CHAPTER 5

DISCUSSION

This investigation was undertaken to study psychological disturbance in five to eight year old school-going children. The study was conducted in two phases. In the first phase, a large sample of school-going children falling in the age range of five to eight years was screened for the presence or absence of psychological disturbance. In the second phase, a detailed study of the psychologically disturbed and their comparable controls was carried out. A group of children identified as scholastically backward on screening were also studied in greater detail in comparison with a group of scholastically superior children.

In this section, an attempt has been made to discuss and integrate the findings of the present study. Wherever possible, comparisons have been made with other relevant studies carried out in the area. The discussion will use the following format.

1. Demography
2. Reliability
3. Prevalence of psychological disturbance
4. Prevalence of scholastic backwardness
5. Factors associated with psychological disturbance
6. Factors associated with scholastic backwardness
1. **DEMOGRAPHY**:

The demographic characteristics of the sample screened in the first phase of the study are presented in table 1. This sample consisted of 810 (52.77%) boys and 725 (47.23%) girls. These proportions are almost similar to the proportion of boys and girls in the estimated sample pool. Further there was an almost equal representation of both sexes at all the four age levels.

There was no difference in the representation of boys and girls from among Hindus and Christians. However, a significantly higher number of girls than boys were represented among Muslims. When the overall representation of Hindus, Muslims and Christians was considered in the sample, the percentages were 96.29%, 3.71%, 1.82% respectively. This religion-wise sample distribution deviated markedly from the religion-wise representation seen in the general population. Hindus were overrepresented and the Muslims and Christians were underrepresented in the sample. This was perhaps because the Muslim children attended 'Madarsas' (a school for Muslims) in large numbers than the regular school. The Christians were underrepresented perhaps because they more often attended schools privately run by Christian missionaries. It may be recalled here that a majority of the schools which either refused or deferred permission for carrying out this study were the privately managed Christian schools.
With reference to the language spoken at home, there were no sex differences in representation. While there was no sex difference in the representation of boys and girls in the middle income group, significant differences were seen in the extreme income groups. Boys were overrepresented in the lower income group (Rs 0-999 per month) and girls were overrepresented in the higher income groups (Rs 1,000-Rs 1,999 per month).

Analysis according to school showed that there were significantly more boys than girls in schools 2 and 3. School 5 sampled only girls. This was done to balance the proportion of boys and girls in the total sample as the number of girls screened was significantly lower when only the first four schools were considered. A class (standard)-wise analysis suggested a slightly higher proportion of girls than boys in the fourth standard. This was because a large number of boys than girls, from standard 4 were excluded from the study as they were over the age of 8 years. There were no significant differences between the proportion of boys and girls in English and Kannada medium schools.

Briefly, the boys and girls sampled in the first phase of the study were comparable on variables such as age and language spoken at home. Some differences were also seen in that there was an overrepresentation of boys from the lower income group and girls from among Muslims and the higher
income group. On the whole, the sample had an overrepresentation of Hindus. These points need to be borne in mind while interpreting the findings, and caution should be exercised before making generalizations from the findings of this study.

2. RELIABILITY:

Although the validity of the CBQ has been demonstrated in India by its wide use (John, 1980; Rozario, 1988; Sarkar, 1990; Sekar et al., 1983; Vardhini, 1983) and in terms of its discriminative ability (Sekar et al., 1983) no studies had been carried out to study its reliability. In the present study, two types of reliability: interrater and test-retest reliability were studied and found to be high (Table 2).

The interrater reliability coefficients of 0.77, 0.90 and 0.84 for boys, girls and all respectively, indicates that the two teachers involved, made highly identical independent assessments for these children. Further, it also indicates that they were referring to the same behaviour while rating. It is to be noted that the values obtained in this study are higher than those obtained by Rutter (1967) (r=0.72) and Zimmermann-Tansella et al. (1978) (r=0.50 and 0.73 with two and three raters respectively).
The test-retest reliability coefficients of 0.80, 0.72 and 0.75 which were obtained for boys, girls and all respectively, suggest that the ratings did not change significantly even after a month. Rutter (1967) reported a reproducibility value of 0.89, while Zimmermann - Tansella et al. (1978) reported a value of 0.80. The issue of test-retest reliability has often been confused with that of stability of behaviour (Boyle and Jones, 1985). In Rutter's study, the test-retest reliability was reported for a two-three months interval which according to Boyle and Jones (1985) refers to the stability of the behaviour problems rather than the reliability of the questionnaire. However, significant changes in behaviour are not expected to occur in a four-week interval, especially among the general population children. The reliability coefficients obtained in this study therefore refer to the test-retest reliability of the CBQ and not to the stability of the behaviour problems. Morita et al. (1990) assessed the six-month stability of the CBQ and found it to the 0.62, implying that the reliability might be even higher.

In this study, the interrater reliability was higher for girls and the test-retest reliability higher for boys. This is an issue that needs to be considered carefully in future research. Accordingly, it would be important to study short-term and long-term stability of behaviour problems among boys and girls.
3. PREVALENCE OF PSYCHOLOGICAL DISTURBANCE:

The present study employed a two stage research design and therefore, the assessment of psychological disturbance was carried out at two levels: the screening phase and the detailed study phase.

a) Prevalence rates of psychological disturbance on screening:

The prevalence of psychological disturbance among five to eight year old school going children was found to be 18.31% following screening (Table 3). From among the Indian studies, this rate is closest to the 16.40% prevalence obtained by Kurup (1982) whose sample consisted of 5 to 12 year old rural children drawn from the community. Vardhini (1983), using the CBQ as the screening measure reported a prevalence of 10.6% for the five to twelve year old rural school children.

Comparing with studies from outside the country, the prevalence rate obtained in this study is similar to that observed by Minde (1977). He reported a prevalence of 18.10% among 7 to 15 year old school going Ugandan children. Rutter et al. (1975a) also reported a prevalence of 19.10% among 10 to 11 year old London children. In general the prevalence rates obtained across studies using the CBQ as a screening measure have ranged from 3% to 32.20% (Kolvin et al., 1977; McGee et al., 1986; Minde, 1975; Rutter et al., 1975a; Venables et al., 1983; Zimmermann Tansella et al., 1983).
An age-wise analysis of prevalence rates did not show any clear-cut pattern. In this study, the prevalence was found to be highest at the age of 5 years. It was found to be lower at the age of 6 and 7 years, and to increase slightly for the 8 year old children. A finding similar to the present one was also reported by Shepherd et al. (1971) where no identifiable age trends were found. The present study and that of Shepherd et al. (1971) were cross-sectional in nature and therefore do not provide any meaningful insights regarding age trends. To understand the effect of age on behavioural disturbance, longitudinal studies seem most appropriate. In one such study, Stevenson et al. (1985) observed that behaviour problems tended to remain fairly stable over time. They also reported a tendency for the severity of behaviour problems to increase at the age of eight years for both boys and girls.

A gender by age analysis was also performed (Table 3). Boys and girls did not differ significantly in the rates of disturbance at ages 5 and 6 years. However, at ages 7 and 8 years, boys were found to have a significantly higher rate of disturbance than the girls. A somewhat similar finding was reported by Coleman et al. (1977) who found that sex differences in prevalence rates became significant only after the age of five years.
No significant age trends were found either for the boys or the girls when analyzed separately. Yet, a tendency was noticed for the prevalence to decrease with age for girls and to remain static for boys. Perhaps explanation for this finding lies in the increased control and supervision exercised by the family members over girls' behaviour which brings down observable deviant behaviour (Anandalakshmy, 1989). On the other hand, such restrictions placed on behaviour could result in emotional problems which often go undetected. Thus, it is not clear whether this gender difference occurring at a later age is a function of social factors, that of a reporting bias or a combination of the two.

The prevalence of psychological disturbance was also determined according to a few demographic variables such as school, religion, language spoken at home, medium of instruction and family income (Table 4). The highest prevalence was obtained in school 3, in standards 1 and 4 and in schools where the medium of instruction was Kannada. There was also a tendency for the disturbance to be more among Muslims and those falling in the lower income group, although this trend was not significant. It is to be noted here that schools 3 and 4 where disturbance was relatively high had Kannada as the medium of instruction. Further, it was also found that a large proportion of children attending
Kannada medium schools came from lower income groups. These findings when interpreted together seem to suggest that psychological disturbance is more among those coming from the lower rungs of society. Research indicates that the association between social class and psychiatric disorder of the child is weak and inconsistent (Wolkind and Rutter, 1985). It has also been established that the consequences of belonging to lower social class such as low level of parental education and lack of adequate parenting rather than the social class itself, that is most strongly associated with disorder (Mulligan, Douglas, Hammond and Tizard, 1963).

b) **Prevalence of psychological disturbance following a detailed assessment**:

It was also of interest to determine the prevalence of psychological disturbance subsequent to detailed assessment by the teacher and parents on the TRF and CBCL respectively. However, these measures warranted modification in view of the observations made by Sarkar (1990) as well as the results obtained in the pilot study conducted as a part of this research. It was therefore decided to carefully examine these two measures and affect the necessary changes, before the prevalence rates of disturbance could be reported for the second stage of the study.

i) **Modification of the TRF and CBCL**:

An item analysis of the TRF and CBCL revealed that only
59 and 49 items respectively were reported frequently enough (more than 10% of the time) to be retained for further analyses. Thus, the TRF and CBCL were reduced in length to 59 and 49 items respectively. Fombonne (1989, 1991) has hinted that the reduction of the length of the scale by one quarter, or the combination of internalizing and externalizing scales to form a short scale does not alter the discriminative ability of the CBCL. These two measures were subjected to the principal component method of factor analysis.

The factor analysis of the TRF yielded 13 factors which explained 66.92% of the total variance (Table 13), while the CBCL yielded 11 factors explaining 66.97% of the total variance (Table 15). The first three factors were conceptually meaningful and these together accounted for a major proportion of the total variance. Therefore only the first three factors each were interpreted on the TRF and CBCL. On the TRF, the first, second and third factors corresponded to internalizing, learning and externalizing problems respectively (Table 14), while on the CBCL they corresponded to externalizing, internalizing and learning problems respectively (Table 16).

The factor termed "internalizing problems" on the TRF (factor no. 1) and CBCL (factor no. 2) covered the following common items: worrying, withdrawn, anxious, sad, cries a lot, nervous, shy/timid, self conscious and day dreams. In
addition, internalizing factor on the TRF also included items such as overconforms, hurt when criticized, fear mistakes, feels guilty and likes to be alone. The additional items on the same factor on the CBCL included fears animals and does not brag or boast. These problems tended to cause internal distress to the child and were termed "internalizing", problems, originally by Achenbach (1978a,b; Achenbach and Edelbrock, 1979) and was subsequently replicated by Achenbach, Verhulst, Baron and Althaus (1987b) and Auerbach and Lerner (1991).

The "learning problems" factor on the TRF (factor no. 2) and CBCL (factor no. 3) had two common items namely poor school work and clumsy. On the TRF, this factor also covered items such as has difficulty learning, doesn't carry out tasks, messy work, unmotivated, underachieving and fails to finish things. On the CBCL, the additional items included under this factor were underactive and cannot concentrate. Although a learning problems factor was not obtained on the Achenbach scales by earlier workers, a similar factor was obtained on other teacher rating scales such as the Classroom Adjustment Rating Scale (Lorion, Cowen and Caldwell, 1975) and the AML scale (Cowen et al., 1973). Miller (1967) also derived a learning problem factor from a second order analysis of his Louisville Behaviour Checklist. It comprised of first order factors labelled academic disability and
immaturity and covered items such as spells poorly, reads poorly and writes poorly.

The factor labelled "externalizing problems" on the TRF (factor 3) and the CBCL (factor 1) covered the following common items - unusually loud, temper tantrums, impulsive and fights. In addition, this factor covered the following items on the TRF: stubborn, moody, sulks, explosive behaviour, threatens people, easily frustrated and talks out of turn. The CBCL also had few additional items on this factor such as talks too much, shows off, demands attention, teases others and screams. These problems represented behaviour which involved difficulties with others and were therefore called as "externalizing problems" (Achenbach, 1978a, b; Achenbach and Edelbrock, 1979). This factor was obtained also by Achenbach et al. (1987b) and Auerbach and Lerner (1991).

The remaining 26 and 23 items of the TRF and CBCL respectively were retained as a part of the total scale, although they were not covered under any of the above three factors. These items were retained because of their high loadings on factors which emerged later (although not interpreted), as well as their clinical importance.

Factor analysis of the TRF and CBCL was originally carried out on an American clinic sample by the author of the scale (Achenbach, 1978b; Achenbach and Edelbrock, 1979,
1983, 1986). Similar analyses were also carried out on a Dutch sample (Achenbach et al., 1987b) and on an Israeli sample (Auerbach and Lerner, 1991). The latter two studies have confirmed the cross-cultural validity of most of the syndromes reported on the American sample. The factors obtained in the present study however correspond only to the broad-band factors obtained through second order analyses in the American, Dutch and Israeli studies. The narrow-band factors obtained in these studies were not replicated in the present study.

Several reasons could be attributed to this difference seen between the findings of the studies cited above and the present study. The present study factor-analyzed data obtained on a group of disturbed children picked up from the school population by a screening tool, whereas in the three studies cited above, the children included were clinic referred cases. The three studies also employed large sample sizes (n=450) whereas in this study the sample sizes were only 279 and 166 for the TRF and CBCL data respectively. In this study only those items which had a reported frequency of 10% were entered into the analysis whereas in the three studies, the cut-off was placed at 5%, thereby enabling those workers to enter a larger number of items into the analysis. Further, in this study each of the items were retained only under one factor where it had the highest loading, thereby avoiding repetition of the same item on several factors.
Furthermore, only those factors which were psychologically meaningful and covered a major portion of the total variance were interpreted.

Inspite of these differences in methodology, two factors - internalizing and externalizing problems - found in earlier studies, although subsequent to a second order analyses, were also found in this study, on both the TRF and the CBCL, indicating the universality of these two syndromes. An interesting finding in this study, however, is the emergence of a third factor called "learning problems" not previously obtained on the Achenbach group of scales. Achenbach and Edelbrock (1978) and Edelbrock (1979) have raised doubts about the validity of the learning problems factor obtained on several other measures. According to Achenbach and Edelbrock (1978) the items comprising the learning factor are redundant and it is therefore not clear yet whether it is better viewed as a syndrome of behaviour problems or as a single problem of school performance. In the present study however, it is important to note that this factor emerged consistently across both the parent and teacher versions of the scale. In the TRF, it emerged as the second principal component covering 12.53% of the variance, and in the CBCL it emerged as the third principal component covering 4.31% of the total variance. In view of the these findings, the importance of the "learning problems" factor cannot be
overemphasized. Learning problems are being viewed as one of the major problems apart from the internalizing and externalizing problems, by both the teachers and parents in India. To ignore or to overlook this problem would be to be short-sighted. As Dorr, Stephens, Pozner and Klodt (1980) have pointed out, the primary mission of the school is to impart academic knowledge, and failure to successfully complete this mission is certainly a serious problem and a matter concern to both parents and teachers alike.

(ii) Cut-off scores, sensitivity and specificity:

Having obtained factors, the next concern was to determine cut-off scores for the subscales (factors) as well as the total scales and to see if these cut-off scores effectively discriminated between the disturbed and nondisturbed groups. Several methods have been used to determine cut-off scores for the tools, some of which include linear regression analysis (Fombonne, 1989), ROC analysis (Fombonne, 1991), mean plus two standard deviations and percentile ranks (Achenbach and Edelbrock, 1983, 1986). Since the sample in this study included an almost equal number of disturbed and nondisturbed children picked up from the screening phase, it was thought appropriate to use the midpoint of means methods. Using this method, the cut-off points were obtained by averaging the means of the disturbed and nondisturbed groups (Tables 17, 18).
Subsequent to the determination of the cut-off points, the next step was to determine their efficacy. It was presumed that efficient cut-off scores would accurately classify children as either disturbed or nondisturbed, and that this classification would closely resemble the classification provided by the screening tool. In other words, for the new cut-off scores to be effective they would have to yield high sensitivity, specificity and efficiency rates for the CBQ (screening tool). The sensitivity refers to the ability of the tool to detect cases, specificity to its ability to distinguish cases, and efficiency to its capacity to perform both these functions (Goldberg, 1972; MacMillan, Kolvin, Garside, Nicol and Leitch, 1980).

In epidemiological studies, the usual practice is to use two-stage methods to make it possible to determine the sensitivity, specificity and efficiency of the screening tool, as well as to determine corrected prevalence rates. In the studies involving children, often a psychiatric or a diagnostic interview is used in the second phase of the study to see whether children screened as disturbed, fall into any of the diagnostic categories. (Achenbach and Edelbrock, 1981; Verhulst et al., 1985). In this study however, two detailed behaviour checklists (TRF for teachers and CBCL for parents) were used in the place of psychiatric interviews, as the aim of the study was to determine the presence of general
psychological disturbance which does not entail impairment in
the child's functioning, rather than to arrive at a clinical
diagnosis. Rutter (1977) has pointed out that the presence
of a score above the cut-off on a screening measure does not
signify the presence of psychiatric disorder. Nevertheless,
such problems in children should not be ignored. It was this
group of children that this study attempted to identify.

Since behaviour checklists were used in both the phases
of the study it was expected that the agreement between the
screening and detailed assessment measures would be high.
Accordingly, the use of the new cut-off scores yeilded
significantly high sensitivity and efficiency rates for both
TRF and CBCL. Thus sensitivity for boys and girls was
94.32% and 91.26% on the TRF and 84.16% and 72.31% on the
CBCL respectively. Efficiency of the TRF and CBCL was also
high for both the boys and girls. The specificity however,
although high was not very different from that obtained with
author recommended cut-off scores (Tables 19,20).

In contrast to the high sensitivity and efficiency rates
obtained with the new cut-off scores, the rates obtained
using the author recommended cut-offs were fairly low. Thus
boys and girls had sensitivity rates of 36.93% and 32.04% for
the TRF and 33.66% and 46.15% respectively for the CBCL.
The efficiency of the tools was also relatively low. Several
investigators using author-recommended cut-off scores on 6-11
year old clinic children found average sensitivities and specificities respectively across the sexes to be as follows: 76% and 90% in the original American study (Achenbach and Edelbrock, 1983) 87% and 63% in the Puerto Rican study (Bird et al., 1988) and a specificity of 71% in an Australian sample (Achenbach, Hensley, Phares and Grayson, 1990). Using slightly different thresholds, Verhulst et al. (1985) obtained an average sensitivity and specificity of 60% and 90% respectively for a group of 6-11 year old Dutch boys and girls. In the French study, the corresponding rates were 66% and 75% respectively.

In this study, when the author's cut-off was used on a small group of clinic children, the sensitivity of the CBCL was found to be almost 61% (pilot study) which is similar to the values obtained in other comparable studies. However, when the same cut-offs were used with children from a school population, the sensitivity and efficiency were lower. This, according to Robins (1985) and Fombonne (1989) is to be expected when tools standardized on clinic populations are used with the general population. Yet, the findings obtained with the use of the author's cut-off in this study are highly unsatisfactory due to two reasons. First, the measures used in both phases of the study were behaviour checklists and therefore agreement between the two should have been high. In other words, the efficiency rates obtained for the CBQ should have been high. Second, in a similar study, Fombonne
(1989) reported high level of efficiency for CBQ and CBCL (both parent measures) indicating that both these tools were good measures of general psychopathology. In the present study, the author's cut-off failed to reach up to these expectations and to replicate Fombonne's (1989) finding. On the other hand, the new cut-off scores demonstrate a high level of agreement between the measures used in both the stages of the study (efficiency of TRF = 96.09% for boys and 96.89% for girls; efficacy of CBCL = 85.58% for boys and 71.65% for girls), indicating that they were effective, and are acceptable for further use.

One issue that deserves to be pointed out is the higher rate of efficiency obtained through the TRF rather than the CBCL. Since CBQ and TRF are both teacher measures, the greater agreement between the two was expected. The relatively lower efficiency of the CBCL is perhaps due to the difference in the informants used. Situational specificity of children's behaviour has been found to contribute to variations in the reports of informants (Achenbach et al., 1987a). A detailed discussion on this issue however has been provided elsewhere.

iii) Corrected prevalence rates of psychological disturbance:

As reported in an earlier section, the prevalence of psychological disturbance on screening was found to be 18.31%. The corrected prevalence rates were found to be
19.80% following a detailed teacher assessment (Table 21b), and 27.17% after a detailed assessment by the parents (Table 22b). Although the prevalence according to teacher's report increased only marginally after correction, the parent reported prevalence registered a marked rise. This is perhaps explained in terms of the situational specificity of the children's behaviour itself (Morita et al., 1990; Rutter et al., 1970). It appears that the teachers in this study were not able to report behaviours that occurred exclusively at home. There is evidence from literature to suggest that teachers tend to focus exclusively on school-related problems (Garrison and Earls, 1985) and antisocial/disruptive behaviour (Kolvin et al., 1977; Rutter et al., 1970). Further, children have been found to be better behaved in schools than at home due to strict supervision from teachers (Ekblad, 1990). The parents on the other hand, are usually familiar with their children's functioning across time and situations. This advantage that they have over teachers makes it possible for them to provide a comprehensive picture of their children's problems and competencies (Verhulst and Akkerhuis, 1989). Several studies have also pointed out that parents and teachers agree only moderately in their assessment of problems in children (Achenbach et al., 1987a). In view of these findings, the discrepancy in the rates obtained by teachers and parents in this study, does not appear out of place.
In general, prevalence rates obtained through parent reports have been found to be higher than those obtained through teacher reports (Ekblad, 1990). Using the CBCL, Achenbach et al. (1990) obtained a prevalence of 29% on an Australian sample of 6-11 year old children. The 8 year old Dutch children had a prevalence of 26% and the 11 year olds had a prevalence of 27% (Achenbach et al., 1987b; Verhulst, Achenbach, and Akkerhuis, 1989). The parent reported prevalence rate obtained in the present study falls within the range obtained in the above studies. An exception to all these findings however is the prevalence of 10% obtained on the American sample on which the CBCL was originally standardized (Achenbach and Edelbrock, 1981).

iv) Type of psychological disturbance:

Analysis was undertaken to determine the types of psychological disturbance prevalent in the sample (Table 5). A majority of the disturbed children were found to manifest antisocial problems (77.94%) followed by neurotic (16.72%) and mixed disorders (5.34%). This preponderance of antisocial over neurotic and mixed disorders has also been observed in other Indian studies. Sarkar (1990) in her study of 8 to 12 year old school going children noted a antisocial: neurotic mixed ratio of 67.44 : 11.62 : 20.93. Sekar et al. (1983) found that about 57.89% of the general population children got classified as antisocial as against 42.11% who were grouped as neurotic.
Several Western studies have also reported a higher proportion of antisocials than neurotics among disturbed children (Rutter et al., 1975a; McGee et al., 1984). Two studies from the Asian countries of Japan and China have also supported this trend. In the Chinese and Japanese studies, about 89% and 83.6% of the disturbed children respectively got classified as antisocial, resulting in a small number of neurotics. This finding compelled the authors to suggest that CBQ is "not so good in screening neurotic behaviour in Oriental children" (Ekblad, 1990; Matsuura et al., 1989). An exception to these findings is that of Venables et al. (1983) who found that about 52% of the disturbed Mauritian children manifested neurotic disorder.

Results from the detailed phase of this study provided information on the proportion of internalizing, externalizing and learning problems among the disturbed children. The data from teacher reports (TRF) revealed that a large proportion of the disturbed children had externalizing problems (79.57%) followed by learning (53.41%) and internalizing problems (30.47%) (Table 21a). Data from parent reports (CBCL) also revealed results similar to those found on the TRF. Thus, a major portion of the children showed externalizing problems (68.07%); 49.40% showed learning problems and 46.39% of them
showed internalizing problems (Table 22a). An important finding was that a large number of children had learning problems as reported by both the informants. It is to be noted that teachers reported a higher percentage of children to have antisocial/externalizing problems and learning problems than did the parents. Likewise, parents identified a larger number of children with internalizing problems than did the teachers. Garrison and Earls (1985) noted that teachers tended to focus more often on school-related problems, whereas Kolvin et al. (1977) and Rutter et al. (1970) found that they tended to more often report antisocial/disruptive behaviour. In contrast, it has been reported that in comparison with teachers, parents reported more symptoms of emotional disorder such as depression, worry and fear (Emery, 1982; Yule, 1981). The findings of this study are thus in keeping with the general trend of findings seen in literature.

Several explanations have been sought to account for the finding that teachers often report more antisocial/externalizing problems and underreport neurotic/internalizing problems. One possibility for this finding, with the use of the CBQ, is the inherent structure of the scoring system itself (Rutter, 1967). The author's scoring method includes more scorable items under antisocial (A) than under
the neurotic (N) subscale, thereby, increasing the probability of a high score on the A subscale. This often results in a larger number of children getting classified as 'antisocial'. To overcome this problem, MacMillan et al. (1980) derived an alternate scoring system for the CBQ which included an equal number of scorables items under both the antisocial and neurotic subscales. They obtained a A:N ratio of 1:1.3 indicating that the scoring method employed could well influence the distribution of various types of problems. This explanation however does not seem to hold good in the present study, as a large proportion of children were grouped as having externalizing problems even on the TRF, which employed a different method of scoring and classification.

Other possible explanations include factors relating to the teachers and the environment (school/classroom setting). It has been hinted that teachers' temperament, values and experience influence their perception and reporting of symptoms in the children (Ekblad, 1990). Although information on most of these aspects such as introversion-extraversion dimension of personality and neuroticism among teachers was obtained in this study, no meaningful association could be drawn with reference to their reporting of problems, due to small sample size of the teachers (n=48).
The size of the class and the teacher's familiarity with the children are plausible factors which influenced teachers' assessments. In this study the size of the classes ranged from 30 to 75. In all, the teachers knew only 6.38% of the students 'very well' as against the remaining 93.62% whom they knew only 'moderately well'. Given this background it is possible that the teachers did not understand the children well enough to report their internal mood states, and therefore limited their ratings to readily observable behaviour such as antisocial and learning problems. Ekblad (1990) has pointed out that teachers report antisocial problems more often as they are readily observable and because of their 'nuisance value'. Neurotic/internalizing problems most often do not have 'nuisance value' and therefore go unnoticed in a classroom setting (Garner and Bing, 1973).

The finding that parents provide information on a wider range of children's psychological problems and competencies has been reported earlier by several workers (Achenbach, 1978a; Garrison and Earls, 1985; Rutter et al., 1970). This is because parents are familiar with their child's functioning across time and situations (Verhulst and Akkerhuis, 1989). From the findings obtained in this study and those of other workers, it appears that parents are more effective as informants of children's behaviour. The role of the teacher as an informant however cannot be discounted as
they are in a better position than parents to report on school related problems, especially learning problems. It would therefore be ideal to involve both teachers and parents as informants while studying children to obtain a better picture of their problems.

Another important finding in this study was that a large number of children showed learning problems, although teachers identified more children than did the parents.

Prevalence of individual problems:

The prevalence of individual behavioural and emotional problems was also studied. Findings on the three measures — CBQ, TRF and CBCL were considered for this purpose. The problems were studied in terms of the most common and least common problems.

a) The most common problems:

Those problems which occurred in more than 10% of the population under study were considered as common problems for the purposes of this study. Going by this criteria, the most frequent problems among the school going sample were poor concentration (29.19%), restlessness (17.79%), being solitary (14.36%), fighting (9.87%), and being irritable (9.74%). Other problems such as squirming (9.35%), destroying (9.41%) and bullying (8.50%) were also fairly common among the children in general (Table 6a). It is to be noted here that most of the problems with the exception of 'being solitary' are externalizing in nature.
 item analyses have also been reported by other workers. Matsuura et al. (1989) analyzed the item distribution in the general population of children and found that a combination of antisocial and neurotic items figured among the most frequently reported items. Minde (1975) analyzed the item distribution for a group of disturbed children. In general it was noted that some of the most common problems reported in children across studies, including the present were poor concentration, restlessness, being solitary and squirmy. Minde (1975) reported that disturbed children in addition to the above also showed problems such as feeling miserable, telling lies, not being liked, worrying, fighting and being irritable.

The most common problems seen among the disturbed children were also studied. Thus, according to their teachers (TRF) (Table 7), disturbed children most often had problems which could be broadly grouped as attentional/hyperactive problems (eg. can't concentrate), behavioural/conduct problems (eg: sulks), academic/learning problems (eg: difficulty learning) and emotional/internalizing problems (eg: anxious). In line with the trend noted in this study, teachers reported internalizing symptoms in a relatively small number of disturbed children.

A few other studies employing teachers as informants have also reported similar findings. In a study conducted on
Dutch children, teachers tended to score children higher on items related to academic functioning and on items related to peer relations. In another study, Weisz et al. (1987) also found that externalizing problems figured most prominently among the common problems of American children. The common problems of the Thai children fell under both the internalizing and externalizing categories.

When the parent reports (CBCL) were analyzed, (Table 10) it was found that problems belonging to both the internalizing and externalizing dimensions figured in the list of common problems. Some commonly reported externalizing problems were sulking, moody, stubborn etc. and the some of the common internalizing problems included cries a lot, day dreams, self conscious etc.

The least common problems:

For the purposes of this study those problems found in less than 3% of the sample under study were considered uncommon. The uncommon problems found in the general population include problems which could be grouped under severe conduct problems (eg: truancy, stealing) extreme emotional reactions (tears on arrival at school), habit problems (sucks thumb, bites nails), developmental problems (stutters/stammers, speech defects, wets/soils), somatic problems (pains and aches) and others such as twitches and fussy.
Support for the absence of severe conduct problems among young children, especially theft and truancy, comes from several studies (Ekblad, 1990; Matsuura et al., 1989; McGee et al., 1984; Minde, 1975; Rutter et al., 1974). In addition, all these studies also confirm the infrequent occurrence of twitching. Other infrequently reported problems include thumb sucking (Matsuura et al., 1989; McGee et al., 1984), wetting/soiling at school and school absences (Matsuura et al., 1989), tears at school (Matsuura et al., 1989; Rutter et al., 1974) and stuttering (McGee et al., 1984; Ekblad, 1990).

It was of interest to determine which of the problems were infrequently present among the disturbed children. Findings from the TRF and CBCL ratings were considered for this purpose. From the TRF data it was noted that the following broad categories of problems were totally absent in this group of children: age related problems (eats nonfood, sexual preoccupation, alcohol and drug use), somatic problems (eg: overweight, headache, nausea etc), psychotic symptoms (auditory and visual hallucinations, strange behaviour and ideas) obsessions (obsessions, compulsions and impulses) and other problems related to emotional and cognitive development (no guilt, easily jealous, feels unloved and feels persecuted).
The parental ratings not only confirmed the absence of the above problems but also added a few more items to the list of uncommon problems. They included severe conduct problems such as running away from home, setting fire, stealing, hoarding, truancy and vandalism. Certain extreme forms of unacceptable behaviour such as playing with sex parts in public and smearing oneself with bowel movements were also totally absent among these children. A few other problems which were present, but only infrequently, included those relating to developmental aspects (eg: speech problems).

An issue that emerges out of the item analysis is with reference to the clinical significance of individual symptoms. Studying this aspect, Weisz and Weiss (1990) introduced a measure called "referrability index" derived through logit analysis. Based on this, they identified problems that were the most and least referrable. An examination of these problems suggests that the most referrable items were those which were age inappropriate and those which caused distress to the child and others (eg: vandalism, truancy, sex problems, stealing, attacking people, suicides etc). The least referrable problems were those which were indicative of certain traits in the child (eg: concerned with neatness, accident prone, compulsive, sleeps less etc). This finding indicates that clinical significance is perhaps not indicated by the frequency of symptoms as proposed by
Shepherd et al. (1971), rather by the inappropriateness and the extent of distress and dysfunction caused to the child and others.

vi) Gender differences in psychological disturbance:

Gender differences in psychological disturbance was studied in terms of whether the boys and girls differed from each other in terms of prevalence rates as well as in the type of disturbance. Two hypotheses were proposed in this regard.

Hypothesis 1: Boys will have a significantly higher prevalence of psychological disturbance than girls.

In the first phase of the study, on screening it was found that boys had a prevalence of 21.98% as against 14.20% for the girls, giving a boy : girl ratio of 1.55:1 (Table 3). In the second phase, following a detailed teacher assessment, the prevalence rates for boys and girls were 22.47% and 16.83% respectively, giving a boy: girl ratio of 1.34:1 (Table 21b). Following parent assessments however, a reversal was noted in this finding in that boys had a prevalence of 21.98% as against 32.97% for the girls, yielding a boy: girl ratio of 1:1.5 (Table 22b). The difference between the rates for boys and girls was significant in all the three assessments. Thus, boys were found to have greater disturbances according to teacher reports and girls were
found to have more disturbance according to parents. Thus hypotheses can get accepted only as far as teacher report is concerned.

In general, a majority of the studies both from India and abroad point towards a preponderence of boys over girls with reference to overall rates of disturbance. Rutter (1967), Rutter et al. (1975a) and Zimmermann - Tansella et al. (1978), found a boy: girl ratio of 2:1 Wang et al. (1989) and Matsuura et al. (1989) reported a ratio of 4.9:1. Stevenson et al. (1985) also reported that a greater proportion of boys than girls showed deviant behaviour at 8 years of age. In India, Rozario (1988) found a boy: girl ratio of 11:1 among adolescents. An exception to these findings is that reported by McGee et al. (1984) who found an almost equal proportion of disturbed boys and girls in their sample of New Zealand children. Sarkar (1990) in India also found a 1:1.39 boy:girl ratio for 8-11 year old children.

An interesting finding in this study is that the prevalence rates increased significantly following parent ratings ($x^2 = 55.08, p < 0.01$) for girls, but not for boys. The prevalence rates reported for boys as assessed on the CBQ, TRF and CBCL were 21.98%, 22.47% and 21.98% respectively. However, a significant increase was noted in the prevalence rates obtained for girls across the 3 measures i.e., 14.20% on CBQ, 16.83% on TRF, and 32.97% on the CBCL.
In fact, the prevalence rates for girls doubled after taking parent reports into account. This also resulted in the increase in the overall prevalence rates based on the CBCL data. These findings once again emphasize the view that parents are in a better position to provide a comprehensive view of the child, whereas the teachers often miss out quiet but potentially disturbed children (Garner and Bing, 1973). It has been noted that girls, by and large, are quieter and less boisterous than boys (Eme, 1979).

An issue that needs to be considered is with reference to gender differences in the cross-situational consistency of children's behaviour. There is evidence to show that aggressive boys tend to show a marked consistency in their behaviour across situations, leading to a greater agreement among informants when they report this behaviour (Loeber and Dishion, 1981). Conversely, the question is whether the behaviour of girls is less consistent across situations than that of boys, resulting in discrepancy in the reports of teachers and parents. This is an issue that needs to be investigated further so that a clearer picture could be obtained with reference to sex differences in the rates of psychological disturbance.

One other concern was to determine whether the boys and girls differed from each other in the nature of problems they manifested. There have been several references to sex
differences in psychopathology among children (Ems, 1979). Therefore the second hypothesis was proposed which was directional in nature.

Hypothesis 2: There will be sex differences in the type of psychological disturbance.

On screening it was found that boys more often had antisocial problems than did the girls and girls more often had neurotic problems than did the boys. There was no difference in the prevalence of mixed disorder among boys and girls (Table 5). The boy : girl ratio for antisocial problems was 1.4:1 and for neurotic problems was 1:3.35.

Data from the TRF and CBCL further confirmed this finding. (Tables 21a, 22a). In general a larger proportion of disturbed boys were found to have externalizing problems when assessed both by teachers (89.20%) and parents (77.23%). Boys also had learning problems more frequently according to the TRF (59.09%) and CBCL data (51.49%). Girls on the other hand, were often found to show internalizing problems (49.51% according to TRF and 67.69% according to CBCL).

The boys also had significantly higher scores than girls on the externalizing and learning problems scales, and girls had greater scores on the internalizing scale of both the TRF and CBCL (Tables 23a,b, 24a,b). This trend was supported also by the findings obtained through item analysis. For example,
A few of the common problems among boys were being restless, irritable, poor concentration destroying, explosive behaviour, demanding attention, physically attacking, stubborn, sulking, messy work, not carrying out tasks, fighting, impulsive etc. (Tables 6b, 8, 11). A few of the common problems seen among girls were feeling miserable, worrying, fearful, fussy, crying, anxious, lonely, shy, timid, guilty, withdrawn etc (Tables 6c, 9, 12).

All these findings when integrated suggests that differences do exist in the nature of problems manifested by boys and girls. Thus boys more often tend to show externalizing and learning problems and girls tend to manifest internalizing problems more often. The second hypothesis therefore gets accepted.

These findings are in consonance with the general findings reported in literature with reference to gender differences in the problems of children. Several workers the world over have reported a preponderance of males over females for antisocial problems and the reverse with reference to neurotic problems. Wang et al. (1989) reported a boy : girl ratio for antisocial behaviour to be 8.8:1, and for neurotic disorder to be 1:1.5. In general, the above findings have also been supported by the work of Minde (1975), Rutter et al. (1970) and Stevenson et al. (1985). A few studies which depart from this general trend have also
been recorded. In the Ontario Child Health Study, Offord et al. (1987) found that the prevalence of emotional disorder was almost similar for boys and girls, but boys had a higher prevalence than girls for conduct disorder. In India, Rozario (1988) found that adolescent boys showed more externalizing as well as internalizing problems compared to adolescent girls. The presence of certain specific problems among girls has also been recorded in a few studies. Japanese girls more often had neurotic problems whereas the New Zealand girls more frequently complained of aches and pains than boys. (Matsuura et al., 1989; McGee et al., 1984). Achenbach and Edelbrock (1981) also made similar observations in an American sample.

4. PREVALENCE OF SCHOLASTIC BACKWARDNESS

Scholastic backwardness was defined as a scholastic performance with a total marks percentage of less than 35%. In all 10.99% of the boys and 9.38% of the girls fell into this category giving an overall prevalence of 10.23% for scholastic backwardness (Table 25). There was no difference in the rates for boys and girls. There were no specific age-trends and class (standard)-trends, although a tendency was noticed for the prevalence to increase slightly with age and the standard in which they studied. School 5 which sampled only girls had the highest prevalence whereas the lowest prevalence was obtained in school 4. The medium of
instruction and income level of the family were not found to influence scholastic backwardness.

Employing a similar definition of scholastic backwardness, Rozario (1988) found an the overall prevalence of 32.02% while Sarkar (1990) reported a prevalence of 29.90% and Kapur (1985) a prevalence of 30%. These rates are higher compared to the rates obtained in the present study. This could be due to an older group of children studied in these studies, where the higher rates of scholastic backwardness could be the result of the inability of the children to cope with the increasing complexities in the syllabi. In another recent study, Venugopal and Raju (1988) using a tool specifically to screen out the learning disabled children reported a prevalence of 20.61% among 3rd and 4th standard students. Studies from abroad have more often focussed on specific reading difficulty rather than on general scholastic backwardness, and the rates have ranged between 3.3% (Berger et al., 1975) to 43% (Schachter et al., 1991).

An important finding in this study is the association between psychological disturbance and scholastic backwardness. About 26% of the psychologically disturbed children were found to be scholastically backward as against about 7% of the nondisturbed population. Among Western studies, the association between reading difficulty and psychological disturbance has been demonstrated in several
clinic (Yule and Rutter, 1985) as well as epidemiological studies of the total population (Rutter et al., 1970).

Ekblad (1990) found a positive correlation between psychological disturbance and poor school achievement among Chinese children. Several explanations have been put forth to account for this association. While one hypothesis holds that educational failure causes emotional and conduct disturbance (McGee et al., 1986; Rutter et al., 1970), another view favours a common etiology for both these disorders (Richman et al., 1982).

An analysis of other related problems at school revealed that girls (6.48%) more often had writing difficulty than boys (3.95%), and boys (15.43%) more often had arithmetic difficulty than girls. The boys and girls had almost similar rates for reading difficulty (Table 26). Cantwell and Baker (1977) have viewed reading and writing difficulties as originating from a general verbal disability, whereas, Yule and Rutter (1985) have pointed out that in young children mathematics difficulty could be due to a difficulty with basic operations of addition, subtraction, multiplication and division. Landsdown (1978) has pointed out that these difficulties were more often due to poor teaching methods and excessive anxiety in the children.

Only a small percentage of children were poor attenders, more so the boys. Boys more often had physical defects than
girls (such as squint in the eyes (3), hair lip (1), polio affected leg (1). Compared to girls, boys more often participated in extra curricular activities and had nick names. Some of the nick names included - Kulla, sodi, four eyes, kunta, sondili etc. Rozario (1988) also reported that a small percentage of his group of disturbed children had nick names.

To sum up, about 10.23% of the children in the entire sample studied had scholastic backwardness with no difference between the boys and girls in the rates. Girls more often had writing difficulties while boys had more arithmetic difficulties. A large proportion of psychologically disturbed children also had scholastic backwardness. Other problems such as poor attendance, nick names and physical defects, although uncommon in general, were more often seen among the boys.

5. FACTORS ASSOCIATED WITH PSYCHOLOGICAL DISTURBANCE

With the modification of the CBCL and TRF, a few changes occurred in the composition of the groups. Consequently, children were reassigned to the "disturbed" and "nondisturbed" groups. Based on the CBCL data, 164 and 171 children got reassigned as disturbed and nondisturbed respectively, and were studied in detail.
a. **Demographic variables:**

The demographic details of the sample considered for the detailed phase of the study are presented in Table 27. The disturbed and nondisturbed/control groups were comparable on the following variables: age, sex, mother's age, father's age, duration of stay in the city, family type, family size, sibship size, birth order of the child, parental absences and the presence of step parents and step siblings. The two groups however, did differ in terms of father's occupation and income, mother's educational level and total family income.

The average age of the children in the two groups was around $86.78 \pm 12.72$ months (around 7 years and 3 months). About 17.52% of the girls and 25.68% of the boys from the original sample screened constituted the subjects for the detailed phase of the study. Parents of children in both the groups were to a large extent in the early adulthood stage of the lifespan (average age of fathers = $38.31 \pm 8.56$ years; average age of mothers = $32.61 \pm 9.42$ years).

A majority of children from both the groups belonged to nuclear families. In the present study, a nuclear family was conceptualized as a family where only the married couple and their children stayed under one roof. Indian studies in the past have reported that a large number of children attending child guidance clinics belonged to nuclear families.
(Maachanda and Manchanda, 1978; Sharma et al., 1980). In this study the large number of nuclear families present in both the groups perhaps, is only a reflection of the current trend in the general population itself, where nuclear families are on the rise.

In the present study, family size was recorded by counting all the adults and children living in the family under one roof (Uma, 19881. A large proportion of children in both the groups were either first or second born, had only two or lesser number of siblings, and belonged to families which had five or lesser number of members. Viewing these findings together, it is evident that a major proportion of the children included in the detailed phase of the study belonged to small nuclear units. These families are perhaps representative of the families found in the present day urban parts of the country.

The association between psychological disturbance and variables such as sibship size, family size and ordinal position of the child have been studied by several workers. Findings obtained from Indian studies are conflicting (Daniel, 1989; Muralidharan, 1969; Uma, 1988), although Western studies have demonstrated some clear-cut associations (Rutter and Giller, 1983; Rutter et al., 1970). In the present study however, both the disturbed and control groups had an almost equal distribution of these variables
indicating an absence of association between these variables and psychological disturbance.

Only a small number of children from both the groups had lost either of their parents through death or were not living with their parents, and had step-mothers and step-siblings. None of the children had step-fathers.

The disturbed and control children did differ from each other on a few variables reflecting social class. The control children more often had fathers who had a professional qualification when compared to the disturbed children. Wang et al. (1989) in China, also found that higher levels of education in the fathers was associated with lower levels of disturbance in the children. The mothers of control children were also better (University) educated than the mothers of disturbed children, an observation also made by Daniel (1989) and Gowrie Devi (1983). There is evidence to suggest that college educated mothers are competent in rearing their children (Lytton 1971, Minton et al., 1971). Therefore, it is possible that the better educated mothers in this sample were able to provide an environment conducive to better mental health in their children through the use of competent child rearing methods.

The fathers of disturbed children more often had unskilled jobs when compared with the fathers of the control
children. Although Offord and Fleming (1991) and Shepherd et al. (1971) have reported a non-existent relationship between the two, a few studies have pointed out certain specific associations between father's occupational status and psychological disturbance. Matsuura et al. (1989) found that psychological disturbance was higher in the children of farmers while Rutter et al. (1975b) found them to be common among the children of semi-skilled labourers.

The father's income as well as the total family income was much lesser in the families of the disturbed children compared to the controls. Thus, the disturbed children in this sample were found to more often belong to economically disadvantaged families. Several studies have documented strong and consistent associations between economic disadvantage and child psychiatric disorder (Offord and Fleming, 1991). Economic disadvantage on the other hand, has been found to be associated with certain other correlates of psychological disturbance such as marital discord family dysfunction and low intelligence in children (Rutter and Giller, 1983; West and Farrington, 1973). It is therefore speculated that these correlates mediate the relationship between economic disadvantage and psychological disturbance.

In summary, the disturbed and nondisturbed groups of children were matched with each other on most of the demographic and background variables. The only difference
between the two groups was that disturbed children more often came from economically disadvantaged families, had parents with lower educational levels and had fathers who had an unskilled job compared to the fathers of control children. The disturbed children were more often born of consanguinous marriages than were the nondisturbed children.

b. Factors within the child

i) Developmental details:

Disturbed children were found to have significantly more perinatal problems than their controls (Table 28). This finding has also been supported by the work of Knobloch and Pasamanick (1966). Daniel (1989) found that her sample of conduct and mixed disordered children had more perinatal problems than did the normal or emotionally disordered children. Evidence not supporting the above also do exist (Davie et al., 1972). Shaffer (1985) concludes that research on the association between perinatal and behavioural problems has been largely inconclusive.

Developmental milestones (global and in the area of language) were more frequently present among the disturbed children. It needs to be pointed out here that most of these children caught up with the others in their development by the time of school entry. Evidence exists to support the association between developmental delays and later behaviour problems. Cantwell et al. (1980) found that delay in language
development was more common amongst boys and that it was associated with the presence of behaviour difficulties. Richman et al. (1982) found that 3% of the three year olds showed delayed language development and half of these children also had behaviour problems compared with a prevalence of 14% of behaviour problems in the total population. In a follow-up study of these children, it was found that language difficulty at the age of 3 years was associated with behaviour problems at the age of 8 years (Stevenson et al., 1985).

The frequency of medical problems was also significantly higher in the disturbed children when compared to their non-disturbed controls. The disturbed children had more instances of measles (8), typhoid (6), fever requiring hospitalization (4), jaundice (4) and road traffic accidents (2). Fergusson et al. (1990) also found that severe health problems requiring hospitalization were associated with later behaviour problems. Rutter et al. (1970) also reported an association between psychological disturbance and chronic health problems.

To sum up, the disturbed children had more developmental problems than the nondisturbed in the form of perinatal problems, delay in global and language development and a past history of medical problems.

ii. Schooling details:

It was found that the disturbed children more often had
school refusal at the time of school entry than did their nondisturbed peers (Table 29). The disturbed children more often expressed a desire of not wanting to go to school, cried all along the way from home to school, and continued to cry even after being left in school, in the initial one or two weeks of joining school. Often depressed mood has been reported in children with school refusal (Kahn, Nursten and Carrol, 1981) whereas Frommer (1972) suggested that school refusal was one of the commonest presenters of phobia in children. Weiner (1970) stated that a youngster may refuse school not only because he is lethargic and slowed down but also because of acute anxiety or somatic symptoms.

Scholastic backwardness, tuition attendance and complaints from school were more frequent among the disturbed children. The association between psychological disturbance and scholastic backwardness has been highlighted by several workers (eg., Rutter et al., 1970), and has been discussed elsewhere. It was found that a larger number of disturbed children attended private tuition in the mornings/evenings. This could be a consequence of being poor in studies. On the other hand, it could also be viewed within the context of over-ambition in the mothers of these children. The teachers of these children often complained about their poor scholastic performance as well as their disruptive behaviour, to their parents.
iii) Assets of the child:

The nondisturbed children had more talents had participated more often in sports and other extra curricular activities of the school (Table 30). It appears that participation in these activities helped the children channelize their energy in a socially acceptable manner thereby reducing the incidence of problem behaviours, amongst them. Recent evidence by Rae-Grant et al. (1989) also suggests that participation in two or more activities was associated with absence of disturbance. The authors viewed this as one of the protective factors against the development of disturbance among children.

iv) Temperament:

There is evidence to suggest that the temperament profile of psychologically disturbed children differs from that of normals (Prior, 1992). In view of these findings, a third hypothesis was proposed.

Hypotheses 3: **The disturbed and non disturbed children will differ significantly on the temperament dimensions.**

The results on temperament were analyzed separately for boys and girls (Tables 31a,b). It was found that the disturbed boys differed from the control boys on six out of nine dimensions and the disturbed girls differed from the control girls on four out of nine dimensions. The disturbed boys and girls were found to be more intense in their
emotional expression, had a lower threshold, were very sensitive to their environment, were more distractible, and had lower levels of persistence than the nondisturbed boys and girls. In addition, the boys were more active and had low adaptability compared to their nondisturbed controls. These findings lend support to the third hypothesis which gets accepted.

Although the disturbed children showed traits that predisposed them to face difficulties in their adjustment, their temperament profile did not fit into the description of "difficult temperament" as proposed by Thomas and Chess (1977). They postulated that difficult temperament predisposed a child to develop psychological disturbance. The only characteristics that the disturbed children in this group shared with "difficult children" of the Thomas and Chess (1977) study were a highly intense emotional expression among both boys and girls and low adaptability among boys. Several workers in the area have documented associations between difficult temperament and the development of behavioural and emotional problems, although the dimensions that constituted 'difficult temperament' varied from study to study (e.g. Graham et al., 1973; Rutter, 1987; Prior et al., 1989; Mazaide et al., 1989).

Regarding the manner in which temperament influences the development of behaviour problems, Thomas and Chess (1977)
have theorized that persistent manifestation of difficult temperament behaviours contribute to negative social interaction with significant others (e.g. parents, teachers and peers) which could undermine healthy psychosocial development and adjustment.

An important finding of this study was the presence of sex differences on four out of the nine temperament dimensions. The disturbed boys were found to be more active, more approaching, with a more cheerful and intense mood than the disturbed girls (Table 31a,b). The control boys and girls did not differ from each other on any of the nine temperament dimensions. These findings suggest that the temperament characteristics that predispose children to develop disturbance are different for boys and girls. Cameron (1978) found that boys who subsequently became mild cases were above the mean on negative mood and persistence and below the mean on the adaptability cluster. Girls who subsequently became clinic cases were below the mean on persistence and high or withdrawal, adaptability and mood. Other workers have also reported sex differences in temperament. Girls have been found to be less active (Buss and Plomin, 1975) and more fearful and anxious than boys (Huston, 1983). However, it is not yet clear whether these differences are due to biological factors, cultural conditioning and stereotyping or due to a combination of these factors.
The association between specific temperament dimensions and the types of psychological disturbance were also determined (Table 32). Once again, separate analyses were carried out for boys and girls. Externalizing boys and girls were found to be highly active and approaching towards people in social situations, cheerful and highly distractible. In addition, externalizing boys tended to have low levels of persistence, while the girls were highly adaptable. Support for these findings exist in literature. Associations have been found between difficult temperament and aggression (Kolvin et al., 1982) and oppositional disorder in middle childhood (Mazaide et al., 1989). Malhotra (1989) and Malhotra et al. (1986) found that conduct disordered children showed a temperament profile marked by high activity, intensity and a persistently negative mood. Daniel (1989) found that conduct disordered children were more sociable, adaptable, more approaching, more responsive to the environment, and more fussy in their sleeping and feeding habits than normal children. The findings regarding externalizing problems obtained in this study are closest to those obtained by Daniel (1989) with reference to conduct disorder.

Internalizing boys and girls were found to be highly withdrawing from social situations, were unhappy and had lower thresholds to stimuli from the environment. In
addition, internalizing girls also had reduced activity levels. Research findings on this aspect are more or less consistent and reinforce the present findings. Internalizing problems have been found to be associated with shyness (Lazarus, 1982), anxiety and fearfulness, social withdrawal and inhibited behaviour (Kagan et al., 1989; Rubin et al., 1989). Studying an emotionally disordered group, Malhotra and her colleagues found that they were less sociable and adaptable and highly distractible with an extreme negative mood compared to the normals (Malhotra and Malhotra, 1988; Malhotra et al., 1986) Daniel (1989) partially replicated this finding, where she found the emotional disordered group to be less sociable and outgoing, less adaptable, less energetic, more unhappy, irritable, discontented, intense and active than normals. They were also poorly responsive to the environment and had poor eating habits.

Children with learning problems were found to be highly distractible and had low persistence. The girls who had learning problems were highly intense in their emotional expression and had low thresholds in addition to the above. Support for this finding comes from the work of Sharma et al. (1983) who found that children with high scholastic achievement had lower levels of distractibility and high levels of persistence. These findings implicate attentional problems as the precursors of learning problems at school.
In general, the findings of this study indicate that specific associations exist between temperament and the types of psychological disturbances. Thus, externalizing problems were found associated with high activity levels, sociability and intense mood states; internalizing problems with low activity levels, a tendency to withdraw and intense negative (unhappy) mood; and learning problems with high levels of distractibility and low levels of persistence. The findings of this study therefore extend the findings of earlier work where difficult temperament was found associated with almost all types of disturbances. Although this study has established a few specific associations, the mechanisms underlying these associations are not clear, and future work in the area could deal with these issues.

c) Factors in the family

i) Family history of mental illness:

A large proportion of disturbed children were born of consanguineous marriages. Also a large number of the disturbed children had a family history of epilepsy compared to the nondisturbed/control children (Table 33).

An important finding was that a history of regular drinking was present more often among the fathers of the disturbed children (Table 33). In this study, regular drinking was defined as consumption of alcohol on a daily basis. It was not possible to establish alcoholism according
to a diagnostic criteria because the necessary information was not forthcoming from the mothers either due to their lack of awareness about this, or their unwillingness to report this problem. Thus the development of tolerance, psychological and physiological dependence, as well as the presence or absence of withdrawal features following abstinence could not be established. Yet, the regularity of alcohol consumption among fathers itself was found to be associated with psychological disturbance in their children.

Several studies based on both clinic and general population samples have reported associations between parental psychiatric disorder in children (Rutter, 1966; Beardslee et al., 1983; Rutter and Quinton, 1984). More often than not, it has been found that these parental disorders fall into the two overlapping categories of sociopathy and alcoholism. In this study, information regarding antisocial personality in the fathers could not be obtained due to reasons cited above. However, the finding regarding regular drinking is in keeping with those of several other studies. Elevated rates of overall and specific psychological disturbance have been recorded among the children of alcoholic parents (von Knorring, 1991).

There is evidence to suggest that the association between parental alcoholism and psychological disturbance in children is not a direct one. The consequences of alcoholism
such as family disruption and marital discord (von Knorring, 1991), family violence (Black et al., 1986) and poor parenting (Udaykumar et al., 1984) have been found to mediate this association.

Neuroticism was also found to be high among the mothers of disturbed children (Table 34). Several studies have reported an association between parental neuroticism and psychological disturbance in children (Links et al., 1990; Rutter et al., 1975b; Rutter and Gould, 1985).

It has been demonstrated that parental mental disorder has a more pronounced effect on the child when the symptoms involve the child. Depressed mothers have been found to be less sensitively tuned in their responsiveness to the child (Radke-Yarrow et al., 1985). Further, it has been found that depressed mothers often induce aggression in their children because they are irritable and unable to meet the children's emotional needs (Richman et al., 1982).

Although literature points out that major psychotic disorders are frequent among the parents of disturbed children (see Rutter and Cox, 1985), such a finding has not been obtained in this study.

ii) Family interactions:

Interesting findings were obtained in this study with reference to family interactions (Table 35a,b). It was found
that the family atmosphere of the disturbed children was characterized by frequent poor father-mother and father-child interactions (Table 35a), father's indifference towards the child, maternal rejection, overprotection, overambition, and sibling hostility (Table 35b). Accordingly, the interactions between the parents of the disturbed children were marked by frequent arguments, disagreements, fights, violence, and verbal abuse. The father-child interactions were characterized by a feeling of fear and a tendency to withdraw from the father on the part of the child. The fathers in turn were more often indifferent to the emotional and social needs of the child, were less reassuring, and often expected the mothers to totally take over the burden of raising the children. The mothers were more often found to be overprotective i.e., they often pampered and indulged the child too much, were fussy about their food habits, and often gave into the child's demands, even though they appeared unreasonable. They were also overambitious for their children, especially with reference to educational achievement. Often the expectations of the mother exceeded the abilities of the child. In some instances, the mothers had even planned out a career for their children. It was interesting to note that a large proportion of mothers of both the disturbed and nondisturbed children shared this attitude, although, the difference was significant in favour of the disturbed group. On the whole, only a small percentage
of mothers rejected their children, the majority of them, having disturbed children. These mothers often expressed the wish that the index child were not born and often blamed this child for any stressor or misfortune that occurred in their lives.

Support for the above is available in the several strands of findings evident in the relevant literature. By far the factor most consistently associated with deviance has been marital discord, and this has been identified as a risk factor for the development of disturbances in nonclinic children (Emery, 1982). The interactions of families with a disturbed child have been marked by more negative feelings and fewer positive feelings (Rutter and Cox, 1985). Often marital discord has been found to lead to family discord, disorganization, and disruption (Rutter and Giller, 1983), resulting in tension in the family (Rutter and Cox, 1985), and this constituted a major stressor for the child (Rutter and Quinton, 1984). More specifically, marital hostility was found to lead to aggressive and antisocial behaviour in children, especially when they had observed it (Porter and O’Leary, 1980). Thus, family violence often served as a model of inconsistency, aggression and hostility (Bandura, 1969). Thus, overt conflict has been found to be more deleterious than parental relationship marked by unhappiness and apathy. Marital discord has been found to result in disagreement among parents with reference to child rearing (Block et al.,
resulting in disorganized discipline (West and Farrington, 1973). Further, as proposed by Bowlby (1969) the presence of discord in the family often affected the development of loving relationships between parents and children.

In view of the above findings it could be speculated the impaired father-child interaction noted in this study could be a consequence of the impaired father-mother interaction. It is of significance to note that for the most part, the fathers of disturbed children were also indifferent towards their children. Certain issues can be raised here with reference to the alignments within the family in the face of discord. Thus it could be that the children align with the mother thereby creating a rift in their relationship with their fathers, whereas fathers react to the situation with indifference. Although this explanation is plausible, the data of this study does not lend itself to such extensive inferences. This hypothesis is however of interest, and could be explored in future research.

Research presents conflicting evidence with reference to the relationship between maternal overprotection and psychological disturbances. Berg and McGuire (1974) did not find any difference in maternal overprotection between normal and neurotic children. Systematically studying the association between overprotection and childhood and adult
psychiatric disorder, Parker (1983) reported that the former predicted the latter both in childhood and in adult life. In India, Gowrie Devi (1983), Kishore et al. (1972), Murthy et al. (1974) reported that the parents of clinic attending children tended to pamper, overindulge and overprotect their children. Rutter and Cox (1985) tentatively concluded that the harm probably came from the underlying anxiety and uncertainty. Almost no studies exist to either support or contradict the finding obtained thus far regarding the relationship between maternal overambition and psychological disturbance.

Studies dealing with the association between maternal rejection and psychological disturbance in children also appear to be limited in number. Of the studies available, a positive association between the two have been reported by Kishore et al. (1972), Bapna and Ramanujam (1976), Chacko (1964) and Murthy et al. (1974). Daniel (1989) found the mothers of clinic children to be both hostile and rejecting in their attitudes towards their children. Inspite of this consistent association, the temporal relationship between psychological disturbance in children and maternal attitudes is not yet clear.

In this study the disturbed children were found to have more sibling hostility in their families than did the nondisturbed children. Several studies have highlighted the
impact of sibling relationships on the development of deviance. Brody, Stoneman and Burke (1987) pointed out that the emotional climate in the family was related to the frequency and intensity of the conflict between siblings. Several other studies have also documented associations between sibling hostility and psychological disturbance in the index child (Daniel, 1989; Dunn, 1988; Patterson, 1982; Richman et al., 1982).

To summarize, the findings in this study indicate that poor family interactions are more frequent among the disturbed children when compared to the normal controls.

iii) Disciplining:

In keeping with the findings recorded in literature, it was found in the present study that the disturbed children were more often subjected to inconsistent and inadequate disciplining. Their fathers less often involved themselves in the process of disciplining than did the fathers of nondisturbed children. The disciplining in the homes of control children was most often adequate and material reinforcements were used more frequently (Table 36). Inconsistency in disciplining was defined as lack of agreement between parents regarding 'which' behaviour needs to be disciplined, and 'how' and 'when' should it be disciplined. The dimensions of direction (positive or negative), cross situational consistency and uniformity in
The importance of father's role in disciplining has been emphasized by Margolin and Patterson (1975). In the present study it was seen that the fathers of disturbed children involved themselves less often in disciplining their children than did the fathers of nondisturbed children. This finding appears significant when seen in the context of other related findings of a poor father-child interaction and an indifferent attitude of the father towards the child.

The control children were not only subjected to adequate disciplining but were also exposed to a wider variety of reinforcements than were the disturbed children. Although the two groups were about equally exposed to verbal (praising, berating etc.) and physical (beating, hugging, etc.) methods, the nondisturbed children were in addition provided with material reinforcements (eg. toys, sweets, money, outings, movies, etc.). The wider range in the reinforcements used perhaps brought about better compliance and produced the desired behaviour more readily thereby reducing undesirable behaviour in the control group. Studies in this area have not addressed the issue of the efficiency of the use of a wide range by reinforcements, although, by and large they seem to point out that disturbed children were more often subjected to harsh methods of punishment such as smacking and beating (Hackett et al., 1991; Minde, 1977).
To summarize, the families of the disturbed children were characterized by regular drinking in the father; neuroticism in the mother; poor father-mother interaction; poor father-child interaction; father's indifference; mother's rejection, overprotection and overambition; sibling hostility; inconsistent and inadequate disciplining; and father being less involved with disciplining. It would be interesting in future work to determine the associations among these variables as well as the manner in which they relate to psychological disturbance individually and in combination.

d) Relationships of the child

No disturbance was noticed in the interactions of the disturbed children with members from outside the family (Table 37). Thus, their interactions with neighbours, peers in the neighbourhood and at school and with their teachers was more or less cordial. It could be that factors which related to their disturbance did not originate from these sources. A similar finding was also noted by Sarkar (1990) who found that inspite of being disturbed the children continued to maintain a good relationship with their teachers. However, Uma (1988) noted that her sample of hysterics more often had stressors at school, rather than at home. It could perhaps be concluded that in this sample, the children rarely had problems at school, and that most of their problems arose from the family environment as pointed
out earlier. Therefore, 'impairment' as conceptualized in this study was not present in terms of impaired relationships of the child with members from outside the family. This indicates that the measure of impairment used in this study was perhaps inadequate.

FACTORS ASSOCIATED WITH SCHOLASTIC BACKWARDNESS

a) Maturational level

A small group of scholastically backward children were taken up for further study by administering the BGT. A comparable group of scholastically superior children frequency matched for age, sex and the class in which they studied were also considered for the study. The mean age of the two groups was around 92 months i.e. 7 years and 8 months (Table 38).

The BGT provides a measure of the developmental level of the child up till the age of 11 years (Koppitz, 1975) in terms of visuo-motor integration. The BGT is scored for errors. It was found that the scholastically backward children committed significantly more number of errors (6.24 ± 7.26) than did the scholastically superior children (2.76 ± 2.22). The developmental age of the scholastically backward group was between 7 years and 7 years 5 months, which was slightly lower than the group chronological age. The scholastically superior group had its developmental age between 8 years 6 months and 8 years 11 months. Thus the scholastically
backward group, as a whole lagged behind in its maturational level, while the superior group had a developmental age that surpassed its chronological age. It was also found that a larger proportion of the educationally backward group (91%) had developmental lag as compared to only 42% from the superior group. The finding of this study that the backward children lag in their development and have a lower level of maturation with reference to visuo-motor integration has also been reported by John (1989) and Koppitz (1963).

An analysis of the type of errors (Table, 39) indicated that the most commonly committed errors by the scholastically backward children were those of distortion, rotation, perseveration and integration of figures.

b) Other factors

Data was available on the various parent report measures for 62 and 67 scholastically backward and superior children respectively. These were analysed and only the significant findings are presented and discussed (Table 40).

The scholastically backward children more often came from families which lacked basic amenities such as water supply, electricity and drainage. The two groups however did not differ from each other in terms of family income. Several studies have reported that poor scholastic performance was associated with economic deprivation and disadvantaged family conditions (Davie et al., 1972; Rutter
and Madge 1976; Silva, McGee and Williams, 1985). Such deprived conditions perhaps indicated the inability of the parents to afford facilities (stationary, furniture etc.) to the child, which are conducive to a good educational performance.

In addition to these deprived conditions, the scholastically backward children also had families more often marked by poor parental interaction, regular drinking in the father and inconsistent disciplining. Although the exact mechanisms by which these produce poor educational achievement is not yet clearly understood, there is reason to believe that the underlying mechanisms are almost the same as those for the development of psychological disturbance. Besides being strongly associated with one another, scholastic backwardness and psychological disturbance are also being viewed as having a common etiology (Richman et al., 1982).

The scholastically backward children also changed their schools more frequently than did the superior children. However it needs to be pointed out here that a large number of children from both the groups changed schools while moving from kindergarten to class 1, and only a small percentage of these school changes were due to the difficulty they faced in coping with the teaching methods in any given school. A large number of backward children attended private tuition and very few had hobbies.
In summary, a large proportion of the scholastically backward children came from homes which lacked basic amenities such as water supply, electricity and drainage. Further their families more often were characterized by regular drinking in the father, poor parental interaction and inconsistent disciplining. These children changed schools more often and attended private tuition. They also had almost no hobbies.

INTEGRATION OF FINDINGS

An integration of the major findings of this study is in order. Drawing from the studies done in the past, it is possible to postulate that the fathers of disturbed children often consume alcohol regularly resulting in the depletion of the already limited family income. This perhaps results in frequent father–mother arguments leading to family violence and abuse, and subsequently perhaps to neuroticism in the mothers. All these factors either independently or in combination could lead to poor parental practices in the family. Thus, disciplining often becomes inadequate and inconsistent. The father becomes indifferent towards the children and abstains from disciplining them, whereas the mother tries to compensate for the indifference of the father by being overprotective. This is perhaps also associated with poor father-child interactions. The family violence and abuse then could serve as a model for interpersonal behaviour for the children, resulting in sibling hostility.
Given this family background, a child with a temperament marked by low levels of adaptability and threshold and a tendency towards intense negative emotional expression could react in either of the two possible ways: by withdrawing within him/herself thereby suffering alone (internalizing problems) or by displacing his resentment of the existing family situation on other members inside and outside his home (externalizing problems). The presence of other problems such as developmental delays could further complicate the picture. Often, the presence of these problems could cause internal distraction, especially to those children prone to high levels of distractibility and low levels of persistence. This in turn could lead to poor scholastic performance in several of the disturbed children.

This is only a plausible formulation of psychopathology based on the findings of the present study. Research evidence indicates that several of the variables included in this study are often interrelated (Fergusson et al., 1990; Rutter and Cox, 1985) and that the probability of developing disturbance increases with the increase in the number of risk factors (Blanz et al., 1991; Rutter et al., 1970). Yet, the actual mechanisms underlying the association between these correlates and psychological disturbance is not clear. The formulation proposed above is therefore only tentative, and it is also possible to formulate a totally different model of psychopathology from these same variables identified in this
study. It is therefore necessary through further work to test out the validity of the views put forth in this study. The use of multivariate statistical techniques could go a long way in assisting in the integration of the available findings towards a theory of childhood psychopathology.

IMPLICATIONS

The findings of this study have several implications for theory, research and intervention in the area of child mental health.

Theoretical implications:

This study has brought to light several theoretical issues with reference to childhood psychological disturbance and psychopathology. First, it has demonstrated that there are children in the general population who show minor/mild psychological disturbances not necessarily amounting to clinical disorders. Although these children do not show any obvious impairment in their functioning, especially in terms of their relationship with others, these problems nevertheless should not be overlooked. They are frequent enough and intense enough to be noticed by teachers and parents.

Second, although research evidence the world over by and large points towards a male preponderance over females for psychological disturbance, the results of this study have
only partially supported this view. The higher rate of disturbance among females obtained in this study when assessed by parents suggests that, the issue of gender differences in rates could be a function of the informants employed, the situations (home/school) covered, and the attitudes and perceptions of the informants as to what constitutes deviant behaviour in boys and girls. These issues need to be studied in greater detail to understand the issue of gender differences better.

Third, a related issue is the cross-situational consistency of children's behavior. It is now established that children's behaviour varies in different situations. However, what is not clear is whether there are any gender differences in this variation across situations. Thus, is the behaviour of boys more stable across situations than that of girls? If so, why? These are questions to which answers need to be sought.

Fourth, as found in several earlier studies, this study also confirmed the frequent presence of externalizing problems among boys and internalizing problems among girls. It would be of interest to seek explanations for this gender difference in the nature of problems.

Fifth, one trend noted (although not a significant finding) was that gender difference in the rates of disturbances emerged only around the seventh year i.e., the
rates for boys remained constant across age, whereas it tended to reduce with age for girls, especially when assessed by teachers. Perhaps, reasons for this finding lie in the differences in the socialization processes, gender role stereotyping, differing expectations of what constitutes desirable behaviour for boys and girls etc. Issues such as these could be investigated in relation to psychological disturbance of children in future work. Thus future epidemiological studies could do well to view psychological disturbance from a sociocultural perspective rather than resorting to a mere head count of individuals with psychological disturbance.

Sixth, an important finding of the study is that, apart from the traditional categories of externalizing and internalizing disorders, a substantial number of children also had 'learning problems', as identified by both parents and teachers. If replicated across studies, this finding could call for a fresh view of the classification of children's psychological problems, especially for those found among the general population children.

Seventh, an issue related to the above is the overlap of scholastic backwardness with psychological disturbance. It would be of interest to determine whether scholastic backwardness co-exists with externalizing or with internalizing problems. This would perhaps throw light on the
prognosis as well as help in the management of these problems.

Eighth, in keeping with the trend noted in the area, the present study has highlighted the observation that psychological disturbance is multifactorial. Several of the identified correlates have been in turn found to be associated amongst themselves. However, it is not clear whether these risk factors act alone or in combination. The exact mechanisms underlying the associations between risk factors and psychological disturbance are yet to be delineated. An integration of these findings is required. Evidence however exists, to favour a biopsychosocial model of psychopathology in children.

Research implications:

Following are the research implications of this study.

One issue is with reference to the calibration of measures to suit the population on which they are to be used. The Achenbach scales which were standardized on a clinic population were not found to be satisfactory when used on a general school population. Over 50% of the items were redundant resulting in the shortening of the scales and consequently the modification of the cut-off points. The efficiency values (i.e. sensitivity and specificity) of the modified scales have pointed out the magnitude of error that would have been attributed to the screening tool, had the
original author recommended cut-off points been used. This finding implies that calibration of measures is an important methodological step which should not be overlooked in similar situations in future studies.

Another issue is the need for developing separate norms for the age groups of 5 to 8 years and 9 to 11 years, instead of the current practice of providing common norms for the wide age range of 5 to 11 years. Such a break-up of age groups is necessary, as the symptom picture in the two groups is often different. Problems such as enuresis and soiling may be totally absent in the 9-11 year old children of the general population, whereas, 'feeling persecuted', 'feeling unloved' etc., may be absent among the 5-8 year old children owing to their relatively poor cognitive and emotional development.

One other issue refers to the choice of informants in studies on young children. As noted in this study, teachers reported externalizing and learning problems more often did the parents, and parents reported internalizing problems more often than did the teachers. These findings indicate that both parents and teachers are competent in themselves to report varied kinds of problems. Therefore, without discounting the value of the information provided by either, it is necessary to employ both these informants to obtain a more comprehensive view of the child's problems.
A closely related issue is that referring to the ways and means of integrating information obtained from multiple sources. As the different sources (especially parents and teachers) agree in their assessment only upto a moderate degree, it would be useful to highlight the areas where the agreement is maximum. Further efforts need to be made to arrive at the means of meaningfully integrating the discrepant information either qualitatively or through statistical procedures.

Implications for intervention:

The findings of this study have certain implications for intervention too. The reporting of psychological problems in children by both teachers and parents calls for intervention both at home and at school. Both parents and teachers could be involved in the management of these problems.

At the school level, teachers could be made competent to manage some of the problems frequently encountered in classroom situations. eg., poor concentration, restlessness, destroying things, fighting, etc. This could be done by introducing in their (teachers') syllabi not only the principles of normal child development, but also of deviant behaviour/psychological disturbance in children. They could be further trained to identify, assess and manage problem behaviours in children. Their reportoire could include the knowledge of the principles of behaviour modification and
their implementation, the use of reinforcements etc. An important problem that they would require to deal with is "learning problems". After teaching them the identification of the basic defects in the learning process, teachers could be trained in the planning and execution of remediation programmes for these children. They could be further sensitized to encourage emotional expression and the development of self esteem in the children, as well as to channelize children's energy into acceptable activities such as sports, music, drama etc. It was noted in this study that the nondisturbed children more often participated in sports and other extra curricular activities in the school and had more hobbies and talents than the disturbed children.

The parents could also be counselled regarding the ways and means of dealing with problems seen at home such as, temper tantrums, demanding attention, fighting, lying, enuresis etc. Methods of implementing behaviour modification packages, providing opportunities for self development, providing a conducive environment at home for better personal development of the child could be stressed in the sessions with parents. Children could also be managed by making them feel more responsible for their actions.

Often due to time constraints, such intense implementation of the proposed packages may not be possible for both teachers and parents. Therefore, the services of
school, psychologists/counsellors could be made use of, so that they could devote more time and resources to the management of these children, thereby providing intervention at the level of the community.

A CRITIQUE OF THE STUDY

Merits of the study:

1. This was an epidemiological study which employed a two-stage design. This was done to reduce the misclassification of cases and noncases by assessing a few children in detail in the second stage of the study.

2. Several precautions were taken to make the study methodologically sound. One such step included the employment of large samples both at the screening and detailed study phases. Attempts were made to keep the boy:girl ratio constant at both the phases of the study.

3. The detailed phase of the study used matched controls, matching being done in terms of age, sex and the class in which they studied.

4. Teachers were screened for neuroticism before including them to participate in the study. However, none of the teachers who were contacted scored high on the neuroticism scale.

5. Attempts were made to reduce the drop-out rate in the study by making repeated requests, and a final call to parents and the end of the academic year to participate in the study.
6. The time gap between the teacher and parent assessments were kept at a minimum (average of 8 days) to ensure that they were referring to the same time period while rating children's psychological problems.

7. Although the screening tool employed in this study had been previously used widely in India, no attempt had been made to assess its reliability. Therefore, the reliability of the tool was studied in terms of interrater reliability and test-retest reliability on two independent large samples.

8. The discriminative ability of the CBCL—one of the measures used with parents in the detailed phase of the study—was also determined, although on a small clinic sample.

9. The initial findings suggested that the TRF and CBCL were not efficient measures for use with population under study, when used according to the recommendations of the authors. These measures were therefore modified by deleting the redundant items and performing factor analysis of the shortened scale to obtain subscales, and by determining cut-off points which were efficient.

10. Keeping in mind the situational specificity of children's behaviour, both parents and teachers were used as informants in the detailed phase of the study.

11. Unlike in the earlier epidemiological school surveys carried out in the country, this study did not restrict
itself to the mere head count of individuals with psychological disturbance. This study also studied the "factors that determined the distribution" of psychological disturbance, in keeping with the definition of epidemiology. Thus, factors such as temperament, developmental details, family details, family dynamics, etc., were studied in relation to psychological disturbance.

12. Attempts were made to operationally define some of the 'factors' studied in relation to psychological disturbance.

13. Psychological disturbance was also studied in relation to the 'impairment' it caused in terms of impaired relationships of the child with the members from outside his/her family.

14. The prevalence of scholastic backwardness was also studied. Further, an attempt was made to determine the factors associated with scholastic backwardness, especially the development of visuo-motor integration in the child.

15. The study was carried out within the ethical guidelines formulated for the study.

16. The study has made important contributions to theory building in the area of childhood psychopathology and to research methodology as pointed out in an earlier section. It has also highlighted several implications.
4. Likewise, the measure of 'impairment' used in this study did not prove to be effective. Perhaps, a more comprehensive, valid, reliable and objective measure would have been useful.

5. In the detailed phase of the study, a structured interview schedule could have been used to determine whether the children identified as disturbed in the first phase did in fact manifest psychiatric disorder. However since the aim of the study was only a detailed assessment of mild psychological disturbance, a detailed behaviour checklist was used instead.

6. The drop-out rate in this study (second phase—for parent reports) was quite high in spite of the repeated requests made to parents to participate in the study. This was perhaps because of the procedure adopted to contact parents. Perhaps a better response rate would have been obtained had the investigator made attempts to visit either the homes or offices of the parents, rather than expecting them to meet the investigator at the school.