CHAPTER 1
INTRODUCTION

The development of child psychiatry as a clinical speciality has occurred at a rapid pace over the last half century. Diagnostic and therapeutic services are now widespread in the developed countries and in the process of spreading in the developing countries. The concurrent growth of child psychiatric epidemiology has often been cited as one of the important reasons for this growth (Graham, 1977).

Epidemiology has been defined as the study of both the disease or physiological condition in human populations and the factors that influence that distribution (Lillienfeld, 1976). Child psychiatric epidemiology then, centers on the study of the distribution of child psychiatric disorders and the variables that influence it (Offord, 1985).

Epidemiological studies are of two types: descriptive and experimental (Earls, 1979; Robins, 1978a). Descriptive studies answer a variety of questions depending on the sample and design used. They include the prevalence of overall psychological disturbance as well as that of specific disorders, and the correlates of disturbance. Longitudinal studies make it possible to study disturbances in children from a developmental perspective (Rutter, 1988); and when cultural aspects are considered from the socio-cultural
perspective as well (Kellam, 1989). Thus, age of onset and course of disorders, as also the effect of risk and protective factors on the development of psychological disturbance could be studied. Experimental studies, on the other hand more often involve experimentation in terms of prevention.

The data resulting from epidemiological studies have two major uses: administrative and scientific (Earls, 1979; Robins, 1978a). In the administrative area, such data allow for comparisons to be made among geographic regions on the frequency or prevalence of child psychiatric disorders. In addition, comparisons can be made between morbidity and service utilization, and to plan future service needs in a rational fashion. The scientific uses of the epidemiologic data center on discovering more about the disorders, so that a comprehensive picture is obtained in terms of the nature, course and etiology of the disorders. The data gathered thus also allow investigators to construct plausible causal chains for these disorders (Robins, 1978a). The study of the effectiveness of interventions is an other important scientific use of epidemiology. With the tremendous potential that epidemiology could provide for the growth of child psychiatry, it is not surprising that child psychiatric epidemiology has progressed over the past twenty-five years.
The first systematic wide scale epidemiological study in the field of child psychiatry was the Buffalo study undertaken by Lapouse and Monk (1964) in the mid 1950s. This study brought to light certain important findings that indicated the presence of a high frequency of emotional and behavioural problems among 6-12 year old children. It also pointed out that a few problems decreased with age and that discrepancies existed between mother and child reports for some symptoms. However, this study did not provide clinical diagnosis for the children.

Although several other similar surveys were undertaken at about the same time, the first large scale epidemiological study with a child psychiatric focus was the British series of epidemiological studies of educational, psychiatric and physical disorders undertaken in the Isle of Wight and in an inner London Borough during the mid 1960s (Rutter, Tizard, Yule, Graham and Whitmore, 1976; Rutter, Tizard and Whitmore, 1970). These studies involved several methodological innovations. They included: the use of multiple data sources; the employment of a two-stage research strategy; the conduct of interviews with both parents and children; the diagnosing of psychiatric disorder using social impairment as one of the criterion of severity; the employment of longitudinal designs to study the age of onset, course of the disorder and the effect of risk and protective factors; the testing out of
certain causal hypothesis; and the use of standardized neurodevelopmental assessments to relate neurological findings to psychiatric measures (Rutter, 1989).

The Isle of Wight studies also produced many empirical findings out of which several issues emerged, which are of relevance even today (Rutter, 1989). First, it threw light on the clinical significance of various behaviours based on the social impairment it caused. Thus, poor peer relations and inattention/overactivity were found to have strong associations with psychiatric disorder. Second, it was found that depressive symptoms were common among adolescents, but not so common among younger children. Third, it showed relatively low agreement between parent and teacher reports of children's deviant behaviour. Fourth, it pointed out that certain disorders co-existed i.e., reading difficulty with conduct disturbance. Fifth, it noted that a substantial number of children showed a mixed picture comprising of conduct and emotional symptoms. Sixth, it pointed out the causal role of adverse family circumstances and organic brain dysfunction in the development of psychological disturbance.

During a quarter of a century since the above studies, child psychiatric epidemiology has both burgeoned and strengthened (Earls 1980; Links, 1983; Graham, 1977; Vikan, 1985). This has been due to improvements in case identification and methods of assessment (Boyle and Jones,
1985; Graham, 1986). In general, the research in this area has been devoted most exclusively to descriptive work (Earls, 1979). These studies have given us a substantial base of knowledge on the prevalence and determinants of psychiatric disorders in children (Earls, 1989).

In general, most of the surveys have studied the prevalence of "general psychological disturbance" or "childhood maladjustment" (Gould, Wunsch-Hitzig and Dohrenwend, 1981). As noted by Offord (1985), most psychiatric disorders appear as failure of adaptation to environmental demands, rather than disease in the organic sense. Reviewing 25 surveys carried out in the U.S., Gould et al. (1981) estimated the prevalence of childhood maladjustment to be not less than 11.8% for American children. This, they reported was only a "conservative estimate". Likewise, another observation was that the prevalence of psychological disturbance for children in the general population ranged from 10-20% at all ages from 3 years to adolescence. In fact this range is similar to that reported in studies of adults. The range itself is a function of where one wishes to place the cut-off point (Graham, 1986; Offord, 1985).

Besides the study of overall disturbance, a few broad categories of disorder such as conduct and emotion have also been studied. Children with conduct disorder have been found
to comprise the single largest category of psychological disturbance in youth (Rutter et al., 1970). Among the most frequently found emotional/neurotic disorders are specific fears and anxiety in young children (Marks and Gelder, 1961) and depression in adolescence (Rutter et al., 1976).

The correlates of psychological disturbance have also been studied. The limited data available with reference to age trends suggests that there is a slight increase in the rate of psychiatric disturbance between late childhood (9 to 12 years) and early adolescence (13 to 16 years) (Rutter et al., 1976). With reference to gender differences, the major findings indicate that the rate of maladjustment for boys exceeds the rate for girls (Gould et al., 1981). However, findings on gender differences have shown to be markedly influenced by the type of disorder. For instance, the rate of conduct disorder has been found to be greater for males than for females, but those for emotional disorder have been found to be greater in females or almost equal among both boys and girls (Achenbach and Edelbrock, 1981; and Rutter, 1977).

Several other correlates of psychological disturbance have also been delineated. Of these are low socioeconomic status, large family size, low levels of parental education, overcrowding at home, large sibship size, chronic health problems in the child, poverty, marital discord, harsh and
inconsistent disciplining, parental mental illness and criminality, and weak family relationships (Offord, 1985; Offord and Fleming, 1991; Rutter and Cox, 1985; Rutter and Quinton, 1984). Psychological disturbance in general has been associated with difficult temperament (Prior, 1992), and the role of other correlates as mediating variables is now being established (Rutter, 1987). The effects of school on disturbance is, also being researched (Maughan, 1988). The current trend in the area is towards the tying up of these various strands of findings into a comprehensive model of psychopathology in children (Fergusson, Horwood, and Lawton, 1990).

Alongside the rich contributions made in the area, are several issues which need to be considered carefully, for further progress to occur. These include the lack of an acceptable classificatory system, lack of instruments with good psychometric properties, the use of multiple informants and drawbacks in the measurement of the correlates of disturbance (Achenbach, 1978a; Graham, 1986; Links, 1983; Offord, 1985; Offord and Fleming, 1991).

The issue of classification is of critical importance to the epidemiological approach because the first major problem in attempting to estimate the prevalence of childhood psychiatric disturbance involves the definition of a "case" (Gould et al., 1981). To date, no acceptable
nosology has been established. In general two approaches to the classification of childhood psychiatric disorders exist (Boyle and Jones, 1985). One employs the clinically derived categoric approach, exemplified by the classificatory scheme of the DSM-III (APA, 1980), and the ICD-9 (WHO, 1978). Several limitations exist in the use of these systems in empirical research, one of which is the unsatisfactory interrater reliability in diagnosing even broad categories of disorders (APA, 1980). A second method of classification relies on multivariate techniques such as factor and cluster analyses to identify syndromes to classify children, resulting in an empirically derived classificatory system (Achenbach and Edelbrock, 1978). There are indications however, that these two approaches do show evidence of convergence (Achenbach and Edelbrock, 1978).

A lack of uniformity exists in the methods of case definitions employed across studies. Different methods of case identification or definition of deviance have been identified in the existing literature (Links, 1983). These include the determination of the prevalence of individual problems (eg. Werry and Quay, 1971), the 'symptom loading' approach (eg. Richman, Stevenson and Graham, 1982), the statistical approach (eg. Shepherd, Oppenheim and Mitchell, 1971) and the use of clinical interviews to arrive at a diagnosis of disorder (eg. Rutter et al., 1970). A combination of the above methods has also been used (Rutter
et al., 1970). However, to date, no "gold standard" has been arrived at with reference to the definition of disturbance (Links, 1983; Offord, 1985).

The problem of definition extends also to the correlates of disorders. For instance, parental illness in one survey (Cullen and Boundy, 1966) included parental physical illness, accidents and operations whereas in another (Rutter et al., 1970), the definition focused on psychiatric illness, particularly on psychosomatic, neurotic and depressive symptoms. In addition, the same correlates could be measured in different ways. Marital adjustment, for example, was rated using interviewers' overall impressions in one study (Rutter et al., 1975b) whereas, in other studies, the rating was based on questions on marital discord and separation (Cullen and Boundy, 1966; Shepherd et al., 1971).

The issue relating to the psychometric properties of instruments used to measure childhood psychiatric disorders has often been discussed as an important one. According to Boyle and Jones (1985), a sound measure should have the properties of acceptability, applicability, procedural adequacy, reliability and validity. Although most measures report adequate reliability values, they often lack in validity. Very rarely are varied kinds of validity established on any given measure, perhaps with the exception of the questionnaires developed by Rutter (1967), Achenbach
and Edelbrock (1983, 1986) and Quay and Peterson (1979). The paucity of good instruments extends also to the measurement of the correlates of disturbance. The need therefore is to develop valid, reliable and objective measures of disorders as well as of their correlates.

Sampling is also considered an important issue. Three aspects of sampling have often been the focus of attention: representativeness of the sample with reference to the population from which it is drawn; justification for the sample size used; and description of the survey population along detailed demographic lines. Rarely do surveys provide adequate information on all the three aspects of sampling. This is necessary to determine the generalizability of the findings (Links, 1983). A majority of workers have studied the school population due to convenience, thereby restricting the generalizability of their findings (Graham, 1977).

One important concern has been with reference to the choice of informants. Due to the situational specificity of children's behaviour (Rutter et al., 1970), the use of multiple informants becomes necessary. A few difficulties however arise with the use of multiple data sources. First, the agreement between parents and teachers has been found to be only low to moderate (Achenbach, McConaughty and Howell, 1987a). Another has been with regard to the difficulty encountered in the integration of information from multiple
sources (Offord and Fleming, 1991). Several solutions have been offered for this problem which include: (a) combining information i.e., giving value for any positive rating regardless of informant (b) giving priority to different informants for different aspects of behaviour. eg: assigning priority to child reports of internal mood, and to parent reports of behaviour problems (c) assigning a confidence rating to each behaviour, proportionate to the amount of agreement between informants and (d) considering disorder as informant-specific and making no attempts to combine reports from different informants to provide an overall classification (Institute of Medicine, 1989). A statistical solution has also been offered for this problem through structural equation modelling procedures (Fergusson and Horwood, 1989).

Despite the existence of these unresolved issues, the wealth of information accumulated in the area appears rich enough to construct a reasonably complete, although still blurred, picture of child psychiatric disorder in the Western community. The more than twenty five years of the descriptive epidemiology phase or the preparatory phase is perhaps ready to usher in a second and more definitive phase of epidemiology i.e., experimental epidemiology (Earls, 1989). Accordingly, the focus would be on the preventive aspects and the study of the role of risk factors and causal mechanisms,
by way of social experiments. Epidemiology thus has not only contributed richly to the understanding of childhood psychopathology, but has also paved the way for preventive intervention. The importance of epidemiology therefore cannot be underestimated.

In comparison with the progress in the area of child psychiatric epidemiology that has occurred in the West, the development in India is rather slow. Indian research has not yet exploited the full potential of epidemiological research in terms of its contribution to psychopathology, leave alone intervention. Most of the research done with children, especially those with emotional problems have been confined to the analysis of clinic data (Prabhu, 1980, 1987). Further, most studies would share the criticisms provided by Anandalakshmy (1980) i.e., 'samples were chosen for convenience of test administration rather than for theoretical reasons'.

The 1980s have seen the emergence of child psychiatric epidemiology in India (Seshadri, 1989), although several of these surveys are limited in their generalizability to the school population. Large scale surveys focussing exclusively on the general population of children have not yet been carried out. A large proportion of the general population studies thus far have viewed childhood only as a downward extension of adulthood, rather than adopting a developmental
approach. These studies have restricted themselves largely to the study of mental retardation and behaviour disorders. The studies carried out at the school level have also been incomplete in that they have carried out only a 'head count' of children with psychological disturbance. The 'factors that influence the distribution' of psychological disturbance have been hardly studied.

While the Western world is preparing itself to enter the second phase of epidemiology in terms of intervention, Indian research has not yet fully explored the various facets of the area in terms of descriptive work. Due to cultural differences in the perception of psychological disturbance caution should be exercised while applying findings from other cultures 'in toto' to our children (Weisz, Suwanlert, Chaiyasit, Weiss and Jackson, 1991). The developmental perspective also needs to be kept in mind. There is therefore a need to focus on the study of psychological disturbance and their correlates among children in India, so that child psychiatry as a whole reaps the benefits of this research, both in theory and in practice.