PRESENT STUDY
CHAPTER III
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The Emotional and Behavioural disorders among Preschool children has been the focus of research in the West in the last one decade. As a result of this endeavour, enormous information of empirical and theoretical nature is available. However, very few of such studies have been carried out in India.

The present study was an attempt to investigate into the emotional / behavioural disorders among preschool children and to understand its nature and prevalence. The study also aimed at exploring the interaction of several factors such as urban-rural background, the child's temperament, his social competence and cognitive styles. The parental attitudes and child rearing practices, parent-child interaction, psychological health of the mother and the family interaction patterns were also explored as contributory factors for the preschoolers' emotional problems.

The focus of this research was to understand the child in totality in an integrated fashion. Diverse areas of family influences, parental attitude, interactions in peer group and the psychological processes in children which may facilitate or interfere with normal growth and development were considered for study to understand the child from a social and ecological perspective.
Problem statement:
To study Emotional and Behavioural Disorders among Urban and Rural preschool children and to explore the family and psychosocial dimensions of emotional disorders.

Aims and objectives: (Primary)
a) To assess the prevalence of emotional and behavioural disorders among Urban and Rural preschool children.
b) To identify the nature and manifestations of various types of emotional/behavioural problems in preschoolers from Urban and Rural background.
c) To compare the emotionally disturbed and normal children from Urban and Rural settings, with regard to a few child related variables such as the child's temperament, social competence, intelligence and cognitive styles.
d) To explore the differences in the family related variables such as parental attitudes and child rearing practices, parent-child interactions, mother's health and the family interaction patterns among children with emotional problems and normal preschoolers from Urban and Rural settings.
e) To evaluate the efficacy of a social skills training programme for enhancing prosocial behaviour and for controlling behavioural problems among preschoolers.
Secondary Objectives:

a) To study the influence of background variables such as family history, prenatal history, type of delivery, consanguinity, developmental milestones, past medical history etc. on the emotional disorders among preschoolers from Urban and Rural settings.

b) To understand the interaction effect of Urban-Rural background and independent variables such as age, sex and birth order on child's temperament, intelligence, social competence and cognitive styles.

Hypotheses:

The main hypotheses set for the study were:

a) The prevalence of emotional disorder will be more among Rural preschool children as compared with the Urban preschoolers.

b) The children identified by their teachers as emotionally disturbed differ in their manifestations of emotional problems, temperament, cognitive styles and social competence as compared to normals.

c) There will be differences in the parental attitude, their child rearing practices, general health of mothers, and the types of family interaction in the families of the emotionally disturbed and normal children from the Urban and Rural settings.
d) The emotionally disturbed children and the normal children belonging to different age groups / socio-economic status / birth order differ with regard to the manifestation of emotional disorders, temperament, social competence, intelligence, and cognitive styles.

e) The emotionally disturbed children as compared to the normal children -belonging to different age groups / birth order / socio-economic status differ with regard to the types of family interaction, attitudes of parents towards child rearing and the general health of mothers.

f) The prenatal history, natal history, family history, consanguinity, past medical history, developmental milestones and other background factors differ for normal and emotionally disturbed preschoolers from urban and rural settings.

g) The emotionally disturbed children in the experimental group who are exposed to social skills training show improvement after intervention in their socially adaptive behaviour as compared with the control group of emotionally disturbed children.

Definitions of key concepts

i) Emotional / Behavioural Disorder

Earls et al., (1982) conceptualized the definition of an Emotional/Behaviour problem as being that portion of the child's symptomatic behaviour i.e., temper tantrums, eating difficulties, sleeping disturbance, soiling etc. which is the child's current psychiatric status.
Campbell (1990) defines Emotional/Behavioural disorders and distinguishes a disorder from normal behaviour with the help of the following features:

1) A constellation of symptoms is essential to diagnose a disorder.

2) The clusters of symptoms are evident in several settings such as home, nursery school etc.

3) The problem behaviour should interfere with the child's day-to-day activities.

4) The problem behaviour should interfere with the social interactions of the child.

In the present study, children scoring 12 and above on the Preschool Behaviour Checklist (PBCL) of McGuire and Richman (1986) were considered and defined as the problem group, i.e. Emotionally/Behaviourally disturbed. Those children scoring 11 and less were considered as no problem group or normals based on McGuire and Richman's (1986) cut off scores.

Further, the present study explains the problem group by including some of the ICD-10 (WHO 1992) categories and DSM III R (APA, 1987) categories.

In ICD-10, the Emotional and Behavioural disorders occurring in childhood is included under F90 - F 99 (WHO 1992). The present study includes some of the following classifications applicable to preschool children.
F 90 : Hyperkinetic disorders - includes overactivity, impaired attention restlessness, lack of attention, and impulsive behaviour with significant distress and impairment in social and academic functioning occurring in a child less than seven years of age.

F 91 : Conduct disorders - aggressive, defiant, disobedient etc.

F 93 : Emotional disorders - includes:

F 93.0 : Separation anxiety disorder - the symptom included here are unrealistic preoccupation or worry about attachment figures, refusal to go to school and repeated occurrence of physical symptoms during separation from attachment figures.

F 93.1 : Phobic anxiety disorder of childhood - the marked fears of preschool children such as fear of animals strangers and so on wherein the onset occurs during the developmental period.

F 93.2 : Social anxiety disorder of childhood - excessive apprehension of strangers, peers or other social situations which occurs before the age of six.

F 93.3 : Sibling rivalry disorders - emotional disturbance which is of mild or severe degree which occurs after the birth of a sibling. This may be characterized by rivalry / jealousy towards the sibling, regressive behaviour or overt hostility.

F 98 : The other behavioural and emotional disorders occurring in preschool period can be classified here, these include:

F 98.0 : Non organic Enuresis - a disorder characterized by involuntary voiding of urine, by day/night which is not due to any organic condition.

F 98.1 : Non organic Enopresis - a disorder characterized by passing of faeces in clothes during day/night. This condition may occur as part of Emotional disorder in the absence of any organic reasons.

F 98.2 : Feeding disorders of infancy and childhood - it involves refusal of food, extreme faddy eating habits, under eating etc.
F 98.5 : Stuttering. [Stammering] - speech that is characterized by frequent repetition or prolongation of sounds or syllables or words, or by frequent hesitations or pauses that disrupt the rhythmic flow of speech.

F 98.8 : Other specified behavioural and emotional disorders with onset usually in childhood - this includes masturbation, nail-biting, nose-picking and thumb-sucking.

F 98.9 : Other unspecified emotional/ behavioural disorders can be classified here.

The different diagnostic categories drawn from DSM III R (APA, 1987) for the present study are given below:

314.01 Attention-deficit Hyperactivity Disorder - a disturbance characterized by restlessness, unable to sustain attention, shifting from one activity to another. The onset is before the age of seven.

309.21 Separation Anxiety Disorder - symptoms include unrealistic persistence, worry about possible harm for the attachment figures, clinging to parents, fear when separated from the attachment figures. The onset occurs at preschool period.

307.70 Functional Encopresis - Repeated passing of faeces during day/night which is not due to any organic conditions.

307.60 Functional Enuresis - Repeated voiding of urine during day/night.

307.30 Stereotypy/Habit Disorder - This includes repetitive non-functional behaviours such as hand shaking, body rocking, head banging etc.

Children identified as emotionally disturbed manifest some of the above symptoms.

ii) Preschooler

A preschooler is recognized from the chronological age anywhere between 2 and 6 years. When the child is not old
enough both physically and mentally to cope with the work they are expected to do at school, the child attends day care centres, or kindergarten nurseries where the pressures and expectations the young children are subjected to are different from those when they begin formal education.

According to Hurlock the functional analysis of the preschool stage points to the fact that this period is one among the most important of the stages of development, as during this period the foundations are laid for a complete behavioural structure.

iii) Urban-Rural:

The Urban-Rural differentiation is based on the records maintained by the Department of Revenue, Government of Karnataka for Administration purposes. In the present study Urban refers to the Urban District of the Bangalore city (city Corporation) and Rural refers to the Bangalore South Taluk in the Bangalore Rural District. The Bangalore Rural District is spread over a distance of 60 kms. from the Bangalore city.

Design:

A multi-phase design was adopted in this study where the size of the sample varied at each stage. The study was carried out on a group of preschool children from urban Nursery schools and from rural Anganwadi centres.
Phase I

In the first Phase of the study, the prevalence of emotional and behavioural problems was studied using a screening device, the Preschool Behaviour Checklist (PBCL) of McGuire and Richman, N (1986). All children on roll were screened for the presence or absence of Behaviour problems. Children scoring 12 and above on PBCL were considered as emotionally disturbed. Children scoring 11 and less were considered as normals.

Phase II

A Factorial design was adopted to represent emotionally disturbed and normal children from urban and rural areas in equal numbers. In this phase, a detailed study of children was made through home visits. The technique of data collection in this phase involved the use of questionnaires, interviews, rating scales administered to mothers, observation of family interaction and the administration of psychological tests to children to measure intelligence and cognitive styles.

Phase III

A Quasi Experimental repeated measures design was adopted in which the two groups viz, the experimental and the control group of children were subjected to pre and post intervention assessment based on teacher's rating and mother's rating on selected variables. The experimental and control groups consisted of children randomly selected from
the emotionally disturbed group. Children belonging to experimental group were subjected to social skills training while the control group was not subjected to any treatment. But, both the groups were involved for the pre and post assessment.

The three phases were adopted to study the Emotional/Behavioural Disorders among preschool children. The independent variables included in the study were the Urban-Rural background, sex, age, socio economic status and birth order.

The dependent variables were the variables derived from different tools and may be broadly classified under child related variables and family related variables.

a) The child related variables included the manifestations of emotional problems, temperament, social competence, intelligence and cognitive styles of children.

b) The family related variables were the child rearing practices, the parental attitudes, general health of the mother and the family interaction types.

Sample

The size of the sample varied in the three phases.

Phase I:

A total number of 440 preschoolers in the age group of 3-6 years from three different randomly selected urban nursery schools within Bangalore city were screened for the presence or absence of emotional disorder on PBCL.
Similarly a total number of 195 preschool children were screened from 5 different Anganwadi centres belonging to the Bangalore Rural South Taluk. These villages come under the Uttarahalli hobli. Information about Bangalore Rural District was obtained from the Directorate of Child Welfare, Bangalore. From among the taluks of Bangalore Rural District, Bangalore South taluk was randomly chosen for the study, and the area was further restricted to Uttarahalli hobli. The villages and the Anganwadi centres in Uttarahalli hobli were listed. From among this list, 3 centres were randomly selected initially and the random selection continued till the target sample of 50 emotionally disturbed children were identified. Eventually five centres were selected and the selected Anganwadis were situated in the five villages viz., Somanahalli, Talaghatpura, Uttari, Kerechoodarahalli and Thataguppe. A map of Bangalore South Taluk showing the location of these villages is at Appendix-1.

Description of the rural area:

The 5 villages, namely, Somanahalli, Talaghatpura, Uttari, Kerechoodarahalli and Thataguppe belonging to Bangalore Rural South Taluk were selected to draw the sample. These villages are situated around the Bangalore - Kanakapura highway. Table, (3.1) gives a brief description of the villages.
<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the village</th>
<th>km from city limits</th>
<th>Population (1991 census)</th>
<th>Religion</th>
<th>Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Thalgatpura</td>
<td>10 kms.</td>
<td>1,920</td>
<td>Majority are Hindus, around 60 families are Muslims</td>
<td>Majority are Vokkaligas followed by Harijans and Lingayats. A few Brahmin families are present.</td>
</tr>
<tr>
<td>2.</td>
<td>Uthari</td>
<td>18 kms.</td>
<td>776</td>
<td>Majority are Hindus followed by Roman catholics</td>
<td>Majority are Vokkaligas</td>
</tr>
<tr>
<td>3.</td>
<td>Thataguppe</td>
<td>24 kms.</td>
<td>3,000</td>
<td>All are Christians except for two Hindu and two Muslim families.</td>
<td>Entire village consisting of christians</td>
</tr>
<tr>
<td>4.</td>
<td>Somanahalli</td>
<td>23 kms</td>
<td>2,500</td>
<td>Hindus</td>
<td>Vokkaligas</td>
</tr>
<tr>
<td>5.</td>
<td>Kerechooda-rarahalli</td>
<td>19 kms</td>
<td>845</td>
<td>Hindus</td>
<td>Vokkaligas</td>
</tr>
</tbody>
</table>
While Thalgatpura is on the Bangalore - Kanakapura highway, the remaining villages fall on either side with a deviation of about 2-5 kms away from the main road to the interior. While kannada is the language spoken by most people in these villages, some speak Urdu and Telugu.

Agriculture is the main occupation and Ragi is the major crop grown in these villages. Cereals, paddy, vegetables, are the seasonal cultivation. Farmers are also engaged in sericulture. These villages are electrified. Water facility is available through bore wells.

Regarding the availability of health and clinic facilities, these villagers go to Kaglipura which has a Primary Health Centre. In the villages, no private clinics or health unit is available except auxiliary nurses.

Many of the houses in these villages are kachcha houses with mud or cowdung used for flooring, thatched roofs and mud walls. However, a few pukka houses are also seen. Television was the only recreational facility available in some houses and no other recreational facility such as cinema tents were observed.

In each of these villages there is one Anganawadi with an Anganawadi supervisor/teacher and a helper. The number of children on roll in each Anganawadi varies from 35 to 45. The additional educational facilities in these villages are given in Table 3.2.
**Table 3.2: Educational facilities in the 5 villages**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Village</th>
<th>Preschool facility</th>
<th>School</th>
<th>College/Higher learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Thalgatpura</td>
<td>1 Anganwadi Centre</td>
<td>I Std to V Std (Govt. School)</td>
<td>-</td>
</tr>
<tr>
<td>2.</td>
<td>Uthari</td>
<td>1 Anganwadi Centre</td>
<td>I Std to V Std (Govt. School)</td>
<td>-</td>
</tr>
<tr>
<td>3.</td>
<td>Thataguppe</td>
<td>1 Anganwadi Centre</td>
<td>I Std to X Std (Private christian missionary school)</td>
<td>-</td>
</tr>
<tr>
<td>4.</td>
<td>Somanahalli</td>
<td>1 Anganwadi</td>
<td>I Std to X Std (Govt. School)</td>
<td>Private Poly-technique Engineering Institute</td>
</tr>
<tr>
<td></td>
<td>1 Balawadi</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 Govt Nursery School</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Kerechoodarahalli</td>
<td>1 Anganwadi</td>
<td>I Std to V Std (Govt School)</td>
<td>-</td>
</tr>
</tbody>
</table>

In addition to providing nutrition and immunization as a part of the Integrated Child Development Scheme (ICDS), Anganwadi workers are also trained to take care of health and preschool facility for children up to 6 years of age.

The Anganwadi centres are the only preschool facility available for children below the age of six. These centres come under the Karnataka Child and Women Welfare ministry. It caters to the needs of rural children by providing nutrition and balanced diet. This food is given to children
everyday. Pre-primary education is imparted minimally. Children are taught rhymes, Kannada alphabets, numbers and awareness of objects with minimum of indoor games and play activities.

The Anganwadi Supervisor was an S.S.L.C. passed/failed woman with 3 months of Anganwadi training. The Anganwadi works between 9 am and 12 noon.

Description of the urban schools:

Urban nursery schools three in number, were randomly selected for the study. These were regular schools with pre-primary education facility and the schools were recognized by the Karnataka Government. The Pre-primary or the Nursery, classes were variously categorized as Nursery, Lower kindergarten and Upper kindergarten. Children in the age group of 3-6 years attended these schools. The nursery teacher was an SSLC passed individual with/without TCH training. These kindergarten schools were working between 9 a.m and 12 noon except for one school wherein UKG children stay till 3 PM. These nursery schools taught number concept, nursery rhymes, reading skills, writing etc. which were quite rigorous in some schools. Toys were available but were made use of very minimally.

In one of the urban schools with kindergarten sections, there was a special Montessori type of preschool, along with
the regular nursery. Children in this group also were screened for the first phase of study. In the Montessori section the concepts were taught through various activities such as building blocks, counting beads and playing with materials etc. Children did not wear any uniforms, their reading and writing were minimal. Each child worked independently squatting on a mat provided to him/her. It was a sort of natural atmosphere wherein the child's mobility was not controlled by the teacher. The child was free to choose what he/she wanted. Some of the teachers advocating this kind of preschool education opined that these children would have difficulty in adjustment when they go to grade I, wherein, classroom formalities and discipline were quite high.

Phase II:

The sample consisted of 200 preschool children in the age range of 3-6 years. These children formed the four sub groups of 50 children each based on their score on PBCL and their Urban-Rural background. The normal children in the present study were selected from the same class to which emotionally disturbed belonged, but, from among those who scored below a cut off point of 11 and less. The sample distribution is given in table 3.3.
The Rural-Urban categories refer respectively to children from the rural and urban centres. The normal disturbed categories were based on the PBCL score.

The problems examined in the present study will focus on Emotional/Behavioural problems of preschool children only. Children with Disorders of Psychological Development ICD-10 (F80-89) which include specific developmental disorders and disorders of scholastic skills ICD-10 (F81-F81.9) were not considered. Similarly Pervasive Developmental Disorders (F84-F84.9) such as childhood Autism etc. were not be considered.

Sample Characteristics in Phase II:

a) Age distribution of children: Table 3.4 indicates age distribution of children in different groups.
Table 3.4  Mean age and standard deviations of age for children in different groups.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>N</th>
<th>Groups</th>
<th>Mean age in months</th>
<th>Std deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>50</td>
<td>Urban Disturbed</td>
<td>51.66</td>
<td>11.36</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td>Urban Normal</td>
<td>56.60</td>
<td>10.22</td>
</tr>
<tr>
<td>3</td>
<td>50</td>
<td>Rural Disturbed</td>
<td>47.86</td>
<td>10.77</td>
</tr>
<tr>
<td>4</td>
<td>50</td>
<td>Rural Normal</td>
<td>49.22</td>
<td>9.44</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>Overall</td>
<td>51.33</td>
<td>10.93</td>
</tr>
</tbody>
</table>

The mean age of the children in the sample was found to be 51.33 months. The rural children in the sample were found to be younger than the urban children. This is due to the fact that in Rural Anganwadis, children are taken at a young age starting from 1 1/2 years, whereas Urban preschool centres take children from the age of 2 1/2 years.

b) Age and socio-economic status of parents : Phase II:

The details regarding the father's age and the mother's age and the socio-economic status (SES) in different groups are shown in Table 3.5.
Table 3.5 The mean and standard deviations for parents' age in years and their Socio Economic status.

<table>
<thead>
<tr>
<th>Sl.</th>
<th>N</th>
<th>Groups</th>
<th>Father's Age</th>
<th>Mother's Age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>1</td>
<td>50</td>
<td>Urban Disturbed</td>
<td>33.58</td>
<td>5.79</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td>Urban Normal</td>
<td>35.08</td>
<td>5.54</td>
</tr>
<tr>
<td>3</td>
<td>50</td>
<td>Rural Disturbed</td>
<td>36.68</td>
<td>8.38</td>
</tr>
<tr>
<td>4</td>
<td>50</td>
<td>Rural Normal</td>
<td>36.26</td>
<td>5.97</td>
</tr>
<tr>
<td></td>
<td>200</td>
<td>Entire sample</td>
<td>35.40</td>
<td>6.60</td>
</tr>
</tbody>
</table>

As per the table above the mean age of the fathers of Urban children was lesser compared to that of rural children. The mean age of Urban mothers is 28 years and that of rural mothers is around 27 years. The socio economic status of the Urban family is slightly higher than that of rural families.

Phase III:

An Urban school was selected for the intervention programme of social skills training. A group of 20 randomly selected emotionally disturbed children were randomly assigned to treatment condition (experimental group) and no treatment condition (control group) with ten children in each group.
Measures

A set of ten questionnaires and psychological tests were used as measures of dependent variables. These instruments are listed in Table 3.6.

Table 3.6: Measurement devices used in different phases of the study.

<table>
<thead>
<tr>
<th>PHASE</th>
<th>MEASURE USED</th>
<th>AUTHORS</th>
<th>RATER</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Preschool Behavior check list (PBCL)</td>
<td>McGuire and Richman, N. (1986)</td>
<td>Nursery Teachers or The Anganwadi supervisor</td>
</tr>
<tr>
<td>II</td>
<td>1. Preschool Emotional and Behavioural Problem Inventory (EBPI)</td>
<td>Researcher</td>
<td>Mother/ significant others</td>
</tr>
<tr>
<td></td>
<td>4. Binet Kamat Test of Intelligence (BRT)</td>
<td>Kamat (1964)</td>
<td>Researcher</td>
</tr>
<tr>
<td></td>
<td>5. Embedded Figure Test (EFT)</td>
<td>Researcher</td>
<td>Researcher</td>
</tr>
<tr>
<td></td>
<td>7. General Health Questionnaire (GHQ)</td>
<td>Goldberg and Hillier (1979)</td>
<td>Mother</td>
</tr>
<tr>
<td>III</td>
<td>A. Social Behavior Checklist (SBC)</td>
<td>Researcher</td>
<td>Nursery Teacher</td>
</tr>
<tr>
<td></td>
<td>B. Social Competence Scale (SCS)</td>
<td>Kohn and Rosman (1973)</td>
<td>Nursery Teacher</td>
</tr>
<tr>
<td></td>
<td>C. Preschool Emotional and Behavioural problem Inventory (EBPI)</td>
<td>Researcher</td>
<td>Mother</td>
</tr>
</tbody>
</table>
1. PRESCHOOL BEHAVIOUR CHECKLIST (PBCL) McGuire & Richman (1986) (Appendix -2a)

This is a screening instrument which can be used by staff working in group settings with preschool children. It covers most aspects of emotional and Behavioural disturbances, and it is designed to be used to determine the prevalence of behavioural and emotional difficulties exhibited by 2-6 years olds in various nursery settings.

The questions in PBCL were initially based on the Behaviour Screening Questionnaire (BSQ) (Richman and Graham 1971), a 12 item scale which has been used in a large scale epidemiological study involving parents of 3 and 4 year olds (Richman et al., 1982).

Description:

There are 22 items in PBCL, covering a wide range of behaviours that are commonly observed among preschoolers for example—activity level, not liked by others (peers), wets, poor concentration, difficult to manage, fearful, miserable, withdrawn, destructive habits, etc. Each child will be rated on each of these items by class teachers. Each item has to be scored as 0, 1 or 2 as per description given. (0-no problem, 1-mild, 2-severe). Total possible maximum score is 44. The scoring is based on the choice between three alternatives except for four items i.e;
(a) For 'Activity' maximum score obtainable is 2 for high level of activity or for extreme inactivity.

(b) For 'habits' the final score is based on summing up how many habits are occasional or frequent (1 or 2).

(c) The rating on the item 'unclear speech' will have to be noted as 1 or 2 taking into account whether or not speech consists of more than single words.

(d) 'Reluctance to talk' - in this item, the author has given three alternatives (0, 1 or 2). For children who speak other than English, these will have to be noted according to the language spoken by the child. Suppose the child is not speaking at all in his family's language, then the rating is 2.

The cut off point selected by the author was 12, as this included all children considered to have definite emotional and behavioural problem. Hence, children scoring 12 and above were thought to be emotionally and behaviourally disturbed (McGuire and Richman, 1986). The time taken for the completion of questionnaire for each child is about 20 minutes. In the present study, along with the English version the Kannada version was also supplied to the teachers to enable them to understand the concepts in the local context. In the rural set up, Kannada version was used exclusively.
Reliability:

The reliability of this tool was established by studying 187 children ranging from 26 to 58 months living in an outer London borough. All the children were attending day nurseries or infant schools. The reliability of PBCL was reported by the authors in terms of inter-rater agreement between nursery teachers and the scale's internal consistency. The Pearson's product moment correlation coefficient between the scores given by rater 1 and 2 was 0.68 (P<.001) with no overall difference between the mean scores. (rater 1=6.8, rater 2=6.5, paired t=0.77). The overall problem - no problem agreement between the two raters was 83 percent. The inter rater agreement for each of the 21 items (except 'habits') have coefficients above 0.40 and are significant at P<.001 level. The internal consistency using Spearman-Brown split half formula (Odd even) was found to be 0.83.

Validity:

The validity of the scale was assessed in a number of ways. Concurrent validity was examined by comparing PBCL scores with ratings based upon observations of the children and upon interviews with the staff. It was also studied by comparing PBCL scores with those obtained from an existing checklist. Criterion validity was ascertained by comparing a clinical sample with a normal nursery group. The construct validity was studied with Factor and Cluster Analysis and the content validity was examined in terms of item analysis.
The Factor analysis of PBCL has revealed the dimensions of behaviour problems. Six factors were derived. They were Factor 1 (conduct/restlessness), Factor 2 (emotional/miserable), Factor 3 (aggressive), Factor 4 (immature/isolated), Factor 5 (social/withdrawal) and Factor 6 (sphincter problems).

Concerning Cluster analysis of PBCL, the first cluster includes children characterised by higher scores on overactivity and management difficulties. The cluster analysis also separates emotionally labile attention seeking children from those who are withdrawn and isolated. The range of behaviours included in PBCL is fairly wide. Of the five clusters from PBCL, two are indicative of definite problem groups based upon PBCL scores. They are:

Cluster 1 [conduct disorder and restlessness]: which include symptoms such as interfering with others and destructional behaviour.

Cluster 2 [Isolated/immature]: which includes a range of symptoms such as poor concentration, very sensitive, withdrawal from peers, not liked, attention seeking and speech problems. This cluster is similar to Wolkind and Everitt's early neurotic disorder and to anxious disorder of Fowler and Park (1979).
Cluster 3 [Nervous and lethargic]: The symptoms here include attention seeking, withdrawal from peers, and tendency towards aimless wandering and inactive.

Cluster 4 [clingy and attention seeking]: Children included in this cluster are characterized by being sensitive and demanding a lot of attention from staff. This cluster is similar to one described by Jones (1980) as immature and dependent.

Cluster 5 [No problems]: This is the normal cluster. This cluster is similar to one of no problems groups of Wolkind & Everitt (1974).

2. PRESCHOOL EMOTIONAL/BEHAVIOURAL PROBLEM INVENTORY (EBPI) (Researcher) (Appendix -2c)

Description:

The Preschool Emotional/Behavioural Problem Inventory (EBPI) is an instrument devised by the Researcher to measure the intensity of different emotional/behavioural problems of preschool children. The 14 major areas and the items included in each are drawn from ICD - 10 (WHO, 1992) and DSM III R (APA, 1987) and other available measures. The 14 major areas are Separation anxiety, Fears, Social fears, Aggression, Attention seeking, Temper tantrums, Hyperactivity, Poor attention & Concentration, Apathy, Mood, Eating problems, Sleeping problems, Sibling rivalry and Atypical behaviour. Altogether there are 55 items. Both the Kannada and English versions of the inventory are available.
Administration:

EBPI is a structured interview schedule wherein the child's mother rates her child on the different items. The instruction is given in the interview schedule. The mother is instructed to rate the child on each of the problem area, if it is present in her child for the last six months. The interviewer has to clarify if the mother is not clear about any items.

Scoring:

Mother's ratings on each set of items of a specific area are obtained based on which an overall score is obtained. Each item has to be rated on a four point rating scale: 1 = no problem 2 = mildly present 3 = often or moderately present and 4 = severely present. For each major area an overall score also is obtained which is based upon the individual ratings. Example: If a rating of 2 is given frequently to an item the overall rating for that item is also 2. If a rating of 3 and above is consistently seen in all the items, then the overall score would be 3 to 4. All the areas have to be scored.

In addition to ratings on each item, information on the onset of a particular symptom, its duration, and interference in other social interactions is also obtained from the mother.
Reliability:

For standardization purposes, two psychologists rated the children independently on each area based on the information provided by 40 mothers during the structured interview. The inter-rater reliability based on product moment correlation for each area vary from .618 to .941 as given in Table 3.7. The inter-rater reliability for the total scale is 0.82. For all the 14 areas the probability of correlation is lesser than .001. Positive inter correlation among the 14 areas and the inter correlation with the total scale score indicate internal consistency of the scale.

Table 3.7 Inter-Rater Correlations based on two Independent ratings for EBPI (N=40).

<table>
<thead>
<tr>
<th>Areas</th>
<th>Intercorrelations among two raters</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Separation anxiety</td>
<td>.941</td>
</tr>
<tr>
<td>2 Fears</td>
<td>.823</td>
</tr>
<tr>
<td>3 Social fears</td>
<td>.618</td>
</tr>
<tr>
<td>4 Sibling rivalry</td>
<td>.876</td>
</tr>
<tr>
<td>5 Mood</td>
<td>.682</td>
</tr>
<tr>
<td>6 Attention Seeking</td>
<td>.809</td>
</tr>
<tr>
<td>7 Hyper activity</td>
<td>.833</td>
</tr>
<tr>
<td>8 Aggression</td>
<td>.784</td>
</tr>
<tr>
<td>9 Temper Tantrums</td>
<td>.811</td>
</tr>
<tr>
<td>10 Apathy</td>
<td>.817</td>
</tr>
<tr>
<td>11 Eating Problems</td>
<td>.773</td>
</tr>
<tr>
<td>12 Sleeping Problems</td>
<td>.866</td>
</tr>
<tr>
<td>13 Habits</td>
<td>.864</td>
</tr>
<tr>
<td>14 Atypical behaviour</td>
<td>.890</td>
</tr>
<tr>
<td>15 Total score</td>
<td>.820</td>
</tr>
</tbody>
</table>

Description:
This test was developed by Malhotra et al (1983) and was based on the nine temperamental dimensions evolved by the New York Longitudinal Study Group (Thomas and Chess, 1968). The nine dimensions assessed are: activity level, rhythmicity, approach-withdrawal, adaptability, mood, intensity, threshold distractibility and persistence. Each area has 5 items, with a total of 45 items to be rated on a 5 point scale. The stems of items are such that it could be extended to other younger age groups also.

Administration and scoring:
The child's mother or any significant others rated the children on each item on a 5 point scale, the mid point of which is at 3 and the extreme scores are rated at 1 and 5. Scores less than 3 were considered to be in the negative direction and greater than 3 to be in the positive direction for indicating the frequency and intensity of behaviour. For example, a low score on approach-withdrawal meant withdrawal problems and high score meant approach. A summated ratings on 5 items is taken for each area. The time taken to complete the schedule for each child is about 20 minutes.

Reliability:
The authors examined two measures of reliability, the
test-retest reliability and the inter-rater reliability. The Pearson's product moment correlation coefficient for test-retest ranged between 0.83 to 0.94 for the nine dimensions and the range was between 0.82 and 0.96 for inter-rater reliability.

Validity:

The face validity was found to be adequate. The factorial validity as well as the construct validity have been reportedly well established.

In India, the temperament measurement schedule was standardized on 100 emotionally disturbed children, wherein the ratings were obtained from their mothers. These children were taken from the child guidance clinic of the department of psychiatry, PGI Chandigarh. In addition 100 children attending the out patient department of paediatrics at Chandigarh were also studied for comparative purposes. The age range was 5-12 years. This data was subjected to factor analysis, and four factors emerged, viz emotionality, sociability, energy and attentivity.


The social competence scale was devised by Kohn and Rosman, (1973) to measure the child's mastery of the preschool environment. The social competence scale covers the entire range of functioning from emotional health to
disturbance. There are two factors measured by this scale—namely, Factor I: Interest -participation Vs Apathy-withdrawal and Factor II: Cooperation-compliance Vs Anger-defiance. A high positive Factor I score indicates interest, curiosity, and assertiveness, while a high negative factor I score signifies withdrawal from these opportunities, lack of interest and a failure to elicit the cooperation of peers in the play activities in class room (Kohn and Rosman, 1973).

A high positive score on the social competence Factor II indicates living within the structure of the classroom and complying with teachers' requests and suggestions; a high negative score indicates defiance and creating disturbances which upset the normal classroom routine.

The negative poles of the two dimensions seem to tap syndromes similar to what other investigators and clinicians have referred to as "personality problems" and "conduct problems" (Peterson, 1961).

The bipolar factor of SCS are indicated by a positive (+) and a negative (-) sign for items at the two poles. The appropriate sign of each item is indicated in the parenthesis after each item (see Appendix -2e). There are 21 positive items and 15 negative items in Factor I (interest-participation Vs apathy-withdrawal), together there are 36 items. In the factor II dimension (cooperation-compliance Vs
anger.-defiance) a total of 37 items are present, wherein the positive items are 6 and the negative items are 31.

Administration and Scoring:

The instructions for rating are given in the test form. The rater i.e., the nursery teacher is required to go through each item as it relates to the child in question. Each item is scored on a 7 point rating scale as follows. If the response is 'always', then the scoring is 7, for 'very often' it is 6, for 'often'-5, 'sometime'-4, 'seldom'-3, 'hardly ever'-2, and 'never'-1. For example, for a positive item like child is open to the ideas and suggestions of other people, if this is present to a large extent, then the teacher may rate the item as 'always' (7). A negative item, for example, the child acts silly at lunch table, giggles, throws food, shrieks etc -if this is present to a some what greater extent, then the teacher may rate it as 'very often'(6). The sum of the ratings is taken as a score for each dimension thereby yielding two summated scores for each factor. Hence four final scores on four dimensions are obtained. The time taken to complete the score for each child is about 40 minutes.

Reliability:

The reliability study of the social competence scale was carried on 1,232 preschool children with the factors generated by two Nursery teachers. The estimated Spearman-
Brown corrected reliability of Kohn Social Competence Scale for Factor I was 0.74, and for Factor II was 0.76.

The cross instrument reliability of pooled teacher ratings was also worked out by comparing the scores of Social Competence Scales [SCS] with Kohn Problem Checklist [KPC].

On the Factor I of Kohn Problem Checklist KPC I Vs Kohn Social Competence SCS I, the correlation was = 0.74 and Factor II Kohn Problem Checklist KPC II Vs Kohn Social Competence KSC II it was = -0.82. This is also indicative of the validity of the test.

5. BINET KAMAT TEST OF INTELLIGENCE (Kamat, 1964)

Description:

The Binet-Kamat test of Intelligence is an Indian adaptation of the Stanford - Binet revision of 1916. In the present study the Binet Karnatak reappraisal version of Binet-Kamat test of Intelligence was used (Kamat 1964).

The test items are assigned for age 3 to 22 years. It is an age scale in which at each age level there are six items and 2 alternatives. The test measures abilities such as immediate memory span, reasoning ability, conceptual thinking, visual motor skills, numerical ability and social intelligence. The Kannada version of the scale was used with a majority of the children. The English version was used with some children.
procedure:

After establishing rapport with the subject, the test is begun with the items belonging to the child’s age and it is continued until the year in which the child fails in all the items. (Terminal age). The basal age is obtained wherein the child passes in all the items. Binet-Kamat test provides for the calculation of Mental age and also for Intelligence Quotient (IQ).

Reliability:

The test was standardized in 1934 in two languages, Kannada and Marathi on a sample of 1074 children from Preschool to high school years as well as adults. Subsequently, the reappraisal version of the Bombay-Karnatak version was standardized in 1964 (Kamat, 1964). This was done on a smaller sample of 330 children between ages 9.5 years to 14.5 years. Kamat (1964) reports that the results of the second study gave indications to the reliability of the scales.

Validity:

The Bombay-Karnatak version was subjected to the validity of each test (Kamat, 1964). The correlation coefficients of the test i.e., the coefficient of association was generally higher than 0.7 thus testifying the validity of the tests. The scale was further tested by correlating the IQ’s determined by the scale with the teacher’s estimates of Intelligence and was found to be 0.5.
6. EMBEDDED FIGURE TEST (EFT) (Researcher) (Appendix - 2f)

Description:

Embedded Figure Test was developed by the investigator to study the cognitive styles of Field Independence/Dependence among the preschoolers. The test consists of 16 figures in two parts of 8 figures each. These figures are commonly used in learning centres for young children to introduce various concepts such as man, umbrella, rain etc. Embedded in the first set of these figures is letter 'A' at various positions. Similarly letter 'O' is embedded in various positions of the figures of set II. Under normal conditions of cooperation by the child, the test can be completed within 15 minutes with a maximum of 60 seconds for each card. In a few cases because of lack of attention and non cooperation from the child, a second trial may be given.

Administration:

The test is individually administered. The child is instructed to see the letter 'A' in card 1 and to identify this letter in the 8 cards that will be shown one after the other. With the second set of cards the child is instructed to see the letter 'O' and to identify this letter in each of the cards shown. The time taken by the child to show the corresponding letter is noted down. In case the child fails to respond within 60 seconds, one more trial is given. The maximum number of trials for identification is 2 trials. The
behavioural observations of the child such as impulsive responses, inability to follow instructions, inattention, distractibility, stereotyped response or giving the names of background figures are noted.

Scoring:

If the responses are correct, each figure will receive a score of 3, if the time taken is less than 5 seconds. Score 2-if the time taken is between 6-10 seconds; score 1-if the time taken is between 11-30 seconds; Score 0 if the time taken exceeds 31 seconds. The rating '0' was advocated because even the field dependent child looking at the figures for such a long time is likely to identify the embedded letter.

The trials are repeated if necessary, mainly to distinguish non cooperation, impulsivity and lack of attention, as factors distinguishing the performance on this test. The total score is obtained by summing the scores on all the 16 figures and the maximum obtainable score is 48.

Reliability:

The split-half reliability correlation between 2 halves for total time score was found to be \( r = .687 \) and hence satisfactory.

Validity:

The tool was found to be sensitive to age differences
and to normal or disturbed condition of the child. In the pilot study the disturbed group scored significantly lesser than the normal group and younger group lesser than the older group.

7. GENERAL HEALTH QUESTIONNAIRE (GHQ-28) (Goldberg & Hillier, 1979) (Appendix - 2g)

Description:

The GHQ designed by Goldberg (1972) is a first stage screening instrument to identify psychiatric morbidity in general population. Scaled GHQ 28 (Goldberg and Hillier, 1979) is a modified version of GHQ (Goldberg, 1972). It consists of four subscales namely, (A) somatic symptoms (B) Anxiety symptoms (C) social dysfunction and (D) severe depression. The presence of symptoms is checked with reference to a span of one month. The emphasis in GHQ is the present and recent complaints and not those that were present in the past.

Administration:

It is a self administering questionnaire but in the illiterate subjects this can be used as an interview technique. It takes 20-30 minutes for subjects to complete the questionnaire and it provides information about the recent mental status, thus identifying the possible psychiatric disturbance.

Scoring:

The GHQ 28 scoring differs from other scoring methods.
Each item is scored on the basis of the answers given by the respondent out of the four alternatives. A score of '0' is given to the choice of alternatives indicating the absence/no more than normal conditions mentioned in the item. A score of '1' is given when the symptom is more than or much more than normal.

This method of scoring reduces the errors due to the over all agreement set and the errors of central tendency is also eliminated. It avoids errors due to end and middle ratings by some users. A total score of 5 and above is considered as an indicator of the presence of psychiatric disturbance. The validity and reliability of the questionnaire were established by several authors (Goldberg, 1972). The Kannada version of GHQ (Chandrashekar, 1979) was used in the present study.

Reliability:

Goldberg and Hillier (1979) developed a scaled version of GHQ on the basis of the results of principal component analysis.

Validity:

The validity of GHQ has been reported in many studies. Goldberg (1986) used GHQ 28 among the neurological patients of England and reported 80 percent sensitivity and 81% specificity.
8. PARENTAL ATTITUDE RESEARCH INVENTORY (Schaffer and Bell 1958) PARI - MOTHER FORM (Appendix -2h)

Description:

Schaffer and Bell (1958) developed Parental Attitude Research Instrument (PARI) which consists of 23 scales, each scale having 5 statements, with a total of 115 statements. PARI was adapted in India by Saxena (1976) who developed the Hindi version. The Hindi version consists of two forms (mother form and father form). The mother form of PARI comprises 23 scales with 115 statements. Each scale consists of 5 statements. The father PARI (Hindi version) has 100 statements with 20 scales and each scale consists of 5 statements. Both the mother and father forms are self-administering instruments.

In the present study, the Kannada version of PARI (Geetha and Murthy, V. N. 1988) similar to the Hindi version was used. Only the mother form with 115 items and 23 scales was used.

Administration:

The PARI is a self-administering instrument among literate subjects. Among illiterate subjects, PARI can be used as an interview schedule. The time taken to complete the test was about 40 minutes.

Instructions:

Parents were instructed thus: They were asked to read
through or listen to every statement and give their rating of each statement in terms of complete agreement through complete disagreement by encircling the appropriate rating for each statement. 'A' for complete agreement, 'a' for agreement, 'd' for disagreement and 'D' for complete disagreement. The time taken was about 30 minutes to complete the test.

Scoring:

The scales are classified in 'R' and 'U' scales - R signifying reversed scale and 'U' signifying unreversed scale. This R and U classifications were for the purpose of scoring and to check the consistency of the performance of subject. As mentioned earlier, each statement is to be rated on 4 alternatives (A) strongly agree, (a) agree (d) disagree and (D) strongly disagree. In U scales these alternatives are scored as 4, 3, 2 1 and in the R scales it is scored as 1, 2 3, 4. For example, statement No. 2 is a R scale. If this is rated as 'A' then the score of 1 is given. Statement 14 is a U scale. If it is rated A then a score of 4 is given. The sum total of the rating of 5 items of each scale constitutes the total score of each scale.

Reliability:

The Kannada version of PARI was standardized by Geetha and Murthy V. N. 1988). The reliability of the Kannada version of the scale was found out by the authors by administering
the mother form of PARI to 96 mothers. The split-half reliability coefficient of the mother form of PARI was found to be 0.81. The split-half reliability coefficient of the Kannada version of father form of PARI on 96 fathers was found to be 0.84.

Schulderman and Schulderman (1971, 1974) carried out a number of studies in order to test the replicability of the major factors reported by Schaffer and Bell in order to improve PARI. These authors developed a mother PARI with 26 scales of which 23 are similar to those of Schaffer and Bell and 3 scales reversed for checking the response set bias. Similarly, the Father PARI consisted of 23 scales, 20 scales similar to those of Schaffer and Bell and 3 scales for checking response bias.

Validity:

The concurrent validity of the scale is well established. (Saxena, 1976).

9. FAMILY INTERACTION SCALES (FIS) HENRY ITTLESONS CENTRE (MarJorie & Behrens et al 1969) (Appendix - 2i)

Description:

The family interaction scale was developed at the Henry Ittlesons Centre for Child Research and reflects more than 10 years of family study at the Ittlesons Centre. The Ittlesons Centre for child research was established in 1953
for the investigation of the more serious psychopathologies of childhood.

Method:

The data for the rating scale are derived based on a 3 hour home visit preferably when all the members of the family are likely to be at home and participatory observation is recommended. After the visit is completed, the observer rates the family on the scales, and a description of family interaction is recorded.

Scoring:

Family interaction scales consists of 44 seven point scales arranged in seven groupings. For assistance in rating, each scale contains four anchoring descriptions of behaviour for scores 1, 3, 5 & 7 respectively. These descriptions given serve only as guidelines in making judgments on a given family and not all the descriptions statements given for a specific scale point need apply. The authors also point out that in a family, the presence of conditions which appear under a particular rating do not make that rating mandatory, because frequency and intensity should also enter into the judgments. Example: the observer may give a rating of 3 although some parts of the descriptive statements in 1 or 5 may also apply.
In general, ratings from 1 to 3 indicate poor functioning; 5 indicates average; and 7 indicates very good functioning. The authors also suggest that optimal ratings on some scales are associated with behaviours of moderate intensity in other scales. This would not be considered optimal. Some behaviours desirable in a limited degree are considered abnormal or pathological when excessive and are rated accordingly. The adequate judgment of the observer is important. For e.g. in scale 1.0.2 of cleanliness and orderliness, a rating of 7 indicates that the home has a clean and moderately cared for appearance. Homes which are excessively neat, look unused or unlived in are considered inferior in terms of family adequacy.

All scales should be scored. Ratings are made directly on the scale form by indicating the appropriate number. Before rating, the observer should re-read each time the definitions for each scale. All scales should be scored. The sum total of each group should be arrived at. In group 5, total scores are calculated by taking an average of the mother's and father's scores and adding this to the scores from the other six groups. As in the Ittleson's Centre the ratings of group 7 which measures some aspects of sibling interaction were excluded in the total score because some families had only one child.
Reliability of the scales:

In order to test the inter-rater reliability, two observers visited together and rated the family interactions of 13 families independently. The overall scores for each family which two observers submitted were quite similar. The Spearman's rank correlation coefficient being 0.86 (Combined). The correlation is highest on the family group patterns of interactions (0.88). The lowest correlation is seen for Mother-child interaction. (5.1 mother r=0.44); Mother's emotional interaction towards child (5.2 mother r=0.56) and the mother's act towards the child (5.3 mother r=0.50).

Validity:

The validity of the scales is supported by the general clinical experience at the Ittleson Centre. Independent ratings of case workers of the functional adequacy of the families as rearing environments (ratings based on office interviews) agree strongly with those made by observers in the home, guided by the family interaction scales. The family interaction scores of a family observer was compared with the ranked ratings of the adequacy of 19 families of schizophrenic children which were supplied independently by two case workers. The case workers' rankings were based on about two years of therapy contacts with these families while the family observers' ratings for each family was based on a single home visit. The rank correlations between the ratings
of each case worker and the family observer were 0.77 and 0.63 respectively. The more experienced the case workers, the closer were their ratings to the ratings based on family interaction. This indicates a general agreement between judgements of family interaction derived in the traditional manner and those based on the scales, thus indicating the validity of the scale.

10. SOCIAL BEHAVIOUR CHECKLIST (SBCL) (Researcher) (Appendix -2)

Description:

This is a 20 item checklist devised by the Researcher mainly to note a few of the social behaviour of preschool children which are typically observed in group settings during play in a nursery. The items included are dominant behaviour of the child, enjoying play, submissive behaviour, initiating conversation, empathizing with other children, shy, withdrawn, aloof etc.

Administration:

Each of the behaviour listed has to be rated on a four point rating scale by the nursery teacher i.e., 1 - This behaviour is not present, 2 sometimes present 3. often present 4. always present. Description of each behaviour and anchor points are also given to make the concepts clear to the rater. It has to be rated by the nursery teacher or the Anganwadi supervisor who is familiar with the child.
Scoring:

The rating given will be the score on that dimension.

Reliability:

The reliability of this tool was established through inter rater reliability and it was found to be satisfactory. Three raters rated 20 children independently while the children were playing. The average correlation coefficient for three raters on the 20 variables of the scale is found to be 0.94.

Validity:

The validity of the scale is found to be satisfactory when the ratings on this scale were compared with the Social Competence Scale (Kohn and Rosman, 1973).

Pilot Study:

A pilot study was carried out with multiple objectives as given below:

(1) To test the feasibility of the project.
(2) To test the applicability of the existing instruments.
(3) To prepare the Kannada version of existing instrument wherever necessary.
(4) To develop tools required for this study.

Ia. During the pilot phase, the researcher visited the urban nursery schools and the rural Anganwadis to observe the functioning of these centres. The difference in the two
set up were noticed with regard to the physical condition and the behaviour of children, the teachers and their interaction with children as well as the nature of toys and other preschool equipment available.

b. The researcher had discussions with the nursery teachers and the Anganwadi supervisors regarding the behavioural problems of children. The teachers were informed about the various types of Behavioural problems that are commonly seen among young children. Later, an idea on the prevalence of problem behaviour was obtained and also the type and frequency of such behaviours.

2. Subsequently, it was intended to test the feasibility of the screening instrument, Preschool Behaviour Checklist (McGuire and Richman, 1986). There was a need to translate the screening instrument into Kannada since all the teachers were not well versed in English. A psychologist, who knew both the languages well translated the English version to Kannada (Kannada version of PBCL at Appendix - 2a). Subsequently, the translated Kannada version was back translated to English. The items in both the versions were verified for similarity of the meaning it conveyed. Both the versions of PBCL (screening instrument) were administered on a small group of Urban and rural children to verify the applicability and to train the Nursery teachers in rating children on these
Instruments. Initially the teachers had difficulty in selecting the alternatives, but after rating a few children the task became clear.

3. There was a need to translate some of the instruments into Kannada because the sample consisted of rural children whose parents had difficulty in understanding English. Hence the Temperament Measurement Schedule (Malhotra, 1983) was translated into Kannada. Similarly, the Social Competence Scale (Kohn and Rosman, 1973) was also translated into Kannada. The Kannada version was tested and tried for its feasibility.


In order to understand the behaviour problems of children, a number of checklists and rating scales are available. Some of the problem checklists to measure childhood psychopathology are Child Behaviour Checklist, (Achenbach and Edelbrock, 1983, 1986, 1987,) Revised Behaviour Problems Checklist, (Quay and Patterson, 1987), Conner's Teacher Rating Scale (Conners, 1969), and Preschool Behaviour Checklist (McGuire and Richman, 1986). Two checklists have been validated in terms of their usefulness in U.S.A. (Behar and Stringfield, 1974., Kohn and Rosman 1973). Behar and Stringfield (1974) modified the teacher questionnaire devised by Rutter into a 30 item checklist suitable for use with 3-6 year olds. The items are similar to
the checklist of Kohn and Rosman, (1973) consisting of 50 items, the items are rated as 'not at all typical', 'some what typical' 'or' very typical' of a child in question.

These checklists satisfy practical requirements and exhibit many desirable psychometric properties. But, they also share common disadvantage (Offord, D.R., Boyle, M. H. et al., 1993). The constellation of items used to measure syndromes in existing problem checklist do not correspond to the symptoms used to classify various psychiatric disorders in ICD-10 (WHO, 1992) or DSM III R (APA, 1987). Although there is a resemblance between the check lists and the dimensional approach wherein the syndromes are derived empirically, with the disorders specified in DSM III R (Achenbach, 1986., Quay, 1986., Edelbrock and Costello, 1988) there are important content differences between the two. The items and the contents in problem checklists are different from a well defined criteria to diagnose a particular symptom given in DSM III R used by researchers and clinicians. Therefore, it is difficult to translate syndrome scores obtained by the rating scales and checklists into classifications of disorder according to ICD-10 or DSM III R.

In the present study use of both these approaches was proposed. PBCL was used as a screening device and simultaneously a need was felt to develop an instrument pooling the items from ICD-10 (WHO, 1992) and DSM III R (APA,
In the West, DSM III R (1987) was used to generate the items with older children in the study by Boyle et al (1993). In India there is a need for such an instrument especially for use with Preschoolers and with local samples. Initially items pertaining to different types of disorders were formulated and were shown to experts in the field in order to check the content validity in terms of the coverage of the tool and to check the correspondence between the items and the ICD-10 and DSM III R categories. In addition, a few more items were added from other instruments.

The scale was administered to some parents and teachers to try its feasibility with the Preschoolers. Some items were reframed and some deleted based on the experience gained. Later this instrument was, translated into Kannada (Appendix - 2c).

Then, the Kannada version was back translated into English to check for the similarity in meaning and interpretations of the two versions. In its final form this is a structured interview Schedule which covers 14 major areas of Emotional Behaviour problems for use with mothers. An attempt was made to establish the inter-rater reliability of the instrument. Two raters independently rated 40 children based on the descriptions given by their mothers. The inter-rater reliability of the instrument based on product moment correlation was found to be $r=0.82$. 

1987). In the West, DSM III R (1987) was used to generate the items with older children in the study by Boyle et al (1993).
Validity:

The concurrent validity of the scale was found out by comparing the scores of Preschool Emotional/Behavioural Problem Inventory and PBCL. The product moment correlation between the two sets of scores is $r=.8133$.

The criterion validity was ascertained by comparing the known groups of children identified as normals and children with Emotional Disorder. The two groups show significant difference in their mean scores.

The content validity of the Inventory was ascertained by obtaining expert opinion regarding the content areas covered. The areas were also based on ICD-10, DSM III R and other existing tools.

b. Embedded figure test

The field independent and dependent nature, and aspect of cognitive style among children, was first given by Witkin (1962). Researches also reveal a relationship between field dependence and problem behaviour. And there was a need to know the field dependent or independent characteristics of emotionally disturbed and normal children.

The original Embedded Figure test by Witkin (1962) was tried during the pilot phase. It was found that the test did not yield individual differences in cognitive styles. Children could easily identify the embedded figure because of
its size and isolation from the background. Hence, a test was developed by making the test complex and by reducing the size of the figures with a different set of familiar background.

In the initial phase, the researcher scanned many figures which could be suitable for youngsters. Later 24 figures which are commonly used figures in learning centres for young children (Maxim G. W. 1977) were selected. When this was tried for applicability, some items that did not differentiate younger and older groups were removed from the set. In the final set, 16 items were retained. These figures included: umbrella, sun, girl, etc. which were used to introduce common concepts to young children. Since the urban as well as the rural preschoolers were familiar with the letters of the alphabet, i.e. 'A' and 'O' these were selected as the embedded figures.

The test was divided into two sets. In the first set consisting of 8 figures, the letter 'A' was embedded. In the second set of 8 figures letter 'O' was embedded. A group of 100 preschool children were administered this test and the time taken to identify the embedded figure was noted in seconds with the help of a stop watch. The mean time and standard deviations were calculated. The figures were arranged from simple to complex in accordance with the time taken to identify the embedded figure. Subsequently a scoring pattern was also evolved based on the time score. In some
cases where the child was not able to identify the figures for one minute, the trials were repeated. Based on the mean and the standard deviations of time taken, a score of 3 was assigned if the child identified the embedded letter within five seconds, a score of 2 if the time taken was between 6-10 seconds and a score of 1 if the time was between 11 to 30 seconds and a score of 0 was given if the time taken to identify the letter exceeded '30' seconds.

The split half reliability was found to be $r = 0.687$ for a sample of 100 children. The test was also found to differentiate the normals and the emotionally disturbed groups.

c. Social behaviour check list:

This tool was developed by the Researcher. Even though a number of checklists to measure social behaviours were available (Roper and Hinde, 1979) there was a need to develop one due to the following reasons. First there was a need to evaluate the intervention planned in this study on the small group of emotionally disturbed children. This programme was a social skills training through group play. Hence, some of the items or social behaviours of these children which could be readily observed and identified were selected. For this purpose the social behaviour checklist was developed. The items for the checklist mainly consisted of the social behaviour of preschoolers in group settings. Children were
allowed to play and the typical behaviour observed were noted down. Descriptions were given to each of these behaviours and anchor points for four ratings were described. This comprehensive checklist consisted of 20 items and was used in the pre and post assessment of the sample children in phase III of the research. The inter-rater reliability was also carried out during pilot phase and based on the average of correlation of three independent raters. It was found to be satisfactory.

Procedure

A list of schools in Bangalore city with nursery and kindergarten sections was obtained from the Department of Public instructions, Government of Karnataka. Three schools for the urban sample, were randomly selected. A list of Anganwadis that belonged to Bangalore Rural South Taluk was obtained from the child Development Project Officer (CDPO). These Anganwadis come under the Integrated Child Development Scheme (ICDS). The CDPO was appraised and informed about this project and she extended her full cooperation throughout the study. Similarly, the permission to carry out the study was obtained from the principals of the urban schools, selected.

The study was then carried out in three phases: initially the study began in urban nursery schools. After completing the Urban schools, the study was carried out at the Anganwadis.
phase I: This was the screening phase during which the prevalence of emotional problems among preschoolers was assessed. The Nursery teacher of the respective classes were informed about the study. A brief training was given to them regarding the use of screening instrument, rating procedures etc as they were the main raters. Subsequently, the teachers were provided with the English and Kannada version of the PBCL. The names of the children on roll were noted down in an alphabetical order. Every child in a given class was called and the teacher-rated the child on the item of screening questionnaire as the Researcher spoke to the child. This procedure was continued till all the children in the class were screened. A teacher in each school took 3-8 days to complete the screening process.

Children with a total score of 12 and above on PBCL were considered as emotionally disturbed. Children with a score of 11 and less were considered as normal (as defined by McGuire and Richman, 1986). In this manner, 440 children were screened from three urban nursery schools, and 195 children from Rural Anganwadis. Fifty of the children each from Urban and Rural background identified as emotionally disturbed were retained for the phase II of the study. The names of children who scored less than 12 were arranged in an alphabetical order with numbers assigned to them. From each class, normal children equal in number to the emotionally
disturbed children in that class were selected on random sampling basis.

Phase II:

This part constituted the main study. The children selected from the phase I belonged to one of the four groups viz., Urban Normal (UN), Urban Disturbed (UD), Rural Normal (RN) or Rural Disturbed (RD). These children were studied in greater detail by administering questionnaires and psychological tests and by interviewing Nursery teachers and Anganwadi supervisors. Home visits were made to gather information from mothers and for a study of family interaction.

Overall, the parents in both Urban and Rural areas were very cordial with the Researcher. Therefore obtaining information was not very difficult. The home visits of urban children was slightly difficult as the houses were located in different places. The Nursery teachers of urban schools were very helpful in accompanying the investigator for home visits on the 2nd day as they were interested to know the home environment of these children. But in the Rural areas, sometimes the investigator had to visit 3 times to collect information. Here, the data collection was slightly difficult as many of the neighbouring females and children would come frequently to know what is happening. Therefore, the Researcher had to repeatedly stop the interview for sometime,
convince the neighbours to move away and select a quiet place inside the home. The Researcher visited every child's house and spent in all 4-5 hours in each house over the three visits. The purpose of home visit was to observe family interactions among different members, to obtain information on the child's emotional problems and his temperament, to understand the parental health and their attitudes using different questionnaires and rating scales.

During the first visit, after establishing rapport with the family members, the family interactions among different members was observed. The investigator was also participating actively during the observation. After half an hour of inhibition, the members became natural in their interaction. During this time the investigator made sure that majority of the members were present. For this reason home visits were made in the afternoons and evenings. Interactions were observed for 3 hours and later the family interactions were rated and observations recorded. Observation of Family interaction of members was completed for all the 200 cases.

In the later visits, mothers were asked to rate their children on Emotional and Behavioural Problem Inventory and Temperament Measurement Schedule. The mothers also rated themselves on General Health Questionnaire and on Parental Attitudes.
The Intelligence test and the Embedded figure test were administered to children individually in a separate chamber in the school. Some of the rural families were not willing to be present on the second day as they had to go to fields and insisted that the information may be collected there. Therefore, the investigator had to walk several kilometers at times to the field, and obtain information on the questionnaires.

In addition to obtaining information on the questionnaires, the experience gained during the field study was rewarding. Several aspects like the child rearing practices, the difficulties of parents and their socio-cultural attitudes, differences in the families of Rural and Urban areas, the unique problems and difficulties of rural people etc. were discussed with parents and teachers. The phase II of the study viz., data collection took about 18 months to be completed.

Phase III: This was the intervention phase. One of the Urban schools was selected for intervention where cooperation was extended by the authorities. Social skills training through group play was carried out as intervention in 30 sessions along with the pre and post assessment of children. Each session lasted for 45 minutes and the sessions were held twice a week in English.
In this phase, twenty emotionally disturbed children were randomly assigned to experimental or control groups, ten in each group. Informed consent was taken from the parents for the participation of their children in the programme. These children both in control and experimental groups, were subjected to pre-assessment of behaviour problems as rated by the mothers, and social behaviour and social competence as rated by the nursery teacher. The ten children in the experimental group were further divided into two consisting of 5 children in each group. The social skills training through group play was carried out as part of the experimental procedure of the intervention. In total, 30 sessions each lasting for an hour was carried out on the experimental group of children. The control group children remained in their classrooms. During these sessions, prosocial skills training was given through coaching and play. The skills included VENT Skills, following directions, and control of anger (Elías and Clabby, 1989). Also included were, group participation skills, questioning, reducing social anxiety, and self expression skills (Barrell, J. and Liebmann, R. 1986, Ladd and Mize, 1981, Bierman and Furman, 1984).

After the completion of 30 sessions, both the groups of children were subjected to post treatment assessment on Emotional and Behavioural problems rated by mothers and
social competence and social behaviours rated by nursery teachers.

The data obtained in each phase of study was analysed separately using appropriate statistical techniques.

The details regarding the Objectives and the techniques followed in the 30 sessions are listed below (Appendix-3). The intervention programme was carried out in English.

SESSIONS

OBJECTIVES AND TECHNIQUES

I and II

Base line assessment of social behaviours in a free play situation.

III

To introduce social readiness skills; to maintain silence, listen, sit still, wait for turn and follow directions through direct coaching, instructions, play, observation and discussion.

IV

To strengthen the skills learned in the previous sessions and to introduce listening skills' through 'listening game.'

V

To strengthen the skills learned in the previous sessions i,e, 'listening skills' and to introduce 'attention and concentration skills' through complex 'listening game'.

(Elias and Clabby, 1989).
VI and VII  To introduce VENT for better interpersonal communication and assertive skills using structured play, direct coaching and behavioural rehearsal. VENT stands for:

V - Voice and tone modulation.
E - Eye contact.
N - No bad words/accusation.
T - Keep tall/pleasant posture.

VIII  To strengthen VENT and to introduce Communication and helping skills, (Eisenberg et al., 1981), through role play and singing nursery rhymes.

IX  To introduce 'centering' and relaxation through 'centering game' and 'breathing exercises'.

X  To strengthen all the skills learned during the previous sessions.

XI  To introduce questioning skills through story telling and asking questions.

XII  To introduce basic feelings like happy, anger, sad and fear through family role play and questioning.

XIII  To introduce empathy skills and to enable children to take the role of others through imaginary role play.

XIV  Repetition of the earlier sessions.
To help children comment on their emotional problems and to highlight the related feelings by talking about family and social situations.

To strengthen the above skills and to introduce feelings through pictures depicting various emotions and interchange persons for empathy.

To introduce concept of colour, shape and size through the use of different objects and questioning.

To introduce the concept of numbers and the concept of 'little' and 'more' through counting and 'Sharing game.'

To make children understand the expectation and perception of others through 'identification games.'

To enable children stay calm in irritable situations through 'keep calm game'.

To strengthen the earlier skills through repetition of exercises and games.

To direct group activities through craft work.

To enable children recognize what they like in others and to communicate the same through 'stroking game'

To help children get over social anxiety through relaxation technique and compulsory participation.
XXV  To make children participate in group activities and make them to learn to wait for their turns through story telling.

XXVI  This was a strengthening session, wherein stroking, reduction of social anxiety and taking turns were strengthened.

XXVII  To draw the attention of children to the alternative ways of reacting to an emotion laden situation by talking to children.

XXVIII  Using VENT in family situation through role play.

XXIX  A recall session as to how the skills learned were useful.

XXX  Winding up session and post intervention assessment by nursery teachers.

(Photographs of intervention sessions - see Appendix 3).