<tr>
<td>Accepting Responsibility</td>
<td>Acknowledges one's own role in the problem with a concomitant theme of trying to put things right.</td>
</tr>
<tr>
<td>Escape-Avoidance</td>
<td>Describes wishful thinking and behavioural efforts to escape or avoid the problem. Items on this scale contrast with those on the distancing scale, which suggest detachment.</td>
</tr>
<tr>
<td>Planful Problem Solving</td>
<td>Describes deliberate problem-focussed efforts to alter the situation, coupled with an analytic approach to solving the problem.</td>
</tr>
<tr>
<td>Positive Reappraisal</td>
<td>Describes efforts to create positive meaning by focusing on personal growth. It also has a religious dimension.</td>
</tr>
</tbody>
</table>

7) Family Environment Scale (FES) (Moos & Moos, 1986)

The Family Environment Scale (FES) constitutes of 90 items questionnaire that requires the subject to respond in a true or false manner. This scale aims to examine the
interpersonal relationships, personal growth and system maintenance in families. The family environment scale form R comprises of 10 subscales that measure the social environmental characteristics of all types of families and the individual’s perception of his or her family environment. The items are assessed on 9 subscales across three dimensions: the relationship dimensions, the personal growth dimension and the system maintenance dimensions. The relationship dimension includes cohesion, expressiveness and conflict. The personal growth dimension includes independence, achievement orientation, intellectual-cultural orientation and moral-religious orientation. The final dimension, system maintenance, includes measures of organization and control. For this study only relationship dimension has been studied. (see Table 3.3)

Scoring of the scale is a simple clerical procedure that can be done with the help of a template. The number of scores that show through the template in each column are counted and entered at the bottom. The boxes at the bottom show the scores for all the 10 subscales.

Internal consistency of subscales range from 0.61 to 0.78. Test-retest reliability ranges from 0.68 to 0.86. Several studies support the construct validity of FES subscales (Sandler and Barrera, 1984). In India this test has been successfully used by Tung and Jhingan (2002) and Chahal (2003). The use of only the Relationship Dimension of the Family Environment Scale was made by researcher Roman et al. (2012).

Table 3.3: List of Variables of Family Environment Scale (Moos & Moos, 1986)

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Subscales</th>
<th>Symbols</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cohesion</td>
<td>COH</td>
<td>The amount of commitment and support, amongst family members.</td>
</tr>
<tr>
<td>2</td>
<td>Expressiveness</td>
<td>EX</td>
<td>The degree of being able to openly and freely express oneself amongst family members.</td>
</tr>
<tr>
<td>3</td>
<td>Conflict</td>
<td>CON</td>
<td>The extent of anger and aggression amongst the members of the family.</td>
</tr>
</tbody>
</table>
3.3 ADMINISTRATION OF PSYCHOLOGICAL MEASURES

Prior to administrating the psychological measures, a rapport was established with the subjects in order to win their confidence, the subjects were assured that the information was being collected purely for research purpose and would be kept confidential. The help of the special educators was sought to make the learning disabled children comfortable for the testing. All the tests were filled up by the subjects themselves. The children were administered: Self Concept Scale, Loneliness and Social Dissatisfaction Scale and Screen for Child Anxiety Related Disorders (SCARED) whereas Conner’s Parent Rating Scale Revised (s), Parenting Stress Index, Ways of Coping and Family Environment Scale were administered on the mothers.

The subjects were administered all the above mentioned tests and separate instructions were given for each test. Keeping the characteristics of learning disabilities in mind the learning disabled subjects were extended complete cooperation in grasping the test items.

On the group of learning disability subjects, all the above mentioned tests were administered individually whereas for their NLD counterparts the tests were administered in groups comprising five subjects. For the mothers of both the LD subjects and NLD counterparts tests were administered in group comprising five subjects. Apart from the information gathered on the psychological measure, a performa was used to collect demographic details of the subjects. The information pertaining to the child’s age, birth order, educational qualification of their mothers, their family structure was also collected. This performa was administered to the mothers of LD children and their NLD counterparts.

3.4 STATISTICAL ANALYSIS

The data was subjected to the following descriptive statistics:

- Frequency distribution, mean, standard deviation, skewness and kurtosis of all the variables included in the study.
- To find out the percentage of behaviour problems in the learning disabled and non learning disabled group, percentage analysis were carried out.
• The percentage analysis was also done to find out the percentage of learning disabled and non learning disabled on the types of learning disability, birth order, family structure and education level of mothers.

The data was further subjected to the following inferential statistics:

• Discriminant analysis was applied to identify the psychosocial, behavioural and familial profile for the group of LD children and their mothers and NLD children and their mothers.

• Discriminant analysis was also applied to identify the variables which are important predictors of behaviour problems on the group of LD children and their mothers, included in the study.

• t-test was used to study the difference on anxiety, loneliness, self concept, behaviour problems, maternal stress, coping and family environment variables for the LD group and the control group.

• t-test was also used to study the difference on parental stress, maternal coping strategies and perception of family environment for the mothers of LD children with behaviour problems and LD children without behaviour problems.