FAMILY STRESS AND CHILDHOOD

DEPRESSION

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DECLARATION

I declare that this thesis reports my original work, that no part of it has been previously accepted or presented for the award of any degree or diploma by any University, and to the best of my knowledge no material previously published or written by another person is included, except where due acknowledgement is given.
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This thesis describes original research carried out by the author in the Department of Psychology of the Australian National University during 1982.
ABSTRACT

This report is in two parts. In Part 1 there are reviews of the literature pertaining to both family stress research and childhood depression, and the case for examining the role of family stress in childhood depression, is outlined.

Part 2 is the report of a study of depression in 263 pre-adolescent school children. It was found that: 1. There is a clear link between family climate (conflict and lack of cohesion) and childhood depression, but no link between family structure and depression. 2. Children from non-intact families have greater difficulties in enjoying themselves than children for intact families. 3. In intact families girls have higher depression scores than boys, but in non-intact families there are no overall sex differences. 4. Children from non-intact families rate their families as being less cohesive and as having more mother-child conflict than their intact family counterparts, but there are no differences on overall conflict, mother unhappiness or fear of abandonment in children. 5. With non-intact family children there is no relationship between the number of siblings in the family and depression, and no parent/step-parent custodial combinations predispose to depression. However, boys who are with their mothers indicated they are more socially insecure than boys who are with their fathers. 6. There is only a small correlation between teachers' ratings of children on depression-related dimensions and the self-rated depression scores of children, but there is a stronger link between ratings on antisocial behaviour and depression scores. 7. Teachers' ratings on antisocial behaviour are linked with the family structure of the child being rated. 8. A group of children with high depression scores were compared with
the rest of the sample; proportions of intact and non-intact families, and boys and girls, were the same in both groups, but the high depression group reported higher family conflict and poorer family cohesion than the rest of the sample.
### TABLE OF CONTENTS

**INTRODUCTION**

1

**PART 1. FAMILY STRESS AND CHILDHOOD DEPRESSION: A REVIEW**

Introduction 1

1.1 OUTCOME STUDIES OF FAMILY STRESS 2

1.1.1 The Scope of the Problem 2

1.1.2 Categories of Research in Family Disruption 4

1.1.3 Trends in the Research 6

1.1.4 Criticisms of Research Designs 7

1.1.5 Outcomes of Family Disruption 10

1.1.6 Theoretical Explanations 12

1.2 CHILDHOOD DEPRESSION 16

1.2.1 Historical Context 16

1.2.2 Current Perspectives 17

1.2.3 Dimensions of Depression 19

1.2.4 Classification of Children's Depression 23

1.2.5 Definitions of Childhood Depression 26

1.2.6 Assessment Techniques 30

1.2.6.1 Interview Schedules 30

1.2.6.2 Self-report Scales 32

1.2.6.3 Other Techniques 35

1.2.7 Incidence 36

1.2.8 The Etiology of Childhood Depression 38

1.2.9 Conclusion 42

1.3 CHILDHOOD DEPRESSION AND FAMILY STRESS 43

1.3.1 Theoretical Links 43

1.3.2 Research Evidence Suggesting a Link 45

1.3.3 Problems with Existing Research 47
PART 2. THE RESEARCH PROJECT

2.1 DESCRIPTION OF THE PROJECT
   2.1.1 Plan and Scope of the Study
   2.1.2 Hypotheses
   2.1.3 The Measures Used
      2.1.3.1 The Outcome Measure
      2.1.3.1 Other Measures
      2.1.3.2 Teachers' Ratings
   2.1.4 The Subjects
   2.1.5 Procedure

2.2 RESULTS
   2.2.1 Analysis of Measures
      2.2.1.1 The CDS
      2.2.1.2 Other Measures
   2.2.2 Structure and Climate
   2.2.3 Sex Differences
   2.2.4 Non-intact Family Children
   2.2.5 Teachers' Ratings
   2.2.6 The High Depression Group

2.3 DISCUSSION AND SUMMARY

REFERENCES

APPENDIX 1
APPENDIX 2
APPENDIX 3
APPENDIX 4
INTRODUCTION

This report represents the merging of an established field of research and a relatively new one. There is a large body of literature reporting investigations into various aspects of family stress, but childhood depression (CD) has yet to receive widespread empirical investigation. In this report the literature pertaining to both areas will be reviewed, and the results of an empirical study into aspects of the relationship between them, will be presented.

The report is in two parts. Part 1 is a review of the literature pertaining to family stress outcome studies and CD; it also examines the case for studying CD as an outcome of family stress. Part 2 is the report of an empirical investigation which examines the role of family stress in CD.

PART 1 - FAMILY STRESS AND CHILDHOOD DEPRESSION: A REVIEW

Introduction

Part 1 is divided into three sections. The first looks at various aspects of studies into family stress: the scope of the problem, the various categories of family disruption research, trends in the research, criticisms of research designs, outcome variables which have been used, and theoretical explanations for the findings. The second section reviews the literature on CD: the history, current perspectives, dimensions of depression, classifications, definitions, assessment techniques, incidence rates, and etiological theories. Section three examines the case for researching the relationship between CD and family stress; it outlines the theoretical link between the two, the relevant research findings
to date, and suggests how research of this sort might be undertaken.

The term family stress is used here to cover both family disruption experiences such as separation, divorce and bereavement, and family climate processes such as conflict. As will be explained later, much of the research in this area has concentrated on the effects of family structure (e.g. whether single-parent, remarried parent, intact, etc.), but in terms of the impact on children, some of the recent research (e.g. Hess & Camara, 1979; Raschke & Raschke, 1979) suggests that family climate factors may have greater salience. The present study will take family structure (or family disruption) as its starting point, however, the impact of both structure and climate are being investigated so the term family stress will be used where neither component is specifically indicated (viz. Whitehead, 1979).

1.1 OUTCOME STUDIES OF FAMILY STRESS

1.1.1 THE SCOPE OF THE PROBLEM

The incidence of family breakup is increasing in all industrialised countries. In the United States it has been estimated that 37% of the marriages now being contracted will fail and that in the coming decades up to one third of all children will be affected by divorce (Goetting, 1981). The divorce rate in Australia is not as high as that in the United States but it is increasing steadily (Harvey, 1981).

The focus of the present study is on children and their reactions to family disruption. Family breakup may occur for various reasons such as death, hospitalisation, separation, or divorce. Bane (1976) using American data, has shown that whereas in the early years of the century
23% of children (under 18) experienced the death of a parent and 5.9% the divorce or separation of parents, in the decade between 1951 and 1960 these figures were 8.6% and 12.2% respectively. Between 1900 and the 1950's there was a small drop in the percentage of children affected by family disruption overall, but of children growing up in the 1970's she estimated that 20-30% would experience divorce, and when other parental separations and deaths are added to this, 32-44% of children would be involved in family disruption. Currently in Australia, around 50,000 children each year experience the divorce of their parents and the number is increasing as divorce is tending to occur earlier in marriage (Villaroman, 1982).

It is only in the last two decades that widespread attention has been paid to the effects on children of family disruption. Bane (1976) in her review of the subject maintains that there is as yet little clear evidence, and more recently Villaroman (1982, p.2) notes that "few research studies have been conducted to define the nature and extent of (divorce's) detrimental effects." Justice Kemeri Murray, an Australian Family Court judge, has called for more research into divorce and its effect on children, likening it to "an untreated cancer spreading throughout society" (Ward, 1980).

The present review will cover firstly, what sort of research has been done and the current trends in the research. It will then examine some of the problems associated with research in this area. This will be followed by a review of the behavioural, emotional and cognitive problems which have been linked with family disruption. Explanations for these effects in children will then be discussed.
1.1.2 CATEGORIES OF RESEARCH IN FAMILY DISRUPTION

It is difficult to review the research on the effects of family disruption because of the different starting points used by the various researchers as well as different theoretical biases which govern the variables chosen for study. There appear to be several categories of literature which examine different aspects of family disruption. Goetting (1981) notes that during the early years of this century much attention was paid to broken families, per se, and their hypothesised role in producing delinquents and criminals. This rather narrow conceptualisation persisted for several decades, until other researchers (e.g. Nye, 1957) demonstrated that other factors such as low socio-economic status and family conflict were major contributors to delinquency.

Spitz (1946) and Bowlby (1960) were contributors to a stream of family disruption literature which emphasised maternal deprivation. They catalogued the effects of deprivation on children, looking at specific responses for various sorts of deprivation and the effects on infants and children of different ages. Again, delinquency was seen as one of the long-term effects of such deprivation (e.g. Bowlby, 1946). This group has generally seen the role of the father as being peripheral in the personality development of the child (Rutter, 1971) but there is also a long tradition of research which looks at the effects on children of father-absence (e.g. Hetherington, 1972; Herzog & Sudia, 1971). Originally this emphasis was linked with the earlier broken family research, but more recently it appears to be a reaction against the exclusive emphasis on maternal deprivation.

The major category of family disruption research concerns divorce outcomes. Several major research projects have been undertaken in the last decade
(Wallerstein & Kelly, 1980; Hetherington, Cox & Cox, 1977) and there are some comprehensive reviews of the research (Goetting, 1981; Levitin, 1979; Villaroman, 1982).

Finally, there is a category of literature which looks at the effect on children of bereavement (e.g. Dennehy, 1966; Van Eerdewegh, Bieri, Parrilla & Clayton, 1982).

In addition to these different streams in the literature there appear to be three ways of approaching the problem of disruption and effect. First, there are those studies which start with an outcome variable (e.g. delinquency), hypothesise a single cause (e.g. father-absence), then work back to demonstrate whether or not the hypothesis can be supported (e.g. Bowlby, 1946). The second approach is that which starts with a social problem such as divorce or bereavement and studies a wide range of effects on children. Examples of this approach are Wallerstein and Kelly (1980), and McDermott (1970) who specifies divorce as a specific mental health issue and examines the various psychiatric sequelae.

The third approach to the problem is to start with a specific outcome measure and link this with several etiological factors. An example is the study by Raschke and Raschke (1979) who examine the self-concept (self-esteem) of children and link this, not only with family status, but also with various measures of family conflict.

Investigations of the first sort are subject to criticism in that they often set out to prove a point and are in danger of inaccurately identifying causes. Levitin (1979, p.2) commenting on studies of this type, many of which were conducted during the 1950's and 1960's, maintains that:
Linear, unidirectional causal models accompanied by relatively static, single variable approaches have typically been used. A single global variable...is used to try to explain one particular type of outcome, such as delinquent behaviour. Little or no attention is given to mediating factors or to possible multiple and related causes and outcomes of child behaviour.

With the second group there is also a danger of overlooking proxy variables (such as post-divorce family distress) which may be more salient than the divorce experience itself. In addition to this, by cataloguing a variety of outcome measures it is difficult to establish the specifics of cause and effect.

The third approach is less ambitious in terms of elucidating the broader range of effects but because of the range of putative causal variables it can demonstrate with greater specificity the relationship between cause and effect.

1.1.3 TRENDS IN THE RESEARCH

A significant feature of the literature has been the trend away from seeing family status as the major cause of problems in children to a broader view which considers also variables associated with family climate. This trend has received impetus from studies which show that, on the commonly used outcome measures, broken families often fare better than unbroken but unhappy ones (e.g. Nye, 1957; Rutter, 1971).

Some researchers (e.g. Fine, 1980; Rutter, 1971) suggest that it is the
turmoil and tension of the marriage prior to the separation that is the "pathogenic factor" leading to the adverse effects on children, while others (Hess & Camara, 1979; Hetherington, 1979; Wallerstein & Kelly, 1980) draw attention to the ongoing conflict (both inter-parent and parent-child) which tends to increase following the break-up. Family climate variables other than conflict may be important; for example, the emotional state of the remaining parent has also been linked with adverse effects on the children (Herzog & Sudia, 1971; Hetherington, 1979; Tooley, 1976).

Some climate variables which have been used in the research are tension and warmth (Rutter, 1971), parental harmony (Hess & Camara, 1979), children's perceptions of conflict (Raschke & Raschke, 1979) and family cohesion (Cooper, Holman & Braithwaite, in press). The general trend is summed up by Broom (1981, p.182): "For years research and discussion about children of divorce focussed mainly on structure, on the fact of separation itself". Now she notes a growing interest in the "issues of process: how are people acting during separation, how do parents interact with one another and with their children?" Although some researchers still examine the effects of structure per se (e.g. Kalter, 1977), it seems reasonable to accept that both structure and climate factors are important in this type of research.

1.1.4 CRITICISMS OF RESEARCH DESIGNS

1. The majority of the studies draw their conclusions from the observation of abnormal populations; these include delinquents and child psychiatric patients. Typically these studies demonstrate that there is an over-representation of children from disrupted families in their samples. Many other factors (such as conflict or socio-economic status) may contribute to these results and because these disrupted families are not representative
of disrupted families in general, no sound conclusion can be drawn on the
link between cause and effect: the outcome results of most studies are
"generally confusing and unsatisfactory because of doubts about the extent
to which they throw light on the experience of the general community
rather than merely on the small group being investigated in each study"
( Harvey, 1981, p.5).

2. Goetting (1981) maintains that generally there is poor control of
potentially significant variables in this kind of research. Her review of
the literature indicates that these include sex, age of onset, race, socio-economic status, religion, severity of marital discord and post-divorce
relationships. Others which might be added to this list include child
temperament (Hetherington, 1979; Rutter, 1971), post-disruption family
cohesion (Cooper et al, in press); family size (Burns, 1981) and warmth
(Rutter, 1971).

In studies into the outcome of family disruption, the variables of sex and
age have consistently been shown to be crucial. Kalter (1977) showed
that overall links between family status and psychopathology in children
were ambiguous, but when sex and age were controlled simultaneously, a
clear pattern emerged. Likewise, Wallerstein and Kelly (1974; 1975;
1976; 1980) found sex and age (or developmental level) to be important
factors when determining the effect of divorce on children. However,
these researchers can be, and have been, criticised (e.g. Raschke &
Raschke, 1979) for not controlling for other factors such as socio-economic
status.

Levitin (1979, p.21) in her review has outlined the range of questions
that might be asked when the effects on children of divorce are being
considered:
Which children? What are their ages, gender, position in the family, personality characteristics, and their needs? What are their coping strategies and typical responses to stress? From what families, with what socio-demographic characteristics? What was the nature of the parents marriage and of their parenting? Was there open conflict and hostility? Were the children allies of one or the other parent? Was there a history of many separations and reconciliations before the actual divorce? What was the divorce like, and what post-divorce and custodial arrangements have been made? Has the divorce been contested? Were the children given the option to choose the parent with whom they wished to live; and, if so, how did this affect their relationship with the other parent? Is the custodial parent the mother or father? What patterns of visiting by the non-custodial parent have been established? Has either parent remarried? Are there step-siblings? Are ties to the grandparents and other relatives of the non-custodial spouse maintained? What formal and informal support systems are available to parents and children? What is the quality of supports such as day care centres? How well are the parents coping? Do they support each other as parents? What are the psychological consequences of various decisions such as joint custody? And so on.

Some of these are, of course, more important than others, and because all cannot be controlled some choice has to be made when studies are being designed.

Goetting (1981, p.373) has suggested that the ideal design for studies of divorce outcome would be longitudinal in nature using a large representative sample followed from birth to death and assessed periodically. However, the logistic problems of such an operation are formidable, and in addition to this she maintains that "our methodological sophistication is not yet sufficiently developed to effectively disentangle the confounding effects of the numerous unanticipated and undefined intervening factors..." Realistic alternatives to this are retrospective studies using well matched experimental and control samples, or correlational studies using "representative samples of useful populations, appropriate comparison groups and controlling for relevant social variables."
1.1.5 OUTCOMES OF FAMILY DISRUPTION

Over the past decade there have been several comprehensive reviews of the effects of family stress on children (Goetting, 1981; Levitin, 1979; Rutter, 1971; Villaroman, 1982). The findings relating to some of the main outcome variables can be summarised briefly.

There is general acceptance of the fact that immediately following separation from one or both parents, children typically react negatively; these reactions include protest, despair and detachment (Bowlby, 1969); feelings of loss, grief, anger, despair, and bewilderment (Harvey, 1981); denial, grief, depression, fear of abandonment, blame, feelings of guilt, immaturity or pseudo-maturity, and anger (Gardner, 1976); and anxiety (Connell, 1981). Anthony (1974) includes somatic disturbances such as overactivity, tachycardia, anorexia, nausea, vomiting, diarrhea, urinary frequency and disturbed sleep. He goes on to suggest that all these can be considered normal or expected reactions to loss and should not be regarded as pathological, but as crisis reactions. The focus of the present study is on the more chronic problems arising from family stress experiences and the emphasis is on childhood effects, not on the long-term outcomes which carry over into adulthood (viz. Kulka & Weingarten, 1979; Pope & Mueller, 1976).

It is rare now for researchers to link a single cause with an effect as it is clear that there are multiple causes for most outcome measures (Levitin, 1979). A case in point is the use of delinquency as an outcome factor. Goetting (1981, p.368) observes that the "impact of family structure on delinquency rates is a concern which no longer carries the enthusiasm that it did" and citing recent reviews, she argues that "the broken home per se
is less salient among relevant factors associated with delinquency than are the climate and tone of the home." However, delinquency is one of the variables that is consistently linked with family disruption, and in the words of Rutter (1971, p.241), who emphasises factors other than family structure: "it may be accepted as a fact that, overall, children from a broken home have an increased risk of delinquency."

Delinquency has been studied so frequently that the large body of research which has accumulated can be regarded as a discrete category in itself. The following summary roughly follows Goetting's (1981) schema for classifying outcomes, but it only lists the childhood consequences.

Cognitive and school performance measures which have been used include overall achievement or grades (Nye, 1957), attendance or expulsion rates (Conyers, 1977) and various intellectual tests (Levin, Van Loon & Spitler, 1978; Maxwell, 1963). General school interest and performance, school refusal and school phobia have also been used as outcome measures of bereavement (Van Eerdewegh, et al, 1982). Apart from a consistent observation that children from broken homes are less likely to be regular school attenders, the results from these studies are confusing and contradictory so it is not possible to point to specific cognitive or intellectual deficits resulting from family stress experiences.

Personality measures include various types of aggression (Kalter, 1977; Tooley, 1976; Werry, 1979), moral development and sex-typed behaviour (Santrock, 1975; 1977) and self-esteem (Cooper, et al, in press; Raschke & Raschke, 1979). Here again the results are ambiguous; most of the studies demonstrate deficits associated with family stress but there are problems with observer bias and poor variable control. Raschke and Raschke (1979) relate their findings of diminished self-esteem to conflict in
the home rather than to its structure.

Several outcome measures of health consequences (psychological and physical) have been used but as Goetting (1981) notes, there is little evidence available in this area. McDermott's (1970) sequelae to divorce include depression, which is seen as being masked by aggressive behaviour, fatigue and boredom, identification problems, and abnormal superego development. Tuckman and Regan (1968) and Kalter (1977) look at a variety of psychiatric symptoms which are assessed for possible links with parental status; these include several neurotic symptoms, substance abuse and habit formation. Psychosomatic symptoms have also been seen as the result of family disruption; these include headaches, stomach aches, abdominal pains and enuresis (Kalter, 1977; Nye, 1957; Van Eerdewegh, et al., 1982; Wallerstein & Kelly, 1976).

1.1.6 THEORETICAL EXPLANATIONS

The bulk of the literature indicates that family stress leads to deleterious social, health, and possibly, personality and intellectual consequences for children. Several theoretical explanations for these effects have been offered.

Rutter (1971) examined the various theoretical explanations put forward for the link between family stress and delinquency. He rejects the psycho-dynamic notion that it is linked with "disruption of the affectional bonds" because with bereavement, where there is also this disruption, there is only a slight elevation in antisocial behaviour. With divorce, however, there is a great increase. He also cites studies which demonstrate high
rates of antisocial behaviour in intact, but unhappy homes and concludes that "although separation experiences have an association with the later development of antisocial behaviour, this is due, not to the fact of separation itself, but rather to the family discord which accompanies the separation" (p.254). This conclusion is echoed by Herzog and Sudia (1971), Nye (1957), Rosen (1977) and Rutter and Madge (1976) who emphasise the discord prior to the divorce. Much of the recent research (e.g. Hess & Camara, 1979; Hetherington, 1979; Santrock & Warshak, 1979; Tooley, 1979; Wallerstein & Kelly, 1980) emphasises post-trauma (divorce or bereavement) factors such as the ongoing climate of the single parent home, as being more salient in the longer-term adjustment of children. Other researchers still stress the "absence of a parent (as) a crucial factor in the development of delinquency" (Villaroman, 1982, p.7, citing the study by West & Farrington, 1973). One of the theoretical explanations for delinquency in boys relates to father-absence; in this case it is seen as developing as a consequence of the "deprivation of a positive role model" (Whitehead, 1979; see also Connell, 1981 and Lamb, 1977).

Looking at post-divorce conflict Westman, Cline, Swift and Kramer (1970) found that in clinic samples most children had experienced this type of conflict, and Hetherington, et al.(1977) have likewise highlighted the link between such conflict and poor adjustment. Many researchers have noted that inter-parent hostility continues and even increases following the divorce (e.g. Wallerstein & Kelly, 1976; Hetherington, et al, 1977); children are at risk of being drawn into disputes and being forced to take sides. In contrast, "children who remember access as a free and easy experience assisted by cooperation between the parents report that such an arrangement assisted their acceptance of the family's breakdown" (Goldsmith & Smiley, 1981, p.69).
Another sort of conflict that has recently been explored is that which arises between the remaining parent and the child. Hetherington (1979, p.856) observes that:

In most divorcing families there is a period in the first year after the divorce when mothers become depressed, self-involved, erratic, less supportive and more ineffectually authoritarian in dealing with their children. Divorced mothers and their sons are particularly likely to get involved in an escalating cycle of mutual coercion.

Tooley (1976) graphically describes the sorts of interactions that are involved when a newly single mother, overtaxed with her new roles and responsibilities, resorts to authoritarian discipline (something which was often the father's role) or ignores violent sibling interaction. In relation to the question of discipline, Santrock and Warshak (1979) have shown that, as opposed to authoritarian parenting, authoritative parenting ("extensive verbal give and take, considerable warmth, and the use of control and enforcement of rules and regulations in a non-punitive manner") is a primary factor in the positive social adjustment of children after divorce.

Apart from the obvious links between these conflictual interactions and the development of antisocial behaviours in children, a link between conflictual interaction and psychiatric symptomology is quite tenable. Hetherington (1979, p.857) notes that single mothers tend to become dependent on their children and pressure them "to function in a mature, autonomous manner at an early age." Such pressure, along with the experience of loss leads to "feelings of being overwhelmed by unsolvable problems, incompetence, and resentment...and to precocious sexual concerns in some school-aged children and adolescents."

It is a well-documented fact that following divorce adults have an increased rate of emotional disturbances such as anxiety and depression; for example,
Brun (1978) notes psychiatric symptoms in over 40% of her sample of divorcees. Apart from the impaired ability of parents to cope with stress, and hence their decreased capacity for effective parenting, it is also likely that children will respond with anxiety and depression of their own based on fear for their parent (Gardner, 1976). Rutter (1971, p.244) in respect of bereavement claimed that "children may well be more affected by the distress and emotional disorder of the bereaved parent than they are by the death of the other..."

Socio-economic status has consistently been shown to be a relevant factor when considering the effects of divorce. Both the impact of socio-economic status per se and the sudden drop in socio-economic status following divorce have been studied. With respect to the former Bane (1976, p.111) concluded: "Differences between children from one- and two-parent homes of comparable economic status on school achievement, social, adjustment, and delinquent behaviour are small or even non-existent." Such a conclusion is at variance with many of the earlier studies, but the issue is confounded as most families experience a drop in socio-economic status following divorce and it may be this drop rather than the original status that is responsible for the outcome. It is difficult to control adequately for both overall socio-economic status and the severe drop in socio-economic status that occurs. Also deserving of consideration is the fact that children who have experienced bereavement show only a slightly increased risk of delinquency even though "death is frequently followed by economic and social deterioration" (Rutter, 1971, p.244).

Hetherington (1979, p.854) maintains that "some of the most prevalent stresses confronting children of divorce are those associated with downward economic mobility." She notes that few fathers pay regular maintenance and mothers who have concentrated on family at the expense of education
and career find themselves having to work in low-paid menial jobs or go on social security. Bane (1976, p.112) suggests the following causes of economic stress in single parent families: "Loss of 'economies of scale'; low and irregular levels of alimony, child support and public assistance; fewer adult earners, fewer opportunities for female heads of families to work; lower wages than men when they do work." Hetherington (1979, p.854) adds that because of the necessity of work the child may become maternally as well as paternally deprived following divorce, and experience chaotic routines and timetables. The lower income frequently necessitates a move to a cheaper neighbourhood: "For the child, such moves not only involve losses of friends, neighbours and a familiar education system, but may also be associated with living in an area with high delinquency rates, risks to personal safety, few recreational facilities, and inadequate schools."

The empirical investigation reported in Part 2 examines some of these hypothesised mediators of poor adjustment in children following family disruption.

1.2 CHILDHOOD DEPRESSION

1.2.1 HISTORICAL CONTEXT

Literature describing depression in childhood was relatively rare before the 1960's. Kashani et al. (1981b.) note that physicians recognised despondency in children in the seventeenth century, and that childhood melancholia was first described over 100 years ago. Following the second World War, Spitz (1946) described the behaviour of hospitalised infants
who had been separated from their mothers. They were characterised by inertia and withdrawal, behaviours which were primary indicators of what Spitz termed anaclytic depression. Spitz's work aroused a great deal of attention and was supplemented by large volumes of research on maternal deprivation, undertaken by Bowlby and his colleagues in the UK. However, the emphasis was on infants, and apart from some discussion of manic-depressive disorders, CD as such received little attention. Since the 1960's there has been a burgeoning interest in the topic with many theoretical and empirical investigations being published. At least two international conferences have been held with CD as the major theme.

The early neglect of CD can probably be linked with the then prevailing psychoanalytic model of psychopathology. In the psychoanalytic schema there is no place for CD, as true depression is considered to be primarily a function of an internalised superego which is not adequately developed in children (Cytryn, McKnew & Bunney, 1980). The current interest appears to be generated by the widespread clinical observation of depressive phenomena in children.

1.2.2 CURRENT PERSPECTIVES

The growing interest in CD does not indicate a consensus about it, for the debate surrounding the classification of adult affective disorders (viz. Kendell, 1968) is in evidence here also, with some added complications. There are four major viewpoints on CD.

1. The traditional, psychoanalytic-based view is that it does not exist, at least in a form that is analogous to adult depression (Mahler, 1961;
Rie, 1966). Most clinicians accept that sadness and grief are experienced by children, but the absence of a fully developed, internalised superego suggests to the analytically trained clinician that such symptoms do not indicate depression. Others are wary of using the label depression with children, but base their arguments on a prevailing lack of diagnostic clarity and the poor empirical validation of the syndrome (Lefkowitz & Burton, 1978; Graham, 1981). Graham (1981, p.294) in a recent review, concludes that "the value of the concept of depression...in childhood and adolescence remains unestablished", but he does concede that some childhood depressive disorders do occur, if only rarely.

2. A second viewpoint accepts that CD exists but that it is not manifested as it is in adults and must be inferred from other behaviours. Glaser (1967) has included delinquency, learning difficulties, and psychosomatic reactions among symptoms which may be acting as 'masks' for an underlying depression, and he cites research which demonstrates that these symptoms are frequently linked with depressed affect in children. Toolan (1962) describes "depressive equivalents" which are similar to Glaser's masked depressions. Lately there have been fewer references in the literature to this view and a recent paper examining this perspective concludes:

In some children with hyperactivity, aggressive behaviour, and some antisocial behaviour, a depressive disorder co-exists. Insofar as the behaviour disturbance is most outstanding, it may be said to overshadow the depression. To an alert clinician conducting a thorough interview, however, the depression will not be masked. (Carlson & Cantwell, 1980, p.449.)

This interpretation is also accepted by Cytryn, et al. (1980), Pearce (1977) and Poznanski, Cook and Caroll (1979). Another criticism of the notion of masked depression is in the observation that the large range of putative symptoms of depression means that, during development, most
children could be seen as depressed at some time, and further, when all depressive equivalents are added "virtually no child can escape the classification". (Lefkowitz & Burton, 1978, p.718; see also Cantwell & Carlson, 1979.)

3. A third view holds that CD exists and that it is essentially similar to adult depression. Indicators of depression in adults, such as dysphoric mood, lower self-esteem, self-deprecation, diminished psychomotor activity, and sleep problems, have been shown to be present in both children and adults, suggesting to many researchers that childhood and adult forms of depression are essentially continuous. Advocates of this view include Carlson and Cantwell (1980), Cytryn, et al. (1980), Poznanski, et al. (1979) and Puig-Antich, et al. (1978). Cytryn (1979) claims, on review of the literature, that the "emerging consensus" endorses this perspective.

4. The final perspective on CD does not represent a unique approach as it might be held in conjunction with the second outlined above. Several researchers have noted that children at different stages of development have different cognitive and emotional abilities and characteristics; they thus advocate the notion of developmentally specific depressive reactions. This approach suggests, in essence, that there are different manifestations of depression at different developmental stages. Studies which report age-specific responses include McConville, Boag and Purohit (1973), Malmquist (1971) and Ushakoe and Girich (1972).

1.2.3 DIMENSIONS OF DEPRESSION

On reading through the literature one is frequently struck by the fact
that researchers are often alluding to different phenomena and are working from different assumptions. Some of the classificatory distinctions applied to adult affective disorders are being applied to those of childhood and it is worthwhile considering these.

In 1980, Carlson and Cantwell wrote that "scientists in the field are only now beginning to make the distinction between symptom, syndrome and disorder" (1980a, p.19). These are essential distinctions which have been frequently overlooked making it difficult to evaluate and compare many of the studies which have been published. Graham (1981, p.285) notes that "the distinction between sadness, misery, and lack of energy (or depression) as a mood state from depressive disorder characterised especially by apathy, dysphoria, anorexia, insomnia, and agitation or retardation of speech and movement has proved useful" in the understanding of adult affective disorder. Depression can refer to a symptom, syndrome, disorder or illness. Pearce (1977, p.79) differentiates these as follows:

**Symptom** - "A normal lowering of mood; an expected emotional response to adversity."

**Syndrome or Disorder** - "An abnormality of mood which is a handicap" (usually involves several symptoms in addition to dysphoric mood).

**Illness** - "An illness characterised by a depressed mood qualitatively different from usual with a recognised aetiology and prognosis."

Care has to be exercised here as the usage of these terms is not consistent. Some, for instance, use syndrome and disorder interchangeably (e.g. Pearce, 1977) while others refer to what Pearce calls an illness, as a disorder (e.g. Cantwell & Carlson, 1979).

It is useful to look at the nosology of adult affective disorder to help
place the literature on CD in context. Although there is a continuing
debate over the validity of the *primary/secondary* classification, Cantwell
and Carlson (1979, p. 522) maintain that there is general consensus over
the use of these categories:

Patients with primary affective disorders develop depression or mania
without any pre-existing history or psychiatric illness other than
depression or mania. Those with secondary affective disorders
develop depression or, rarely, mania in the face of an already pre-
eexisting psychiatric disorder or medical problem."

The distinction has rarely been specified in reference to CD. Carlson and
Cantwell claim that they are, in fact, the first to use it, and have applied
the term secondary depression to children whose primary complaints
included hyperactivity, drug-abuse, anorexia nervosa, learning disability,
and seizure disorder. It can be seen that these 'primary' problems are
similar to Glaser's (1967) masked depressions. Generally it can be assumed
that when an unqualified reference is made to CD, a *primary* problem is
indicated.

The other major categories outlined by Cantwell and Carlson (1979) are
the two divisions of primary depression - *bipolar* and *unipolar*. Bipolar,
or manic depressive illness, does occur in childhood but it is rare (Cytryn,
et al., 1980; Kashani, et al., 1981b) and literature references are
generally to case studies only. Most of the literature on CD concerns the
unipolar disorder. It remains to be established whether or not there is
any relationship between CD and adult bipolar disorder.

Another major distinction within adult affective disorders is that between
exogenous and endogenous depressions. An exogenous or neurotic
depression is said to have a clear precipitant event such as a loss, while
endogenous or psychotic depression is said to occur where there is no clear external precipitant; a biochemical cause is thus posited for the latter (Buss, 1966, p.180). This distinction is by no means clear cut (Kendell, 1968) but it is frequently used, and whether these are seen as discrete or part of a continuum (see Buss, 1966, pp32-39) they have significance for research in CD. There is a general consensus that psychosis of any sort is relatively rare in childhood and this is certainly the case with depressive psychoses (Cytryn, et al., 1980). However, there are some writers who concern themselves explicitly with endogenous depression in childhood. They accept that this endogenous depression is somewhat different from that which is found in adults, but would argue that it is essentially continuous with the adult type. Weinberg, et al. (1973) are impressed with the similarity between adult and childhood depression in their study of children with educational difficulties. Eight out of ten symptoms are the same for both adults and children. Ossofsky (1974) has argued that endogenous depression can be diagnosed in infancy and has suggested that symptoms normally associated with disorders such as hyperactivity may indicate depression.

Sometimes researchers specify what sort of depression they are referring to. Cytryn, et al. (1980, p.22) see depression in terms of three 'types'; acute, chronic and masked. They describe the first two as follows:

In acute depression one sees a recent severe trauma usually associated with object loss, a shorter duration, relatively good functioning prior to the precipitating episode, and absence of gross psychopathology in close family members. In contrast, children with chronic depressive reaction have no immediate precipitating cause, their illness is of longer duration, there is a history of marginal social and emotional adjustment usually resulting in a rigid and/or inadequate personality, previous depressive episodes and a history of affective illness in close family members.

At first sight it appears that Cytryn and his colleagues are advocating the
neurotic/psychotic distinction, but they stated previously (Cytryn & McKnew, 1972, p.67) that their categories all constitute depressive reactions and added: "It should be stressed that we are discussing neurotic rather than psychotic types of childhood depression."

Lucas (cited in Kashani, et al., 1981b) attempts an integration of the various positions taken in respect of CD and comes down on the side of clear reactive and endogenous groups - the former represents cases where there is a clear precipitating event, while with the latter, discrete precipitating events cannot be established and a biological etiology is suspected.

Some writers do not specify the type of depression they are referring to. This presents some problems, especially where treatment outcome studies are being compared. When the specific type of depression is not explicitly defined it seems reasonable to suppose that it is a neurotic or reactive depression that is usually being described in view of the widely accepted observation that psychosis is rare in childhood.

1.2.4 CLASSIFICATION OF CHILDHOOD DEPRESSION

Several writers have concentrated their theoretical and research efforts on the classification of CD. The lack of agreement on basic perspectives is reflected in the variety of approaches which have been used in constructing nosologies. Kashani, et al. (1981b) note that classification is based on "organisational themes" which may include age, developmental stage, phenomenology, and etiology. Some sample classification systems are outlined below:
1. Cytryn and McKnew (1972) propose a threefold system.

A. *Acute depressive reaction* - an identifiable depressive syndrome preceded by a precipitating cause; it is relatively short-lasting and is characterised by good pre-morbid adjustment and absence of gross pathology in the immediate family.

B. *Chronic depressive reaction* - there is no clear precipitating event and it is a long-lasting illness; there is poor pre-morbid adjustment and usually a positive history of affective illness in the family.

C. *Masked depression* - this represents the largest group of depressed children; it involves various emotional and behavioural symptoms and the authors suggest that depressive affect can be demonstrated through projective tests.

As mentioned earlier, these writers see all these as neurotic depressions, and the term *reaction* is used instead of *disorder* or *illness* even with the chronic group where there is no clear precipitating event. It is not clear whether the masked depressions are *acute* or *chronic* or whether they represent *syndromes*.

2. Malmquist's (1971) classification system takes account of a variety of organisational themes such as developmental stage, manifest features and etiology. Categories include: a. organic disease, b. deprivational syndrome, c. difficulties in individuation, d. latency-age type depression, and e. adolescent type depressions. Malmquist's is a complex schema and is largely theoretical. Several of the categories are further subdivided, for instance, latency-type depressions are made up of a. those associated with object loss, b. failure to meet unattainable ideals, c.
depressive equivalents, d. manic-depressive states, e. affectless character types, and f. obsessional character.

3. Graham (1981) has not specifically proposed a classification, but his views of the phenomena suggest one: a. there are very rare cases of endogenous (adult-type) depression in childhood, b. most depressions are reactions or postures. He maintains that there is not enough information on etiologies or prognoses to define illnesses or disorders and believes that the symptoms are more parsimoniously explained as communications by stressed children.

4. On a quite different level, Stack (1971) differentiates pre-school and school-age children. Depression in school-aged children, with whom this study is concerned, can be classified as follows: a. simple depression, b. phobic or obsessional with depressive reaction, c. mixed depressive states, and d. depression associated with organic brain syndrome and psychosis.

5. Recently there have been calls for a unified classification system to facilitate research efforts. As a large number of theorists move towards seeing CD as essentially similar to adult depressions, there has been a corresponding trend to make use of adult nosologies. Cytryn, et al. (1980), whose earlier schema was outlined, have recently demonstrated the compatibility between their classification and the adult schema in the Diagnostic and Statistical Manual of Mental Disorders - DSM - III (AMA, 1980).

Kashani, et al. (1981b, p.147) notes that the DSM - III has three major subtypes of affective disorder: "1) major affective disorders in which there is a full affective syndrome, 2) other specific affective disorders in which there is only a partial affective syndrome of at least two years'
duration, and 3) atypical affective disorders." These categories have been specified for use with children and have already been used in some research projects (e.g. Kashani, Barbero & Bolander, 1981a).

1.2.5 DEFINITIONS OF CHILDHOOD DEPRESSION

Owing to the lack of a coherent theoretical base, most researchers have been forced to generate their own operational definitions (or sets of diagnostic criteria). Several samples are given here.

Weinberg, et al's (1973) study has proven to be quite influential. Their list of symptoms was generated from both adult diagnostic criteria and their own experience with children. For a positive diagnosis to be made the following must be met:

A. The presence of both symptoms 1 and 2

1. Dysphoric mood
2. Self-deprecatory ideation

B. Two or more of the following 8 symptoms

3. Aggressive behaviour (agitation)
4. Sleep disturbance
5. A change in school performance
6. Diminished socialisation
7. Change in attitude toward school
8. Somatic complaints
9. Loss of usual energy
10. Unusual change in appetite and/or weight
C. These symptoms must represent a change in the child's usual behaviour.

D. These symptoms must be present for a period of more than one month.

Pearce's (1977) criteria for childhood depressive disorder are as follows:

A. The association of depression, sadness, unhappiness, misery or tearfulness with at least two of the following symptoms - anxiety, sleep disturbance, irritability, suicidal thoughts, eating disturbance, school refusal, phobias, alimentary disorders, obsessions and hypochondriasis.

B. The lowered mood should be present for at least four weeks and represent a change from normality.

C. The symptoms must be severe enough to interfere with the child's everyday social and/or cognitive functioning.

Pearce acknowledges the influence of Weinberg, et al. and it can be seen that there are only minor differences between the two sets of criteria. Self-depreciatory ideation, which is one of Weinberg, et al.'s necessary symptoms, is omitted from Pearce's list.

Birleson's (1981) criteria for depressive disorder in childhood are derived, in part, from the previous researchers. The only changes are the setting of a time limit for the symptoms to have been manifest (not more than one year) and the inclusion of wandering behaviour and depressive delusions and hallucinations in the list.

The above definitions were designed for research purposes. Lang and Tisher (1978, p.5) adopt a slightly different approach, by listing the symptoms of the depressive syndrome which are covered by the items in
their self-report scale. The following features of depression were determined from both the literature and their own clinical experience:

A. **Affective response:** Feelings of sadness and unhappiness, weeping.

B. **Negative self-concept:** Feelings of inadequacy, low self-esteem, feelings of worthlessness, helplessness, hopelessness, unlovability.

C. **Decrease in mental productivity and drive:** Boredom, withdrawal, lack of energy, discontent, little capacity for pleasure, inability to accept help or comfort, motor retardation.

D. **Psychosomatic problems:** Headaches, abdominal pains, insomnia or other sleep disturbances.

E. **Preoccupation with sickness or death:** Either of self or others, suicidal thoughts, feelings of loss (real or imagined).

F. **Difficulties with aggression:** Irritability, temper outbursts.

The DSM-III (APA, 1980) lists the adult criteria as being appropriate for children. Primary indicators are dysphoric mood and pervasive loss of interest or pleasure. At least four of the following symptoms must also be present: 1. change in appetite, 2. sleep difficulty, 3. psychomotor agitation or retardation, 4. loss of interest or pleasure in usual activities, 5. loss of energy, 6. feelings of self-reproach or guilt, 7. complaints or evidence of diminished ability to concentrate, and 8. recurrent thoughts of suicide or death.

Some acknowledgement is given to the fact that there are some developmental variations with children and adolescents, but there are only limited details on this. Kashani, et al. (1981b) note that some of the widely observed
symptoms of CD (e.g. psychosomatic difficulties) are not present in the list but suggest that future research should clear up the inconsistencies.

It is worthwhile noting that the nosological labelling of the DSM - III is different to what is generally used with CD. Cytryn, et al. (1980) diagnosed (by their schema) 37 children; 12 of these had acute depressive reaction, 11 had a chronic depressive reaction, and 14 had a masked depression. Using the DSM - III, there was a general concordance on a depression diagnosis in 89% of the cases. However, most of the acute and chronic children were re-classified as having a major depressive disorder, recurrent, and the largest group of masked depressives were re-classified as unsocialised conduct disorder; other DSM - III classifications used were separation-anxiety disorder, atypical depressive disorder, shyness disorder and introverted disorder of childhood.

Other researchers who have formulated diagnostic criteria for CD include Dweck, et al. (1977), Petti (1978), Posnanski, et al. (1979) and Sandler and Joffe (1965).

It can be seen that there is general agreement on most of the symptoms which are said to be part of the syndrome of CD but there are differences of emphasis and in the necessary conditions for a positive diagnosis. The need for a generally accepted definition of CD is obvious, and even though it needs some further work, the DSM - III might be considered the front-runner. Cytryn, et al. (1980, p.25), who appear to have adopted it in favour of their own, have written:

We hope that universal acceptance of DSM - III as a basis for diagnosing affective disorders in children will dispel the present nosologic confusion and simplify research work in this area. Diagnostic uniformity would allow for valid comparison among studies of
various investigators concerning affectively ill people of all ages.

1.2.6 ASSESSMENT TECHNIQUES

Cantwell and Carlson (1979, p. 528) outline the many facets of CD which still need investigation and suggest that "these studies need to be done using methodological techniques such as systematic rating scales and structured interviews for children analogous to those that have been developed for adults." In this section those that have been developed thus far will be examined. Several of these have been developed directly from research criteria drawn up for specific projects and, as such, were not intended for general use. With others, some psychometric examination has been attempted and normative samples have been gathered. There have been at least three reviews of CD assessment techniques published within the last five years (Kazdin, 1981; Kovacs, 1981; Petti, 1978) but the area is expanding rapidly and new procedures continue to be developed. For the present discussion the techniques will be categorised as interview schedules, self-report scales and others.

1.2.6.1 Interview Schedules

1. Kiddie-SADS (K-SADS). This is an adaption of the Schedule for Affective Disorders and Schizophrenia for Adults - SADS (Endicott &

1 The biochemical aspects of assessment will not be covered here; Cantwell and Carlson (1979) and Kashani, et al. (1981b) have reviews of the progress in this area.
Spitzer, 1978). It was designed by Chambers, et al. (1978) for children 6-16 years of age and assesses the severity of 12 symptoms on a seven point scale, from absent to extremely severe. Information is gleaned from the child, his parents and other relevant adults.

2. Bellevue Index of Depression (BID). This was developed by Petti (1978) from the research work of Weinberg, et al. (1973). It is designed for children 6-12 years of age and assesses 40 symptoms on a four point scale. Information is taken from any relevant source.

3. Interview Schedule for Children (ISc). Devised by Kovacs, et al. (1977) it assesses children aged 8-13 by rating the severity of 37 symptoms or symptom clusters. Information is gained mainly from the child.

4. Children's Depression Rating Scale (CDRS). Developed by Poznanski, et al. (1979) this is essentially an adaption of the Hamilton Depression Rating Scale for Adults (Hamilton, 1960). It is designed for children aged 6-12 and rates the severity of 16 symptoms by providing up to five alternatives. Information is gained from any relevant source.

5. Children's Affective Rating Scale (CARS). Developed by McKnew and Cytryn (1979), this interview assesses children aged 5-15, rating the symptoms of three sub-scales (depressive mood and behaviour, verbal expression and fantasy) on a ten point scale.

Although several other interview schedules for children have sub-scales for affect, those listed above were specifically designed to assess depression. Most of these schedules were developed for research projects and thus not originally intended for general application. Kazdin (1981, p.363) notes that most of the assessment procedures are still undergoing refinement.
and adds: "Rigorous validational work examining intercorrelations among interviews and other measures remains to be completed."

1.2.6.2 Self-Report Scales

There are three significant self-report scales for CD. Unlike the interview schedules, these were specifically designed for general application and have been, or are being, standardised on representative groups of children. There is some debate as to whether children can adequately verbalise or otherwise express their feelings, and self-report measures are notoriously subject to error (Kazdin, 1981). However, the very private nature of depressed affect and cognition suggests that self-report remains the most valid method of obtaining data on depression. Carlson and Cantwell (1980b, p.448) found that traditional diagnostic approaches "overlooked the diagnosis of depression in 60% of (their) cases" and stress the necessity of heeding the child's own productions. Kovacs (1981, p.306) suggests that the new self-report scales "mirror a trend in child psychiatry towards growing acceptance of youngsters' views of their own behaviour as valid information."

1. **Children's Depression Inventory** (CDI). This was developed by Kovacs and Beck (1977) and is derived from the widely-used *Beck Depression Inventory* for adults (Beck, 1972). The scale, in its various editions, has been administered to children aged 7-17; it consists of 27 items giving three alternatives which are scored from 0-3 in the direction of increasing pathology. Overall scores range from 0-54. Kovacs (1981) notes that the scale has been administered to several groups of children including psychiatric patients and normal school children. It has a claimed internal reliability (coefficient alpha) of .86, significant item-total correlations of between .31 and .54, and a one-month, test-retest reliability coefficient.
of .72 has been obtained. Currently, its latest revision is being validated against psychiatric diagnoses. The author further claims that "the CDI is distinguished by the care that has been invested in its construction and refinement. The scoring is simple, the items are generally clear and the symptoms assessed reflect a reasonable sampling of the alleged characteristics of childhood depression." Carlson and Cantwell (1980a, p.309) have reported on the use of a variation of the CDI: the Short Children's Depression Inventory (SCDI). This is based on the short form of the Beck Depression Inventory (Beck & Beck, 1972); it has 13 items with 4 alternatives, scored from 0-3.

2. The Children's Depression Scale (CDS). Developed by Lang and Tisher (1978), the CDS is designed for children aged 9-16 and consists of 66 items scored from 1-5. Items representing the various symptoms of depression are printed on cards which the child 'posts' into one of five boxes labelled very wrong, wrong, not sure, right and very right. There are 48 items which tap various aspects of depression (representing the dimensions of affect, social problems, self-esteem, preoccupation with sickness and death, and guilt), while the remaining 18 assess the ability to experience pleasure. In addition to the child's self-report there are variants of the scale for parents, siblings, and relevant others.

The scale was administered to a clinical sample (general psychiatric out-patients), a normal sample, and a 'depressed' sample which consisted of 40 school refusers. Scores obtained discriminated significantly between the three groups and the authors report a coefficient alpha of .96. An independent psychometric study of the scale (Tonkin & Hudson, 1981) found the test-retest reliability of the scale (7-10 day time period) to be .74, while the coefficient alpha for their sample was .92. These researchers factor-analysed their data and six factors were found, with the main one
accounting for a modest 20.2% of the overall variance; they conjecture that the failure to produce a strong principal factor might be "due to the relative homogeneity of (their) sample." Commenting on Tonkin and Hudson's findings, Lang and Tisher (1981) suggest that the results support the construct validity of the scale as the initial factor (probably depression) was composed of most of the items, while the second was made up of most of the positive items. Kazdin (1981, p.360) notes that "psychometric evaluation of the scale is slightly more extensive for the CDS than for other measures of childhood depression."

Kovacs (1981, p.310), in her survey of rating scales, praises the 'game-like' characteristics of the CDS and its clear administration procedure but cautions that "additional work is needed to establish the validity of the sub-scales, the internal consistency of the child and adult versions separately (now done by Tonkin and Hudson, 1981), and the CDS's correlation with independent diagnoses."

3. **Self-Rating Scale for Depressive Disorder in Childhood.** Birleson (1981) describes the development of this scale and its evaluation on various samples. It has 18 items and is designed for children aged 7-13. The final items chosen for the scale were culled from a list of 37 and were those which discriminated between samples of normal school children, mal-adjusted school children, clinic controls and a diagnosed depressed group. For each item the child indicates how he has felt about each item over the last week, choosing between the temporal alternatives of never, sometimes or most which are then scored from 0-2. Birleson's own data give a test-retest reliability (time not specified) of .80 and a split-half coefficient of .86. Five factors accounting for 61% of the variance were extracted with the principal factor accounting for 30%. 
The development of the scale is in its initial stage; it needs to be tested independently on different samples and generally undergo further psychometric verification.

1.2.6.3 Other Techniques

A variety of other techniques have been used to assess depression in children some of which can be outlined briefly. Although they have specific uses, they lack the clinical and/or research utility of the interview schedules and self-report measures.

Kazdin (1981, p.364) has observed that various projective techniques such as the Thematic Apperception Test (TAT), the Children's Apperception Test (CAT), and the Rorschach Test have been used to assess depression. Depressive themes which are noted by the clinician include "feelings of mistreatment, blame or criticism, abandonment, injury and suicide." Some clinicians (e.g. Petti, 1978) have operationalised guidelines for their own research purposes but there are few such specific guides for the use of these tests and the psychometric support is sparse.

Lefkowitz and Tesiny (1980) developed the Peer Nomination Inventory for Depression (PNID). This is a 20 item sociometric instrument in which school children rate each other (e.g. who plays alone?) on 14 depressive items, 4 happiness items and 2 popularity items. Kazdin (1981, p.365) notes that "examination of the psychometric properties of the PNID has been impressive and more published information is available on the reliability and validity of this measure than on any other measure of childhood depression." However, he further observes that its clinical utility is limited.

Another approach to assessing depression is the use of structured
observational scales (e.g. Lucas, et al., 1965; Petti, et al., 1980). These have mainly been used in hospital settings and the emphasis is on observed depressive behaviour. The scales are probably not intended for widespread use and there are no published guidelines.

In summary, there have been a number of assessment techniques for CD published in the last few years. Most of these are still undergoing development and should not be used as diagnostic tools by themselves. Some, however, are beginning to meet the growing need for psychometrically sound research instruments.

1.2.7 INCIDENCE

The different diagnostic criteria used make inter-study comparisons problematical. In addition, many studies have relied on hospital records; these samples are biased and it is unclear how changing trends have influenced the propensity of clinicians to diagnose depression. There have been few epidemiological studies published to date which have specifically set out to assess incidence rates of CD, although a few have included depression-related assessments. The following are estimated incidence rates in several different population groups.

General population:

Rutter, et al. (1970), as part of the large scale Isle of Wight study of children and adolescents, determined that 1.4/1000, 10-11 year olds had the syndrome of depression - the symptom (dysphoria) was much more common.
Kashani and Simmonds (1979), using the quite rigid DSM-III criteria, found 1.9/1000 could be diagnosed as depressed in a random sample of a general child population; 17.4% had dysphoric mood.

Specific population groups:

Weinberg, et al. (1973), in their study of children referred to an educational diagnostic centre, found that 58% (n=72) could be diagnosed as depressed (disorder).

Albert and Beck (1975) found that 33% of adolescent children in a parochial school (n=63) could be classified as having moderate to severe depression (using the short form of the BDI).

Kashani, et al. (1981a) examined for depression (DSM-III criteria) in children admitted to a general pediatric ward. 7% (n=100) were diagnosed as having a depressive disorder, while 38% evinced dysphoric mood.

Psychiatric samples:

Kovacs, et al. (1976) found that of 37 psychiatric inpatients, 14% were substantially depressed and 24% showed mild depression.

Petti (1978) determined that of 73 psychiatric inpatients, 59-61% were depressed; it is unclear, however, whether or not depressive disorder was indicated.

Carlson and Cantwell (1979 and 1980a) examined children referred to a child psychiatry unit (n=102); 28% were considered to have a depressive
disorder (equally divided between primary and secondary), while 25% were assessed as being at least moderately depressed. Altogether, 60% of the children in their sample had depressive symptoms.

1.2.8 THE ETIOLOGY OF CHILDHOOD DEPRESSION

The causes of CD still await systematic empirical investigation; standardised diagnostic criteria as well as sound epidemiological research are necessary precursors. Kashani, et al. (1981b, p.147) have noted that most of the diagnostic and nosological work to date has been "generated from observation of symptoms rather than derived from a conceptual model", but they believe that the time has now come "to explore childhood depression from various theoretical and methodological approaches." The major theoretical positions advanced thus far are outlined in this section.

The work of Spitz and Bowlby highlighted the depression-related consequences of maternal deprivation on infants and young children - these studies reinforced the analytic notion of object loss. "Objects" notes Malmquist (1971, p.888), "refer to the multiple sources of gratification that become delineated as the child acquires an increasing capacity to distinguish himself from others." When the process of attachment between the child and these objects is broken, grief and mourning occur. Rie (1966) reviewed the writings on this topic and "found general agreement that loss of a loved object either in fantasy or reality has a precipitating role in depression" (cited in Pearce, 1977, p.81). Some have directly investigated this hypothesis (e.g. Caplan & Douglas, 1969) and they have noted a significantly higher incidence of parental loss in depressed children than in appropriate controls. Recently Kashani, et al. (1981a) found, that of
hospitalised children diagnosed as depressed, 85% had experienced the loss of a significant adult figure.

Seligman's (1975) notion of learned helplessness has been an influential theoretical model. His experimental work with dogs demonstrated that when they received a series of random shocks from which there was no escape, they developed a pervasive attitude of "hopelessness and passivity"; even when later placed in a situation of possible escape they did not take it. Kashani, et al. (1981b, p.148) note that this model "posits that the depressed person perceives his behaviour as independent of reinforcements; this perception leads to hopelessness and giving up." It can be seen that this etiological model is compatible with the notion of object loss; loss of a significant parental figure, and the family stresses associated with divorce, could engender in the child a sense of being ineffectual which in turn would lead to resignation.

Some have looked at the development of depression in the context of life-stress events; again, this is not independent of the models outlined above. Coddington (1972) found that a high frequency of life stress events was linked with the development of depression. Crook and Raskin (1975) found that factors such as family discord were more significant than separation per se, in the development of later depression and attempted suicide. Brown and Harris (1978) have examined the role of home relocation, school changes and similar stressful events which affect social supports, while others (e.g. Henderson, Byrne & Duncan-Jones, 1981) have demonstrated that it is the perceived adequacy of the social supports, rather than their number, which determines predisposition to neuroses such as depression.

The perspective of family systems theorists is relevant to this discussion of stresses. Their approach to child pathology such as depression locates
the maintenance factors, if not the causes, in maladaptive structure and interaction patterns. They see pathology or dysfunctional behaviour as a "product of a struggle between persons rather than between internal forces within a single person" (Goldenberg & Goldenberg, 1980, p.4).

Minuchin (1974, p.100) gives an example of depression in a child being examined in the context of her family's structural characteristics, and Malmquist (1971), from a psychoanalytic viewpoint, discusses several family scenarios predisposing to depression in children. Beal (1979) examines the changes which occur in a divorcing family from his family systems perspective, and demonstrates how these can result in child pathology.

There is a large literature dealing with the genetic transmission of mental disorders such as depression. Tsuang's (1978) summary suggests a concordance rate of 76% for affective disorders in monozygotic twins and 67% in monozygotic twins reared apart. Results from such studies, however, are equivocal (Rutter, 1966) and it is clear that although there is a genetic component in the etiology of depression, it probably represents a risk factor rather than a direct cause. Cantwell and Carlson (1979) have noted that a positive family history of affective disorder is frequently used as a diagnostic indicator with children.

Linked with the genetic hypothesis is that which posits a biochemical cause. There is some evidence that "pharmacological and physical manipulation of monoamine-related metabolic pathways or structures has been shown to modify...the expression of affect, mood and emotional behaviour in man." (Kashani, et al., 1981b, p.147). Research along these lines is only in its early stages with depression in childhood but some researchers posit a biochemical cause for some childhood affective states (e.g. Ossofsky, 1974; Stack, 1971) and have treated them accordingly. The question of cause and effect is a recurring problem with research in this area; emotional events
have been shown to have a biochemical effect and visa-versa.

Kashani, et al. (1981b) have outlined some of the major conceptual models which have been applied to adult depression and have related them to children. Two which have not been treated above, and which appear to have relevance for children, are the *Cognitive Distortion* model and the *Behavioural Reinforcement* model. The Cognitive Distortion model postulated by Kovacs and Beck (1978) holds that negative conceptualisations result in disturbed affect and motivation. Malmquist (1971, p.891) mates this notion of cognitive distortion to the self-appraisals which accompany object loss and maintains that these distortions are accompanied by "individual variations in mood that emerge as prominent personality characteristics." Pearce (1977, p.81) suggests that "anything which predisposes to low self-esteem...is likely to lead to depression"; he includes poor scholastic performance, rejection by parents and scapegoating, all of which can lead to depression through distorted cognitions.

The *Behavioural Reinforcement* model was proposed by Lewinsohn, Biglan and Zeiss (1976) and is based on behaviour modification theory. Depression is said to result from a lack of positive reinforcement and to be maintained, in part, by secondary gain reinforcements such as attention and sympathy. Their research has demonstrated that the depressed do in fact elicit fewer positive behaviours from others and that they engage in fewer and less rewarding social activities; again, it is difficult to establish cause and effect.

In summary, there are a variety of theoretical models for understanding the etiology of CD. There is available very little empirical evidence to substantia any of the theories and there is a clear need for further research based on conceptual models (Kashani, et al., 1981b). All the theories outlined
here seem likely to have some validity, and it is likely that future research will establish different causes for different types of CD. It seems reasonable to accept that the phenomena we know as CD result from a variety of causes and that in all probability, "each child's depression results from an interaction between internally and externally generated factors."

(Pearce, 1977, p.81.)

1.2.9 CONCLUSION

There are many problems related to the definition, diagnosis and treatment of CD but there are several reasons for continuing the research endeavours. Kashani, et al. (1981b, p.145) cite Rutter's claim that "answers to the problems posed on childhood depression would shed important light both on the origins of adult depressive illness and on the nature of psychiatric disorders in childhood." Certainly there is some evidence that maladaptive behaviours in childhood are linked with adult psychopathology and it would be beneficial to know the specifics of this relationship.

There have been very few longitudinal studies of children who have been diagnosed as depressed. In one of them, Poznanski, et al. (1976) followed through 10 children who had received a positive diagnosis; 6½ years later 5 of them were still depressed and most of the others had adjustment problems. The authors suggest that these findings do not support the contention that children outgrow depression. Welner, Welner and Fishman (1979) likewise, found, in a follow up study of depressed adolescent in-patients that 8-10 years after their initial diagnosis around 37% still had a depressive disorder.
Kashani, et al. (1981a, p.133) ask what the future holds for depressed children who remain undiagnosed. They suggest that "the child's attitude of helplessness will possibly become fixed and lead to rigid patterns of response which, albeit ineffectual, will intensify learned attitudes of helplessness in the developing personality." These observations emphasise the importance of determining, as precisely as possible, the characteristics of CD, as this should contribute to our understanding of adult affective disorders and lead to the implementing of appropriate intervention strategies.

1.3 CHILDHOOD DEPRESSION AND FAMILY STRESS

In the review of family stress outcome research, depression was mentioned as one of the health consequences in children whose families have been disrupted. To date, however, there have been very few studies which specifically attempt to link parental loss with depression in school-aged children.

1.3.1 THEORETICAL LINKS

There are several strong reasons for linking family stress with CD. On a theoretical level the hypothesised causes of depression fit with the experiences of family stress such as divorce, bereavement and conflict.

The notion of object loss has been used in relation to parental loss in infancy (Spitz, 1946; Bowlby, 1960), but although appropriate for older
children, it has rarely been applied. Caplan and Douglas (1969, p.230), who found a parental loss incidence of over 50% in their outpatient psychiatric group, conclude that these "results lend support to the theories which postulate a relationship between early object loss and depression."

Seligman's (1975) model of learned helplessness can also be seen as being applicable to family stress situations. Noxious events such as divorce, bereavement, and conflict, are beyond the child's control, and given that the family is the primary social context for children, it is not difficult to see learned helplessness and its concomitant passivity and resignation taking root. Similarly, family stress fits readily into the life-stress model (Coddington, 1972); using it, Crook and Raskin (1975) have linked childhood parental discord with suicide and depression in adult life.

With Kovacs and Beck's (1978) notion of cognitive distortion the link is less obvious, but Malmquist (1971) has directly linked object loss events with distortions in self-appraisals, and Pearce (1977) has suggested that any childhood events which cause impairments in self-esteem can result in depression.

Using the behavioural model (e.g. Lewinsohn, et al., 1976), the pre-separation conflicts, the loss of a parent, and the subsequent self-absorption of the custodial parent (Hetherington, 1979) can all be seen as depriving the child of essential positive reinforcements, and in both the pre- and post-separation conflict situations the child may be the direct recipient of emotional and physical abuse (Rosenberg, 1965).

From a family systems perspective a problem such as depression is seen
as caused or maintained by the family system of which the child is a part. Writers differ in their emphases but the family systems role is always seen as primary.

1.3.2 RESEARCH EVIDENCE SUGGESTING A LINK

Apart from the theoretical warrant to study CD as a function of family stress, there is some research evidence linking the two. Clinical studies have consistently shown that in children diagnosed as depressed there is an abnormally high incidence of parental loss. These studies are not representative of stressed families in general but they do contribute to our understanding of the etiology of CD. Caplan and Douglas (1967) found a rate of just over 50%, while Kashani, et al. (1981a) found that there had been the loss of a significant adult figure in over 85% of their depressed child patients. McDermott (1970), examining the records of a large sample of child psychiatric patients with a variety of diagnoses, found that moderate to severe depression was present in 34.3% of the divorce group and was found hidden or in mild degree in virtually all individual records when examined further.

In these studies of psychiatric patients there is an interesting trend for depression to be linked with broken homes but for other neurotic symptoms to be more common in children of intact homes (e.g. Kalter, 1977). Rutter (1971) in his review, concludes that although there is a link between a broken home and the risk of delinquency, "this association does not apply to neurosis but it may apply to some types of depression."

Several studies, while not examining specifically for depression, have noted depressed mood as an outcome of family stress. Wallerstein and Kelly
in their follow-up of latency-aged children who had experienced divorce, found that nearly 50% of them "gave evidence of consolidation into troubled and conflicted depressive behaviour patterns"; they also noted "continuing depression and low self-esteem combined with frequent school and peer difficulties." Five years after the divorce, 37% of the children were depressed and had not come to terms with the changed family situation. They observed (1980, p.211) that "as at the eighteen-month check point, depression was the most common psychopathological finding and was manifested in a variety of feelings and behaviours, including chronic and intense unhappiness (at least one child with suicidal preoccupations), sexual promiscuity, delinquency..., poor learning, intense anger, apathy, restlessness and...unremitting emotional deprivation."

The presence of conflict in the home has also been implicated in CD. Whitehead (1978) found that boys are more likely to be described by their mothers as "sad, miserable or tearful" when there is parental discord at home.

The case for examining depression is strengthened when we consider the various outcome measures which have been linked with family stress. Many of these are actually symptoms of CD. Delinquency has been seen as an outcome of disrupted bonds (Bowlby, 1946) and family conflict (Rutter, 1971), and antisocial behaviour which includes delinquency, is often listed as one of the symptoms of depression (Glaser, 1967; Weinberg, et al., 1973). Similarly, psychosomatic symptoms such as enuresis (Douglas, 1970), overactivity, nausea and vomiting (Anthony, 1974) have been linked with family disruption; they are also consistently listed as symptoms of a depressive syndrome.

Van Eerdewegh, et al. (1982) conducted one of the few controlled studies of the effects on children of bereavement. It is a study which specifically
assesses depression, although it relies on the reports of the remaining parent. They note that following bereavement there is a significant increase in dysphoria which disappears over time, and a "minor form of depression" which persists. When their results are examined closely it can be seen that 13 months after the bereavement 20% of their sample had a depressive syndrome (of at least 3 symptoms) as against 8% for the controls, and that 16% of these cases had emerged during the year between the first and second assessments. Sadness, crying and problems with withdrawal had improved in the year but they were still much greater problems than with the controls. The bereaved group also had significantly higher levels of temper tantrums, bedwetting and sleep trouble, and more decreases in school performance and appetite. All of these symptoms have been seen as part of the depressive syndrome.

Finally, there is a substantial body of research which has linked family stress experiences in childhood with depression later in life. Crook and Raskin (1975) demonstrated links between early marital discord and later attempted suicide and depression. Others (e.g. Hill and Price, 1967; Koller & Castanos, 1977) have linked childhood loss experiences with later depression. The results of such studies are equivocal (Lloyd, 1980) but it is reasonable to conclude that there is some link between childhood loss experiences and later affective disorders and this is, in itself, warrant for examining these links in the early stages. Although the issue has not received much investigation, there is also some evidence of continuity between CD and adult depressive disorder (Poznanski, et al., 1978).

1.3.3 PROBLEMS WITH EXISTING RESEARCH

The family disruption studies reported earlier were generally clinical studies,
based on abnormal samples which cannot be seen as being representative of disrupted families in general; they probably only represent the extreme cases of depression. Their family structure variables which are derived mainly from intake records, are inadequate, as the intact family category often includes those that are remarried and thus 'hides' separation or bereavement experiences that children may have been through. With the exception of that of Caplan and Douglas (1969), they represent that category of research which links family status with a variety of outcomes, and thus lack specificity. All of the clinical studies have the major weakness that they rely on structure per se as the independent variable. As they do not include family climate factors, their findings must be treated with caution.

The research by Wallerstein and Kelly was not directly clinical in nature and their sample is more representative of divorced families in general. A major problem with their type of research, however, is that it does not include controls and this makes generalisation difficult. They looked at different reactions by sex and age so there was a measure of control for these factors but their sample was limited in terms of socio-economic status and race and it is not clear how this influenced the findings. Generalisation of these American results to Australian conditions can only be very tentative.

1.3.4 WHAT IS NEEDED

The above survey contains several pointers for further research into the effects of family stress on children, but given the large number of potentially important factors involved, it is hard to know where to begin. Goldsmith and Smiley (1981, p.60); also Smiley and Goldsmith (1981) from
their reading of the literature, have devised a conceptual framework "to assist in the ordering of individual and family process factors as they affect the adjustment of children to divorce." They see the following major elements being involved:

1. The Child's Developmental Status

2. Individual Child Characteristics
   - Temperament
   - Sex of child

3. Contextual Variables
   - Parental mental health
   - Parental relationship
   - Siblings
   - Explanation from parents of separation process

Other researchers have distilled factors which they see as important when considering a child's adaption; they are similar to those of Goldsmith and Smiley but contain additions such as socio-economic status and race (Levitin, 1979), and available extra-familial support systems (Harvey, 1981). Lamb (cited in Kaslow, 1981, p.678) points to the factors of age, sex, and the parent-child relationship, as important in making custodial decisions.

Most of the literature on family stress concentrates on divorce and its effects. When the emphasis is widened to include separation, bereavement, and family climate, there are possible changes in the salience of some of the relevant variables. The theoretical concomitants of the outcomes being studied (in this case CD) must also be taken into account when deciding what to assess.
What eventually determines the choice of measures is a combination of what has proved to be of importance in previous research and the constraints inherent in the study design chosen. Age (or developmental status) and sex need to be controlled as both have been specifically linked with depression-related outcomes (age: Fine, 1980; McDermott, 1970; Renouf, 1981; Wallerstein & Kelly, 1974; 1975; 1976; 1980. sex: Burns, 1981; Hess & Camara, 1979; Hetherington, 1979; Whitehead, 1979). The etiological theories of depression suggest that it would be fruitful to examine familial conflict and the emotional health of the custodial parent, as well as the specifics of the loss experience (e.g., whether divorce or bereavement).

The general design of such studies needs to incorporate an examination of groups that can be considered representative of stressed families in general, and to have appropriate control groups so as to avoid conclusions drawn only from abnormal samples. With CD this is particularly important, for there is some evidence that many moderately depressed children do not usually come to the attention of health professionals. Wallerstein and Kelly (1980, p.213), reporting on their five year follow-up investigation, note that 37% of their sample were overtly depressed but approximately another third of the children were characterised by continuing anger and "persistent emotional neediness, unhappiness, and somewhat diminished self-esteem." Thus, five years after the divorce two thirds of the children involved were still suffering from depression related symptoms; most of these children would not usually come to the attention of health professionals. Similarly, Weinberg, et al. (1973) found that 58% of their sample at an educational clinic were depressed; these children had educational problems but they had not been referred for psychiatric treatment.

Until recently the study of non-psychiatric groups has been problematical
in that there were no suitable research instruments available. Now, however, there are two rating scales (the CDI - Kovacs & Beck, 1977, and the CDS - Lang & Tisher, 1978) which can be administered in general group settings. Neither is suitable when used alone as a diagnostic instrument but they are suitable for research purposes and have each received some independent psychometric verification.

Levitin (1979, p.4) has observed: "Designs that include some comparison groups, and that have large enough samples for that comparison to be meaningful, are extremely difficult and expensive to implement." A realistic compromise has always to be reached on the scope of research in this area. Goetting (1981, p.373), when considering alternatives to large scale prospective designs, has suggested "a correlational study using representative samples of useful populations, appropriate comparison groups and controlling for relevant social variables." She goes on to suggest a design which would be correlational (or retrospective, if appropriate), "that would compare a divorced sample with samples of subjects from intact homes with high and low degrees of marital discord."

Part 2 of this study is the report of an investigation which follows Goetting's proposed format while taking into account variations necessary for examining a range of family stress factors and the outcome variable of CD.
PART 2 - THE RESEARCH PROJECT

2.1 DESCRIPTION OF THE PROJECT

2.1.1 PLAN AND SCOPE OF STUDY

The project reported here was designed to investigate various aspects of family stress and depression in children. It is a self-report survey, and it follows Goetting's (1981) proposed format for investigating outcomes of family stress: the design is basically correlational and the population is representative of normal children. Numbers of children from intact and non-intact families are large enough for meaningful comparisons between the two, and the influence on depression of family climate variables such as conflict can be investigated across a broad range of families of varying structure and socio-economic status.

The children themselves provided the information regarding their families as well as their own affective states. While parents might provide more accurate information about families, by obtaining this information from children a larger sample size was able to be obtained and the refusal rate was expected to be much lower. Refusals are a major problem with this kind of research as there is always the suspicion that the refusing parents represent a significant grouping, thus making it hazardous to generalise any findings. The final wording of the items was approved by the schools, who then notified parents about the project and invited questions or objections.
The use of child information meant that some potentially significant variables could not be investigated as they were considered to be either too intrusive or beyond the capacity of the child to supply accurate information. It was felt, for instance, that most could not accurately recall the dates of significant family events such as divorce, so this information was not sought although time elapsed since the breakup could well be a major factor in the child's adjustment.

Sex and age have been shown to be important mediators of the effects of family stress on children. It is relatively easy to investigate male/female differences but controlling for age is problematical. Research to date has indicated that the manifestation of depression probably changes with age, so it was decided to investigate a limited cohort and hold age constant. The 9-12 year old group was chosen primarily because they represent a fairly discrete developmental stage (Wallerstein & Kelly's later latency group, 1976). Several other researchers (e.g. Fine, 1980; Hess & Camara, 1979; McDermott, 1970; Tuckman & Regan, 1966) have emphasised the particular problems of this age group in adjusting to family stress, and some (e.g. Renouf, 1981; Tessman, 1978) maintain that it is the age group that is most vulnerable to stress. In addition, the research instruments currently available (CDS and CDI) require that the child be at least 8 or 9 years old, and it was felt that preadolescent children of this age would be more open to expressing depressed affect and less prone to denial than adolescents would be.

The two major family climate variables investigated were conflict and cohesion. Neither of these has previously been specifically linked with CD but both have been causally linked with depression-related, family-stress outcomes, such as antisocial behaviour and lowered self-esteem. Some attempt was made to assess fear of abandonment, mother-child conflict...
and perceived happiness of mother, all of which have been seen as influencing adjustment following family stress. These three were primarily intended for further investigation of those children who had experienced such stress.

To supplement the information provided by the children, their class teachers were asked to provide ratings of the children on three dimensions: sadness/happiness, withdrawal/sociability and antisocial behaviour. The aims were to investigate the question of how children manifest their depression and whether there is a congruence between the child's self-ratings and the teachers' perception of the child on these dimensions, all of which have been linked with CD. Santrock and Tracy (1978) have shown that teachers develop negative stereotypes which are based on knowledge of family structure; children from single-parent homes, for instance, tend to be viewed negatively. The extent to which these ratings are linked with the family structure of the children is therefore of interest.

2.1.2 HYPOTHESES

As several different aspects of the role of family stress in depression are being examined, the findings are divided into five sections.

1. Structure and climate. A major aim of the study is the investigation of the roles of family structure and family climate in the development of CD. The recent literature indicates that family climate is a more salient predictor of child adjustment than is family structure. This holds for such depression-related outcomes as delinquency (Rutter, 1971) and self-esteem (Raschke & Raschke, 1979). Depression may be different, however, as children in non-intact family situations (single parent or remarried
parent) have generally experienced a significant parental loss and such losses have been linked with depression (Caplan & Douglas, 1967). To reflect these possibilities the following hypotheses were proposed:

**Hypothesis 1:** The family climate variables of conflict and lack of cohesion will correlate with depression in children.

**Hypothesis 2:** Children from non-intact families will generally have higher depression scores than children from intact families.

2. **Sex differences.** Sex has been shown to be an important mediator of the effects of family stress (e.g. Burns, 1981; Smiley & Goldsmith, 1981) so differences with respect to the outcome of depression are being investigated. Women generally obtain higher self-report depression scores than men (Weissman & Klerman, 1977) and there are indications that this is also the case with children (Lang & Tisher, 1978; Tonkin & Hudson, 1981). On the other hand, it has consistently been observed that boys may be more susceptible to the effects of family stress than girls (e.g. Hess & Camara, 1979; Rutter, 1971).

**Hypothesis 3:** In the intact family sample girls will have higher depression scores than boys, but in the non-intact family sample boys will have higher scores than girls.

3. **Non-intact family children.** The adjustment of children in non-intact families is of interest and there have been several hypotheses advanced as to what mediates their adjustment. Conflict between mother and child and emotional ill-health of the mother (who is generally the custodial parent) have been seen as indicators of poor child adjustment (e.g. Hetherington, 1972). It has also been suggested that following family disruption and the
loss of a parent, the child experiences a *fear of abandonment* which may be a precursor or concomitant of depression (e.g. Malmquist, 1971; McDermott, 1970).

**Hypothesis 4:** On the full range of climate measures, children from non-intact families will rate their families higher (indicating poorer adjustment) than will children from intact families.

Further investigation of the adjustment of non-intact family children is to be reported in this section. No specific hypotheses are made as the number of variables involved makes this impracticable. Possible mediators of CD which are investigated are the number of siblings in the family and the effects of various child/parent/step-parent custodial combinations.

4. *Teachers' ratings.* All three of the dimensions have been linked with depression in children, although the links between antisocial behaviour and depression are probably not readily apparent. The findings of Santrock and Tracy (1978) have suggested that teachers rate children from non-intact homes negatively, so a link might be expected between non-intact family type and antisocial ratings.

**Hypothesis 5:** Ratings on all three dimensions will correlate with the depression scores of the children.

**Hypothesis 6:** Ratings on the antisocial dimension will correlate with family structure, with non-intact family children obtaining higher antisocial behaviour ratings than intact family children.

5. *The high depression group.* To obtain a clearer picture of highly
depressed children it was decided to examine a small group of children with high depression scores. This high depression group is compared to the rest of the sample on several of the variables used in the study. No specific hypotheses are made here.

2.1.3 THE MEASURES USED

2.1.3.1 The Outcome Measure

Childhood depression is the main outcome to be studied and the CDS (Lang & Tisher, 1978) was chosen for this assessment. The CDS has advantages over the CDI as it was designed in Australia, thus lessening the likelihood of wording difficulties. As noted by Kazdin (1981), the CDS has more psychometric support than other assessment techniques in use. Tonkin and Hudson (1981) found some difficulties with the scale which were principally associated with the absence of factor clustering to support its various subscales, but most of the items were found to load significantly onto a principal depression factor, and the reliability estimates for the scale were high. They caution against the use of the CDS as a sole diagnostic instrument but conclude that "the CDS certainly would seem to have adequate reliability to warrant its use as a research instrument" (p.15).

In this study the group form of the test (supplied by the authors) was used. The only difference between the two forms is that instead of 'posting' cards with the printed items into appropriately marked boxes, the children tick a box next to the printed item. A copy of the test form used is in Appendix 1.
2.1.3.2 Other Measures

Family structure was assessed by asking the children to nominate who lives at home? They were presented with a list of relatives and asked to place a tick next to those people who lived in their home most of the time. The form used is in Appendix 2.

Before the testing began the children were given a short talk on the different sort of families that exist, to help them describe their own more accurately and to help reduce any anxieties about their own families being abnormal. Terms such as de-facto and foster parent were explained and an effort was made to ensure all children understood the procedure. For the purpose of the study the terms mother and father applied to biological parents and adoptive parents. De-facto parents were included with step-parents as it was felt that many children would not be able to differentiate accurately between the two.

There is no standard method for categorising family status, so in view of the theoretical requirements of the study the following categories were used:

1. **Intact families:** both biological or adoptive parents

2. **Single parent families:** one biological parent

3. **Remarried parent families:** various parent/step-parent combinations including de-facto relationships

Various other family compositions were investigated, such as foster parents and other relatives as primary care givers. However, the numbers in each category were too small to allow for separate analysis. Teachers were also
asked to indicate whether they were aware of a child having experienced a bereavement, but here again the sample (n=3) was too small to allow for separate analysis. Children in these categories were included in the non-intact family group and in the single parent group where appropriate.

The family structure categories allow for the following comparisons:

1. Intact vs non-intact families
2. Single parent families vs the rest
3. Remarried parent families vs the rest
4. Single parent families vs remarried parent families

Five other independent measures were devised. They assess child-perceived family conflict and family cohesion, mother-child conflict, happiness of mother and fear of abandonment. The first four can be categorised as family climate variables in that they attempt to assess aspects of family life. Fear of abandonment has been linked with depression following family stress, but it assesses not so much the family climate as fear within a child. Wording of the items was decided on after consultations with the schools involved in the testing. Minor amendments were made following a pilot test with a small group of appropriately-aged children.

Conflict and cohesion are made up of short scales - 4 and 5 items respectively. Two factors of Moos' (1974) Family Environment Scale were used as starting points in the construction of the present scales. His conflict and cohesion sub-scales assessed respectively, "the degree to which conflictual interactions are characteristic of the family" and "the extent to which family members feel that they belong to and are proud of their family" (p.5). The original items were reworded to make them more appropriate for this younger age group, to remove American cultural nuances, and to make the
items equally appropriate for children from both intact and non-intact families. The final items were as follows:

**Conflict:**
1. People in my family shout a lot.
2. No-one gets hit in my family.
3. At home no-one looses their temper.
4. We fight a lot in my family.

**Cohesion:**
1. In our family we really help and support each other.
2. I have to spend too much time by myself at home.
3. We like being together in my family.
4. We don't go out together enough in my family.
5. There is not enough time and attention for everyone in our family.

As with all the other family climate items in this section, the children indicated, by ticking the appropriate box, whether for them the statement was very wrong, wrong, not sure, right or very right. These are the same response categories as are used for the items of the CDS; they are scored from 1-5 so that higher scores indicate high conflict and low cohesion.

**Fear of abandonment**, **mother-child conflict** and **happiness of mother** have all been mooted in the literature as either causes or concomitants of depression-related outcomes of family stress. **Fear of abandonment** is the following 5-item scale which assesses different aspects of abandonment:

1. I get worried about one of my parents getting sick.
2. Sometimes I am afraid that someone in my family may die.
3. Sometimes I am afraid that everyone I love will go away.
4. If I don't do things right my parents will not love me.
5. I get afraid that one day no-one will be left to look after me.

*Fear of abandonment* may perhaps be seen as being continuous with depression; that is, it possibly assesses a particular aspect of the depression construct. Certainly there is some parallel between these items and some of those in the CDS. Nevertheless, it is believed that these items do specifically assess this fear which some have hypothesised to be a precursor to depression in children.

*Mother-child conflict* and *happiness of mother* are very specific aspects of family climate both of which are assessed by a single item:

1. My mum and I are good friends most of the time.
2. Most of the time my mum is happy.

Both of these have positive wordings as it was felt that they would otherwise tend to be too intrusive.

The format of all of the above items, and the order of presentation, can be seen in Appendix 2. The straight- and reverse-scoring items have been mixed in an attempt to avoid the effects of response sets.

2.1.3.3 Teachers' Ratings

Class teachers were given the following instructions:
Please give your subjective impressions of each of the children in your class on the following three dimensions:

**happiness/sadness**  
1 2 3 4 5  
Most of the time very happy average sad very sad  
......... is happy

**withdrawal/sociability**  
1 2 3 4 5  
Most of the time very sociable average somewhat withdrawn very withdrawn  
......... is sociable withdrawn withdrawn

**Aggressiveness/antisocial behaviour**  
1 2 3 4 5  
With......... this never rarely sometimes often most of the time is a problem

2.1.4 THE SUBJECTS

The subjects consist of all the 5th and 6th grade children in two Canberra primary schools who were present when the testing was undertaken. Parents had been notified before-hand that research into the feelings of children was to be conducted and they were urged to contact the school if they did not want their child to participate or wanted further information. No parents contacted the schools. Out of a total of 267 children who were tested, only 4 took up an option which was offered to them of not having their results used at all; this left 263 records. Incomplete answers necessitated the removal of seven more sets of depression scores, leaving 256 (133 boys and 123 girls). These can be considered representative of the population being studied as there is an effective response rate of over 95%.
The age range of the children was from 10 years to 13 years and 9 months, with a mean age of 11 years and 5 months.

The socio-economic status of the children was not specifically assessed as there were practical difficulties in obtaining this information from the children. However, both of the schools were average suburban Canberra schools and could be expected to reflect the socio-economic distribution of Canberra as a whole. There is a general over-representation of higher income groups due to the large public service employment, but apart from this the suburbs have been planned to include both high and low income housing, thus ensuring some heterogeneity. Cooper, et al. (in press) conducted their study in schools very similar to those used in the present study. Using children's reports of the head of the household's occupation, and a classification based on the estimated family income (Broom, Jones & Zubrzycki, 1965), they determined that 40% were in the high income category (professional or managerial occupations), 33% were in the middle category (clerical, sales and skilled occupations) and 27% were in the low category (unskilled and semi-skilled occupations). These figures can only be taken as a rough guide as the accuracy of child reports in this area must be in question and there is a problem in categorising those families who are recipients of welfare payments.

There were 180 children in the intact family category and 76 in the non-intact group; 52 came from single parent families and 24 had parents who had remarried. Only three children had experienced a parental bereavement (in the knowledge of the teachers); two children indicated that they had foster parents and another two were cared for by relatives.
2.1.5 PROCEDURE

The children were tested in groups of 15-20 and seated apart from each other to ensure privacy. The confidentiality of the exercise was stressed and, although they were encouraged to answer all the items, they were given the option of not answering questions if they did not want to. The response categories were explained using items not included in the testing. As the material in the test had the potential to arouse strong feelings, the children were given an opportunity to talk further with the examiner following the session and several took up this option. Children were also encouraged to write their comments at the end of the form. The test forms were then distributed; the first sheet asked for the family information and the remaining four composed the CDS. Initial items were worked through slowly, with the children being encouraged to indicate if they could not understand what to do; they were then instructed to complete the forms at their own pace. The procedure took around 35-45 minutes for each group.

2.2 RESULTS

2.2.1 ANALYSIS OF MEASURES

2.2.1.1 The CDS

There were difficulties in coding seven of the records - four of these (two boys and two girls) were from non-intact families. In two cases pages had been omitted, probably by accident, but in the others the
omissions appeared to have been deliberate and there were too many blanks to allow for valid coding. Two girls, one from a single parent family and the other an adopted child whose adoptive parents had separated, left many blanks and wrote comments adjacent to items which had evoked strong feelings. Both girls spoke to the examiner following the testing and it was apparent that, had they filled in the forms appropriately, both would have had high depression scores. Each wanted to talk about her situation, apparently finding the group form of the test inadequate for expressing how she felt.

The 256 valid records were subjected to various analyses to examine the overall pattern of results, reliability, and factor structure.

Table 1 contains the mean scores for each of the sub-scales of the CDS, for the total group and for boys and girls separately.

The mean D-score of 137.78 is considerably higher than the 116.9 reported for the normal group in the test manual (p.38). The manual means for boys and girls are 106.3 and 132.5 respectively; both of these, and particularly that for boys, are lower than those obtained here. The present results, however, are similar to those obtained by Tonkin and Hudson (1981), whose means were 132.47 for boys and 141.32 for girls.

Reliability: A Cronbach alpha reliability coefficient of .94 was obtained for the 66 items of the CDS. This lies between the .96 reported in the manual and the .92 obtained by Tonkin and Hudson. The Guttman split-half reliability coefficient for the scale was .90. Only 9 of the 66 items were found to have item-total correlations of below .30. Two of these (Miscellaneous Pleasure items 4 and 6, which are 17 and 31 on the test form) actually correlated negatively with the total. The further analysis
Table 1. Mean scores on the sub-scales of the CDS, by sex of child

<table>
<thead>
<tr>
<th>SUB-SCALES</th>
<th>BOYS</th>
<th></th>
<th>GIRLS</th>
<th></th>
<th>TOTAL</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
<td>SD</td>
<td>X</td>
<td>SD</td>
<td>X</td>
<td>SD</td>
</tr>
<tr>
<td>AFFECTIVE RESPONSE</td>
<td>20.22</td>
<td>6.00</td>
<td>22.13</td>
<td>6.71</td>
<td>21.14</td>
<td>6.42</td>
</tr>
<tr>
<td>SOCIAL PROBLEMS</td>
<td>21.66</td>
<td>6.84</td>
<td>22.79</td>
<td>7.22</td>
<td>22.20</td>
<td>7.03</td>
</tr>
<tr>
<td>SELF-ESTEEM</td>
<td>22.83</td>
<td>7.24</td>
<td>24.85</td>
<td>6.43</td>
<td>23.80</td>
<td>6.93</td>
</tr>
<tr>
<td>PREOC. SICKNESS DEATH</td>
<td>19.76</td>
<td>5.62</td>
<td>20.05</td>
<td>5.57</td>
<td>19.90</td>
<td>5.59</td>
</tr>
<tr>
<td>GUILT</td>
<td>23.23</td>
<td>6.42</td>
<td>23.37</td>
<td>6.13</td>
<td>23.30</td>
<td>6.27</td>
</tr>
<tr>
<td>MISC. DEPRESSION</td>
<td>26.87</td>
<td>6.06</td>
<td>28.07</td>
<td>6.69</td>
<td>27.44</td>
<td>6.38</td>
</tr>
<tr>
<td>PLEASURE/ENJOYMENT</td>
<td>18.61</td>
<td>5.23</td>
<td>18.61</td>
<td>4.97</td>
<td>18.61</td>
<td>5.10</td>
</tr>
<tr>
<td>MISC. PLEASURE</td>
<td>22.99</td>
<td>4.88</td>
<td>22.77</td>
<td>5.82</td>
<td>23.36</td>
<td>5.36</td>
</tr>
<tr>
<td>TOTAL DEPRESSION (D-SCORE)</td>
<td>134.56</td>
<td>32.87</td>
<td>141.24</td>
<td>33.04</td>
<td>137.77</td>
<td>33.07</td>
</tr>
<tr>
<td>TOTAL PLEASURE (P-SCORE)</td>
<td>41.60</td>
<td>9.15</td>
<td>42.38</td>
<td>9.65</td>
<td>41.97</td>
<td>9.38</td>
</tr>
</tbody>
</table>
reported below confirms that these two items are redundant and should probably be omitted from the scale. Overall, the reliability of the scale is impressively high.

**Factor analysis:** The research by Tonkin and Hudson (1981) throws doubt on the validity of the sub-scale groupings used by Lang and Tisher. From a factor analysis of the scale they conclude that their findings do not support the construct validity of the scale. There are several problems with their analysis, not the least being that they had fewer subjects than there are items in the scale.

A factor analysis of the 256 records was undertaken using a principal factor solution similar to that used by Tonkin and Hudson (SPSS - Kim, 1975, p.480). A factor pattern emerged where the first factor had an eigenvalue of 16.5 and accounted for 24.5% of the overall variance; the second had an eigenvalue of 4.02 accounting for 6.1% of the variance, and the third an eigenvalue of 2.37 accounting for 3.6% of the variance. Thereafter the drop-off, both in eigenvalue and percentage of variance accounted for, was slight, such that factor 16 had an eigenvalue of 1.03 and accounted for 1.6% of the variance. As the first factor accounted for a relatively modest 24% of the variance and many other factors were contributing, it appeared that a multifactorial solution was more appropriate than a principal factor one.

To obtain meaningful factors Gorsuch (1974, p.157) suggests that extracting those with a Guttman's root (eigenvalue) of at least one, and using Cattell's scree test, provides "a range within which the correct number of factors is likely to occur."

There were 16 factors with an eigenvalue of at least 1 and a scree
analysis determined between 5 and 8 factors. As suggested by Gorsuch (1974, p.158), the stability of the factors was examined, using a rotated (varimax) analysis, as progressively more factors were extracted. At the 10 factor solution the stable factors started to break down and the new factors comprised only one or two items so the 9 factor solution appeared to be the optimal one. Nine factors account for 50.1% of the scale's variance.

As the factors of a depression scale can be expected to correlate with each other, the nine factors were rotated obliquely. The factors remained stable, with all item loadings over .30. The factor correlations can be found in Appendix 3. (Only Pearson's product moment correlations are used in this report.)

The first two factors appear to lend support to Lang and Tisher's view of depression, expressed in their construction of the scale to include both depression items, and pleasure or enjoyment items - the first two factors reflect this distinction. The first extracted factor includes 34 of the 48 depression items, while 13 of the 18 pleasure items load on the second, along with 11 of the depression items. The items which make up the 9 factors can be found in Appendix 4, only those with loadings of 0.3 or above were included.

The most obvious theme of the first factor items is general depression or depressive ideation. Included are most of the items from the CDS subscales of self-esteem, social problems, guilt and miscellaneous depression, and half of the affective response sub-scale. There is a correlation of .976 between factor 1 and D-score, and as most of the items are the same, it was decided to continue using D-score as the main dependent measure (assessing depression) in this study.

Factor 2 has a correlation of .899 with the CDS P-score. Lang and Tisher
(1978) included the P-items to assess "the presence of fun, enjoyment, happiness in the child's life, or his capacity to experience these things" (p.8). The depression items which load onto factor 2 appear to lie on a happiness or enjoyment/sadness dimension so it seems reasonable to sum up this factor in Lang and Tisher's phrase: inability to experience pleasure.

There are 9 items in factor 3. Those with the highest loadings are concerned with anergia, while disinterest and unhappiness in a school context are also represented. There are strong correlations with the social problems (.857), affective response (.823) and the sickness and death (.792) sub-scales of the CDS. These three sub-scales were the weakest contributors to factor 1. Factor 3 seems best labelled anergia.

Factor 4 has four items which all mention school. This factor could be termed unhappiness at school as this appears to be the common theme.

The six items which make up factor 5 appear to represent depressed affect. In contrast to factor 3, the items define a private rather than a social problem. The factor also contrasts with the depressed cognitions of factor 1. There is a correlation of .754 with the affective response sub-scale.

There are only two clear items loading onto factor 6, both to do with waking during the night. Another item which comes close to a significant loading (.287) refers to bad dreams, so the factor can be termed sleep problems.

The three items of factor 7 have to do with self-concept so the factor might
be termed negative self-concept. There is a correlation of .640 between this factor and the self-esteem sub-scale.

Factor 8 also has three items. The strongest two refer to experiencing unhappiness away from home, and the third mentions parents. The factor might be termed over-involvement at home.

Factor 9 has four items. Those with the highest loadings mention death or dissatisfaction with life, so the factor appears to define suicidal ideation.

2.2.1.2 Other Measures

The conflict and cohesion scales had coefficient alpha's of .696 and .602 respectively. For short scales they both have good internal consistency.

Both scales have face validity but further validation is difficult. In addition, they need to be shown to be relatively independent of each other. Examining them in relation to the family structure data throws some light on this problem. Non-intact families can be expected, by definition, to be less cohesive, on average, than intact families. The majority of the non-intact families have a single parent, and as the work of Hetherington (1979) and others had indicated, the pressure on single parents often means that there is less time available for positive interaction with the children. On the other hand, conflict is not necessarily associated with any particular family type. Table 2 lists the differences between intact and non-intact families on the two measures.

It can be seen that the difference for cohesion is significant while that for
Table 2. Differences between intact and non-intact families on the conflict and cohesion measures.

<table>
<thead>
<tr>
<th></th>
<th>INTACT MEAN SCORES</th>
<th>NON-INTACT MEAN SCORES</th>
<th>t-VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONFLICT</td>
<td>13.71</td>
<td>14.52</td>
<td>1.40</td>
</tr>
<tr>
<td>COHESION</td>
<td>9.46</td>
<td>11.13</td>
<td>3.45*</td>
</tr>
</tbody>
</table>

* Significant at the .001 level

conflict is not. This offers some indirect evidence for the validity of the two scales, and suggests that although there may be some correlation between the two, they are essentially assessing different constructs. The independence of the two scales is further supported by the fact that the internal reliability of the measures (.696 and .602) is greater than the correlation between the two (.402) and the item-total correlations within each scale are higher than those across scales (Table 3).

It is not possible to establish other than face validity for the measures of fear of abandonment, mother-child conflict and happiness of mother. However, the fear of abandonment scale had a sound coefficient alpha of .652, and low correlations with conflict (.188) and cohesion (.144). As it is the negative aspects of cohesion and happiness of mother that are generally being referred to in the results, these variables will be referred to as

1 All significance levels in this report are for 2-tailed tests.
Table 3. Item-total correlations for the conflict and cohesion scales.

<table>
<thead>
<tr>
<th>CONFLICT SCALE ITEMS</th>
<th>CONFLICT</th>
<th>COHESION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. People in my family shout a lot</td>
<td>.758</td>
<td>.319</td>
</tr>
<tr>
<td>2. No-one gets hit in my family</td>
<td>.730</td>
<td>.220</td>
</tr>
<tr>
<td>3. At home no-one loses their temper</td>
<td>.637</td>
<td>.067</td>
</tr>
<tr>
<td>4. We fight a lot in our family</td>
<td>.758</td>
<td>.476</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COHESION SCALE ITEMS</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. In our family we really help and support each other</td>
<td>.297</td>
<td>.552</td>
</tr>
<tr>
<td>2. I have to spend too much time by myself at home</td>
<td>.001</td>
<td>.541</td>
</tr>
<tr>
<td>3. We like being together in my family</td>
<td>.237</td>
<td>.628</td>
</tr>
<tr>
<td>4. We don't go out together enough in our family</td>
<td>.324</td>
<td>.689</td>
</tr>
<tr>
<td>5. There is not enough time and attention for everyone</td>
<td>.340</td>
<td>.711</td>
</tr>
<tr>
<td>in our family</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

lack of cohesion and mother unhappiness.

The reliability of the family structure data provided by the children was not formally assessed, but some checks were made with the teachers. In one case an error was detected, where a child with a step-parent had indicated both natural parents. It is possible that there are other inaccuracies in these data but generally they seem likely to be reliable.

The teachers' ratings are discussed in section 2.2.5.
2.2.2 STRUCTURE AND CLIMATE

Hypothesis 1 stated that there would be a correlation between both conflict and lack of cohesion, and depression scores. For conflict the correlation coefficient is .376 (p < .001) and for lack of cohesion it is .355 (p < .001). In addition, there are significant relationships between these climate measures and each of the nine factors of the CDS. For conflict the range is between .190 (factor 8) and .445 (factor 2), while for lack of cohesion the range is from .124 (factor 5) to .575 (factor 2).

Hypothesis 2 predicted that children from non-intact families would have higher depression scores than children from intact families. The mean D-scores are 141.86 (non-intact) and 136.06 (intact) but the difference is not significant (t = 1.27, n/s). There are differences, however, on two of the factors of the CDS; these are factor 2 (t = 2.56; p < .02) and factor 3 (t = 1.99; p < .05). Factor 2 measures the inability to experience pleasure and factor 3 measures anergia.

There are no significant correlations between D-scores and three dummy-coded, family structure variables (intact families vs the rest, single parent families vs the rest, and remarried parent families vs the rest).

These findings show that for the present sample family climate variables are clearly linked with CD, but family structure is not. Being from a non-intact family situation, however, does seem to predispose to the depression-related outcomes of inability to experience pleasure and anergia.
2.2.3 SEX DIFFERENCES

Hypothesis 3 stated that in the intact family group girls would have higher depression scores than boys, but in the non-intact group, boys would have higher scores than girls. The results of these comparisons are listed in Table 4.

Table 4. Sex differences in D-scores; intact and non-intact groups.

<table>
<thead>
<tr>
<th></th>
<th>MEAN D-SCORE</th>
<th>MEAN D-SCORE</th>
<th>t-VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BOYS</td>
<td>GIRLS</td>
<td></td>
</tr>
<tr>
<td>INTACT FAMILIES</td>
<td>131.3</td>
<td>141.4</td>
<td>-2.07*</td>
</tr>
<tr>
<td>NON-INTACT FAMILIES</td>
<td>142.9</td>
<td>140.8</td>
<td>.27</td>
</tr>
</tbody>
</table>

* Significant at the .05 level

In the intact family group the sex difference is significant, with girls obtaining higher D-scores than boys. In the non-intact group the pattern is reversed, but this difference is only slight and does not reach significance. An analysis of variance shows no significant main effects (for sex or intactness); the interaction f-value is .176, which again does not reach significance.

There are significant sex differences on three factors of the CDS. Girls scored significantly higher than boys on factor 7 (negative self-concept:
Hypothesis 3 is only partially supported. Girls do score higher than boys in the intact group, but in the non-intact group boys do not score higher than girls as predicted, although there is a slight tendency in this direction.

2.2.4 NON-INTACT FAMILY CHILDREN

Hypothesis 4 stated that non-intact family children would have higher scores on the full range of family climate variables, than children from intact families. Table 5 lists these scores.

Table 5. Differences between intact and non-intact families on family climate measures (including fear of abandonment).

<table>
<thead>
<tr>
<th></th>
<th>INTACT</th>
<th>NON-INTACT</th>
<th>t-VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONFLICT</td>
<td>12.18</td>
<td>12.61</td>
<td>.80</td>
</tr>
<tr>
<td>COHESION</td>
<td>9.46</td>
<td>11.13</td>
<td>3.45**</td>
</tr>
<tr>
<td>MOTHER-CHILD CONFLICT</td>
<td>1.53</td>
<td>1.92</td>
<td>2.76*</td>
</tr>
<tr>
<td>HAPPINESS OF MOTHER</td>
<td>1.71</td>
<td>1.83</td>
<td>.89</td>
</tr>
<tr>
<td>FEAR OF ABANDONMENT</td>
<td>12.74</td>
<td>12.61</td>
<td>.80</td>
</tr>
</tbody>
</table>

** Significant at the .001 level
* Significant at the .01 level
It can be seen that, when compared with children for intact families, children from non-intact families rate their families as less cohesive and indicate higher levels of mother-child conflict. There are, however, no differences between the intact and non-intact groups on general conflict, mother unhappiness or fear of abandonment.

In the non-intact group various child-parent combinations were then examined for links with depression. For example, boys living with their natural fathers were compared with boys living with their natural mothers. No difference was found on D-scores but boys with their mothers had higher scores on factor 8 (overinvolvement at home) than boys with their fathers (t=2.54; p<.04). There were only six girls with their natural fathers, but there was a clear tendency for them to report less general conflict at home than girls with their natural mothers.

The number of siblings in the family was not associated with D-score (r=.104, n/s). The only significant finding related to siblings was in the intact group, where there was a link between the number of siblings and the level of conflict reported (r=.263; p<.001).

2.2.5 TEACHERS' RATINGS

Ratings on happiness/sadness and withdrawal/sociability correlate at .600; correlations of these ratings with antisocial behaviour are .223 and .108 respectively. This suggests that teachers are treating the first two dimensions as inter-related and the third as being relatively independent. Hypothesis 5 predicted that teachers' ratings on the three dimensions would correlate with D-scores. Table 6 gives the correlations between the ratings.
D-scores and family structure variables.

Table 6. Correlation matrix for teachers' ratings, D-scores, and family structure.

<table>
<thead>
<tr>
<th></th>
<th>HAPPINESS/ SADNESS</th>
<th>WITHDRAWAL/ SOCIABILITY</th>
<th>ANTISOCIAL BEHAVIOUR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INTACTNESS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(intact vs non-intact)</td>
<td>-.103</td>
<td>-.072</td>
<td>-.216***</td>
</tr>
<tr>
<td><strong>SINGLE PARENT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(single parent vs rest)</td>
<td>.126</td>
<td>.091</td>
<td>.168**</td>
</tr>
<tr>
<td><strong>REMARRIED PARENT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(remarried vs rest)</td>
<td>-.016</td>
<td>-.009</td>
<td>.045</td>
</tr>
<tr>
<td><strong>D-SCORES</strong></td>
<td>.152*</td>
<td>.132*</td>
<td>.258***</td>
</tr>
</tbody>
</table>

*** Significant at the .001 level
** Significant at the .01 level
* Significant at the .05 level

As hypothesised, there are correlations between these ratings and D-scores. The relationship is strongest for antisocial behaviour, and ratings on the other two dimensions, which are more obviously linked with depression, correlate only slightly with D-scores.
Hypothesis 6 stated that ratings on the *antisocial* dimension would correlate with family structure. Teachers' ratings of antisocial behaviour are significantly correlated with intactness, whereas the others are not. Ratings on antisocial behaviour are linked with single parent homes but not remarried parent homes.

### 2.2.6 THE HIGH DEPRESSION GROUP

A D-score cut-off point of 175 was chosen to provide a sub-sample of children who can reliably be considered to be at least moderately depressed. The test manual gives a mean score of 157 for depressed children (p. 38) but using this figure as the cut-off point would mean that 74 children, or 28.9% of the sample would be included. It was felt that by using the higher figure (175) the risk of including false positive depressives would be minimised and the characteristics of depressed children would be more clearly evident. A D-score of 175 in the manual is at the 7th decile for depressed children (p. 69). In the present sample 37 of the 256 children (14.45%) are in the high depression group (high-D); these are compared with the rest of the sample (the low-D group).

Table 7 lists the differences between the high-D and low-D groups on the family climate variables. Those in the High-D group rate their families higher on *conflict* and *lack of cohesion* than those in the low-D group, but there are no differences between the groups on *mother-child conflict* or *mother unhappiness*.

There were no differences between the two groups in the proportions of intact and non-intact family children ($X^2=.958, n/s$), and the proportions
Table 7. Differences between the high-D and low-D groups on the climate measures.

<table>
<thead>
<tr>
<th></th>
<th>HIGH D MEANS</th>
<th>LOW D MEANS</th>
<th>t-VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONFLICT</td>
<td>14.03</td>
<td>11.99</td>
<td>-2.92*</td>
</tr>
<tr>
<td>COHESION</td>
<td>12.38</td>
<td>9.56</td>
<td>-4.09**</td>
</tr>
<tr>
<td>MOTHER-CHILD CONFLICT</td>
<td>1.84</td>
<td>1.63</td>
<td>- .97</td>
</tr>
<tr>
<td>MOTHER UNHAPPINESS</td>
<td>2.05</td>
<td>1.68</td>
<td>-1.72</td>
</tr>
</tbody>
</table>

** Significant at the .001 level
* Significant at the .01 level

of boys and girls ($X^2=.375$, n/s). The high-D group scored significantly higher than the low-D group on the fear of abandonment scale ($t=-5.19$; $p<.001$) but comparisons between the high and low-D groups reveal an interesting characteristic of this scale. In the low-D group there are clear correlations for D-scores with conflict (.354), coheslone (.277) and fear of abandonment (.412). The high-D sample is restricted in numbers and in range of D-scores, and accordingly the correlations of D-score with conflict and coheslone are smaller and non-significant (.193 and -.173). However, the correlation of D-score with fear of abandonment remained strong (.477). This suggests that both are assessing much the same thing; that what is assessed by the fear of abandonment scale is probably continuous with depression rather than independent of it.

Figure 1 shows the distribution of D-scores in the high-D group. It can be
seen that there is a tendency for girls to have the extreme scores.

Figure 1. Frequency distribution of D-scores for the high-D group, by sex of child.

Teachers did not rate those in the high-D group as any more sad or withdrawn than those in the low-D group. They did, however, rate the high-D group as more antisocial than the others ($t=2.27; p<.03$).

An analysis using the manual mean for a depressed sample (157) as the cut-off for the high depression group, gives results which are similar to those reported here. The only difference is that the high-D group scores significantly higher than the low-D group on mother unhappiness ($-2.36; p<.025$).
2.3 DISCUSSION AND SUMMARY

The CDS has been found to be a reliable measure appropriate for survey work of this kind. The children appeared to understand the items, and the response system, and to answer conscientiously. For two children the scale appeared to be an inadequate vehicle for expressing strong emotions but such cases would probably be better served in the normal clinical testing situation with the individual form of the test.

The mean scores for boys and girls are higher than those indicated in the manual and support the findings of Tonkin and Hudson (1981). It is probably the case, as Lang and Tisher (1981) have suggested, that the control group means reported in the manual are those of a "super-normal" group with fewer problems than average children. A selection criterion for this control group was that the child must have missed less than ten days of school during the year. As one of the few consistent findings relating to family structure is that children from non-intact families have higher school absence rates than those from intact families (Goetting, 1981, pp358-359), it is possible that this control group contained few children from anomolous family situations.

Using the manual mean for a depressed sample, 28.9% of the present population could be classified as at least moderately depressed. Either this reflects a reality, or the means given in the manual are too low. Although a cut-off figure of 175 was chosen for the high depression group in this study, there is no reason why the manual figure for depressed children should not be considered sound; furthermore, 157 is only the mean, suggesting that many of the depressed sample in the manual scored less
than this.

Albert and Beck (1975), using a short form of the BDI, determined that 33% of children in a parochial school were at least moderately depressed, and Weinberg, et al. (1973) found that 58% of children referred to an educational clinic were depressed. Similarly, Wallerstein and Kelly (1980, p. 213) found that, five years after the divorce of their parents, around two thirds of the children were characterised by "persistent emotional neediness, unhappiness, and somewhat diminished self-esteem." Most of the children in these studies would not normally come to the attention of clinicians, so it is possible that the incidence rates of CD are as high as has been indicated by the present study.

Thirty-nine children (if we include the two uncodable records), or 15.12% of the population, had depression scores of 175 or above. It is unlikely that this result is an artifact of response sets as these children consistently indicated positive responses to items such as *sometimes I wish I were dead*, while indicating at the same time that they did not enjoy life. Although it has not been demonstrated conclusively, it seems probable that there is indeed a substantial proportion of children in the community who experience depression and whose problem remains undetected.

With regard to the factor structure of the CDS, it seems reasonable to accept the suggestion of Lang and Tisher (1981, p. 19) that the first and second factors (*depression*, and *inability to experience pleasure*) "support the construct validity of the CDS". These two initial factors also parallel the necessary condition for a positive diagnosis of depression using the DSM - III criteria: this is, the presence of "dysphoric mood or pervasive loss of interest or pleasure" (Kashani, et al., 1981b, p. 146).
The factors which are extracted from a scale are necessarily dependent on the items which have been included, but some comparison with analogous scales for adult depression is in order. Beck (1967, p.204) reports the analysis of his 21-item, Beck Depression Inventory, where four centroid factors were found: 1. Vital depression (physiological signs), 2. Self-debasement, 3. Pessimism-suicide, and 4. Indecision-inhibition.

Physiological symptomology was not directly assessed in the CDS, but sleep problems (factor 6) were included under Beck's vital depression. Self-debasement is similar to factor 7 (negative self-concept), and pessimism-suicide is covered by factor 9 (suicidal ideation), while there are similarities between indecision-inhibition and factor 3 (anergia). Byrne (1981, p.87), using the Zung Self-rating Scale (Zung, 1965) with a large adult community sample, found 5 factors. The first three parallel factors of the CDS, while the other two assess aspects of depression which were not included in the CDS (diurnal variation of mood and eating problems).

The results for hypothesis 1 are in general agreement with much of the recent literature, which suggests that it is the climate of a family rather than its structure which determines a child's adjustment. Both conflict, which indicates negative interaction, and lack of cohesion, which indicates an absence of positive interaction, are linked with CD. Given that some error variance can be expected in large scale pen and paper surveys of this sort, and the probability that some depression is genetically transmitted (Tsuang, 1978), the obtained correlations between climate variables and depression scores are high. It would seem that being in non-intact family situations is not, in itself, a cause of depression in children, but the risks of depression are greatly increased where there is conflict or a lack of cohesion, irrespective of family structure. It is possible that some of the children from intact, but conflictual and uncobesive homes are experiencin
the pre-parental separation tensions referred to by some writers (e.g. Herzog & Sudia, 1971; Rutter, 1971).

These results have some theoretical significance, for they do not support the notion of object loss as a cause for depression. Children in non-intact families have, by definition, lost a parent at some time during their development, but this is not the case with intact family children who, according to the results obtained here, are equally likely to develop depression. Even in the high depression group, the proportion of children from non-intact families was the same as in the low depression group. It is possible that a concentration on clinical samples has fostered this view of object loss as the major cause of depression in children (e.g. Caplan and Douglas, 1969). Most of the clinical studies reported to date have assessed the etiological role of family structure, but have neglected climate variables. It is also possible that most clinical patients are suffering from acute depressive episodes which are more likely to be precipitated by loss events. The depressed children in the present study (representing those in the general community) may be more chronically depressed as a result of ongoing family problems.

Malmquist (1971, p.889) notes that the nature of loss has been "so broadened that it loses meaning to the point where everything contributing to depression proneness ends up being called a loss." Family conflict and lack of cohesion could thus fit into this definition as loss experiences, but other explanations are more direct and logical. The findings of this study support several of the etiological theories outlined earlier; these include the family systems, learned helplessness, life-stresses and behavioural models.

In contrast to some studies which have found no relationship at all between
family structure and child adjustment (e.g. Raschke & Raschke, 1979 - no relationship between structure and self-esteem), a significant relationship has been found between intactness and both factor 2 (inability to experience pleasure) and factor 3 (anergia). Non-intact family children, and particularly those from single parent families, had higher scores on these factors; this may be a function of the amount of time the parent has available for positive interaction with the child, in the absence of which the child loses the capacity for enjoyment and self-motivation.

Socio-economic status was not specifically assessed in this study and it is possible that this variable had a systematic influence on the findings. Most single parent families are likely to fall into the low status bracket; these families were rated by the children as being less cohesive than the rest, but not as more conflicted. Conflict levels for the total sample are clearly related to depression, which suggests that this finding holds across all socio-economic levels. There is scope for further assessment of the effects of socio-economic status on child adjustment after family disruption, and in particular, the stressful effects of the drop in status which often occurs after separation, needs investigation.

Although it appears that family climate has greater salience than structure in producing depression in children, further research could investigate variables associated with structure. The time which has elapsed since the separation, whether the break was by separation or bereavement, and the access arrangements with the non-custodial parent, are all associated with single parent or remarried parent status.

The question of causality needs to be addressed. Correlational studies can only demonstrate links between measures, not the direction of causality.
Rutter (1971, p.249) raises this point with reference to delinquency, suggesting that it may be the behaviour of the child which leads to the family stress, and not visa-versa. He goes on to dismiss this possibility on the grounds that longitudinal prospective studies have shown that it is possible to predict the occurrence of delinquency on the basis of early family assessment. It is even less likely that depression in children precipitates parental discord, for apart from those cases where antisocial behaviour masks depression, it appears to be a subjective experience which tends not to come to the attention of others. However, a child's depression would probably have some effect on his family system, as the system affects him (Lang & Tisher, 1978, p.27).

Many researchers have noted that females are more susceptible to depression than males; this holds both for numbers who are diagnosed and for a tendency for women to rate themselves as more depressed than men (Weissman & Klerman, 1977). In Byrne's (1981) study of depression in a general population, it was found that women had higher scores overall, and higher scores on most of the symptoms. It appears that this pattern is the same with children; Lang and Tisher (1977), Tonkin and Hudson (1981), and the present study, have all found that girls obtain higher scores than boys using the CDS. It is unclear whether this difference reflects a reality or is just an artifact based on a socialised tendency for females to admit to more depression than men (Gove & Tudor, 1973). Byrne (1981, p.90) found that, contrary to his expectations, women "are not more ready than men to report the presence of that constellation of symptoms, sadness, crying and the like, which imply emotional weakness."

In the present case, however, the three factors on which girls scored higher than boys, were factor 5 (depressed affect - crying, unhappiness, etc.), factor 7 (negative self-concept), and factor 8 (overinvolvement at home); higher scores on these factors do suggest emotional vulnerability.
It is not clear why the consistent sex pattern is not seen in non-intact families as there is no link with family type (single parent or remarried parents). A pointer may be in the finding that boys who were with their biological mothers had higher scores on factor 8 (overinvolvement at home) than boys who were with their biological fathers. This suggests that the former group are having difficulties with social relationships outside the home, possibly because they do not have a father present to provide appropriate social modelling and support (Connell, 1981; Lamb, 1977; Whitehead, 1979). Were a socialised inhibition effect still operating, the boys in the non-intact group would clearly be more depressed than the girls, as their depression scores would be understating their true depression. In sum, there is some suggestive evidence to support the notion that "boys may be more susceptible to the effects of family discord than are girls" (Rutter, 1971, p.252).

General conflict levels were not significantly higher in non-intact families than those in intact families, but as predicted, there were higher reported levels of mother-child conflict. This supports the clinical observations of some researchers (e.g. Hetherington, 1979; Tooley, 1978), confirming a tendency for this sort of conflict to develop in non-intact families. No differences were found here between single parent families and remarried parent families. The predicted higher levels of mother unhappiness and fear of abandonment were not found in the non-intact group. Either the number of children experiencing these was too small, or the measures were not sensitive enough to assess them.

Fear of abandonment appears to be continuous with depression. Within the high-D group, the correlations between conflict and D-score, and cohesion and D-score, are small, probably because the numbers and range
of depression scores were so restricted. However, the relationship between fear of abandonment and D-score, remained strong (r=.477) even within this small sample (n=37). This suggests that what is measured by the fear of abandonment scale may actually be an integral part of CD, and independent of the other measures developed for this study. No light is thrown on the question of whether fear of abandonment is a precursor of depression in children who have experienced a significant loss, or a concommitant of it.

The number of siblings in the family was not found to be a mediator in the development of depression. There were not enough subjects to explore the role of siblings in greater depth; for instance, by comparing girls with sisters, with those who have brothers, and exploring the affects of birth order.

It is surprising that there is such a small link between teachers' ratings on happiness/sadness and withdrawal/sociability, and D-scores, and that there are no differences on these dimensions between the high and low depression groups. Ratings on these dimensions could be expected to correlate strongly with depression, but it appears that there is a discrepancy between how a child feels and how these feelings are expressed. It could also be the case that teachers are not attuned to pick up depressive cues from their children, or else do not interpret these as being significant. Lang and Tisher (1978, p.45) found that parents of control (normal) group children rated their children as significantly less depressed than those children rated themselves, which suggests that teachers are not alone in this regard. Where parents were rating the depression of children who were in the experimental group (i.e. who had been referred for treatment of a depression-related problem), they gave their children higher scores than the children gave themselves.
There was a significant relationship between ratings on antisocial behaviour and D-scores, and the high-D children were given significantly higher ratings than the low-D children. As the above finding suggests that teachers do not pick up the depressive cues of children, this finding would appear to support the hypothesised link between antisocial behaviour and depression. Some writers (e.g. Glaser, 1967) maintain that antisocial behaviour can be a depressive mask; the results here indicate, at least, that there is an association between the two.

The finding of higher ratings on antisocial behaviour in children from single parent families could either reflect a reality, that these children are indeed antisocial, or it could be evidence for Santrock and Tracy's (1978) hypothesis that teachers tend to rate children on the basis of stereotypes.

The examination of the high depression group did not reveal anything unexpected. Although there was a tendency for girls to have the more extreme depression scores, the proportions of boys vs girls, and intact vs non-intact families were not different from those for the rest of the sample. Their conflict and lack of cohesion scores were significantly higher than for the low depression group but scores on mother-child conflict and mother unhappiness did not discriminate between the high and low groups.

This study has been concerned with the average or general effects of family stress and it is conceivable that the picture for an individual child differs from the norm in some way. Although family climate factors are shown to be strongly linked with CD, in individual cases depression may result from l
experiences or biochemical imbalance. Similarly, the overall pattern of depression may differ from the norm in an individual case; a child who is depressed at home may find relief at school, and visa-versa. This suggests that, where depression is suspected, self-rating scales such as the CDS should only be treated as a component in a wide-ranging assessment which investigates the family and social milieu of the child as well as the observed and self-reported symptomology. Lang and Tisher (1978, p.26) caution that, "It is most important that the data obtained from the CDS be considered within the context of all other knowledge of the child which is available and interpreted accordingly."

The present findings could be supplemented in several areas. The patterns of depression in other age groups need to be investigated for it is possible that there are significant age differences. Survey work with younger children would be problematical as there are no appropriate depression measures available, but the CDS and the CDI could be used with adolescents. Although it would present practical difficulties, directly interviewing parents might provide a broader and more accurate range of independent variables to be assessed for links with depression.

There is also scope for further validation of the depression assessment instruments. Cross-validational studies with independent diagnoses need to be undertaken, as well as studies of discriminant validity against measures of other childhood disorders.

In summary, this study of childhood depression in a community setting supports the notion that it is the climate of the family, rather than its structure per se, which determines the adjustment of children. Depression has been found to be more strongly related to conflict and poor family
cohesion, than to family type. This has implications for theories of the 
etiology of depression, and suggests that the family system rather than the 
individual child, is the appropriate target for therapeutic intervention.

The findings also suggest that a fairly large percentage of children ex­
perience depression, and that the problem is generally undetected. Were 
it possible to attend to the underlying emotional needs of some children, 
a consequence might be a decrease in some antisocial behaviour.

In view of the possibility of a continuity between childhood and adult 
depression, there is strong warrant for further research in this area; to 
increase our understanding of the etiology of depression, to provide more 
accurate definitions and classifications, and to facilitate the provision of 
appropriate early interventions.
REFERENCES


Chambers, W., Puig-Antich, J. & Tabrizi, M.A. The ongoing development of the kiddie - SADS. Read at the annual meeting of the American Academy of Child Psychiatry, San Diego, California, 1978.


### APPENDIX 1. THE CDS (GROUP FORM)

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Page 1</th>
<th>Very Wrong</th>
<th>Wrong</th>
<th>Don't Know/ Not Sure</th>
<th>Right</th>
<th>Very Right</th>
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<td>1</td>
<td>I enjoy myself most of the time</td>
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<tr>
<td>2</td>
<td>I am always looking forward to the next day</td>
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<td>3</td>
<td>I feel that there is a lot of suffering in life</td>
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<td>4</td>
<td>When somebody gets angry with me I get very upset</td>
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<td>5</td>
<td>I feel proud of most of the things I do</td>
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<td>6</td>
<td>When I feel very angry, I usually end up crying</td>
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<td>7</td>
<td>Often school makes me miserable</td>
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<td>8</td>
<td>I am always keen to do lots of things when I am at school</td>
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<td>9</td>
<td>Often I feel I am not worth much</td>
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<tr>
<td>10</td>
<td>Sometimes I wish I was dead</td>
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<td>11</td>
<td>Most of the time my mother/father makes me feel the things I do are pretty good</td>
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<td>12</td>
<td>Often I wake up during the night</td>
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<td>13</td>
<td>I feel I am more tired than most children I know</td>
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<td>14</td>
<td>Most of the time I am not interested in doing anything</td>
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<td>15</td>
<td>I feel that we all have lots of fun together in our family</td>
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<td>16</td>
<td>Often I feel nobody cares for me</td>
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<tr>
<td>17</td>
<td>When somebody gets angry with me I get angry in return</td>
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<tr>
<td>18</td>
<td>Often I feel lonely</td>
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Please turn to page 2
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<tr>
<td>19</td>
<td>Often I am annoyed with myself</td>
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<td>20</td>
<td>Often I can't show anybody how unhappy I feel inside</td>
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<td>21</td>
<td>I often feel as if I am letting my mother/father down</td>
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<td>22</td>
<td>I get fun out of the things I do</td>
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<td>23</td>
<td>Sometimes I believe that my mother/father do or say things which make me feel as if I have done something terrible to them</td>
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<td>24</td>
<td>Often I enjoy myself at school</td>
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<td>25</td>
<td>I hate the way I look or the way I act</td>
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<td>26</td>
<td>Often I don't feel like waking up in the morning</td>
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<td>27</td>
<td>I feel like crying often when I am at school</td>
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<td>28</td>
<td>When I am at school I often feel lonely and lost</td>
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<td>29</td>
<td>I feel that my mother/father are very proud of me</td>
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<td>30</td>
<td>Often I feel dead inside</td>
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<td>31</td>
<td>I think that it is all right to feel angry</td>
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<td>32</td>
<td>Often I feel miserable or weepy or unhappy</td>
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<td>33</td>
<td>Sometimes I feel that life is not worth living</td>
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<td>34</td>
<td>I sleep like a log and never wake up during the night</td>
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<td>35</td>
<td>Often I hate myself</td>
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<td>36</td>
<td>I have many friends</td>
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<td>Sometimes I am afraid that I do things which might harm or upset my parents</td>
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<td>Often I feel ashamed of myself</td>
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<td>39</td>
<td>Often I feel that I deserve to be punished</td>
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<td>40</td>
<td>Most of the time I feel that nobody understands me</td>
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<td>41</td>
<td>I am a very happy person</td>
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<td>42</td>
<td>Often my schoolwork makes me miserable</td>
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<td>43</td>
<td>Often I am upset about my mother's health</td>
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<td>44</td>
<td>I spend my time doing many interesting things with my father</td>
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<td>45</td>
<td>When I am away from home I feel very unhappy</td>
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<td>46</td>
<td>I sometimes feel upset because I don't like my mother/father as much as I should</td>
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<td>47</td>
<td>I feel that people love me even though I don't deserve it</td>
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<td>48</td>
<td>I feel tired most of the time when I am at school</td>
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<td>49</td>
<td>Nobody knows how unhappy I really am inside</td>
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<td>50</td>
<td>Sometimes in my dreams I am hurt or killed</td>
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<td>51</td>
<td>Sometimes I don't know why I feel like crying</td>
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<td>52</td>
<td>Sometimes I wonder whether I may be a very bad person inside</td>
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<td>53</td>
<td>When I fail at school I feel that I am a nobody</td>
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<td>Item No.</td>
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<td>54</td>
<td>I feel that life is miserable for me</td>
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<td>55</td>
<td>Sometimes I believe that I do things which could make my parents ill</td>
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<td>56</td>
<td>Often I feel I am no use to anyone</td>
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<td>I feel that many people care about me a lot</td>
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<td>Most of the time I feel I am not as good as I wish to be</td>
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<td>59</td>
<td>Often I am very upset because I don't get the opportunity to do things I want to do</td>
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<td>I often imagine myself hurt or killed</td>
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<td>61</td>
<td>I sometimes feel upset because I believe I can't give my mother/father the attention and love that they need</td>
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<td>Often I feel I am not getting anywhere</td>
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<td>Sometimes I feel there are two persons inside me pulling me in different directions</td>
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<td>When I am away from home I feel empty inside</td>
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<td>I feel I am a beaut person</td>
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<tr>
<td>66</td>
<td>I am successful in most of the things I try</td>
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</tbody>
</table>
APPENDIX 2. FAMILY DATA SHEET

Name: ..................................... Age: ................

WHICH ADULTS LIVE AT HOME? (Put a tick in the box if they live with you)

MOTHER [ ] 
STEP MOTHER [ ] 
GRANDMOTHER [ ] 
FOSTER MOTHER [ ] 
AUNTIE [ ]

FATHER [ ] 
STEP FATHER [ ] 
GRANDFATHER [ ] 
FOSTER FATHER [ ] 
UNCLE [ ]

WHO ELSE? ..........................................................

WHICH CHILDREN LIVE AT HOME?

SISTERS ..... HOW MANY? .................
BROTHERS ..... HOW MANY? .................
ANY OTHER CHILDREN? ............................................... 

Think about the family that you belong to. The 16 things written here may be right or they may be wrong for you and your family. For each statement tick one of the boxes at the end of the line.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Very Wrong</th>
<th>Wrong</th>
<th>Don't Know</th>
<th>Not Sure</th>
<th>Right</th>
<th>Very Right</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. In our family we really help and support each other</td>
<td></td>
<td></td>
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<tr>
<td>2. People in my family shout a lot</td>
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<tr>
<td>3. I get worried about one of my parents getting sick</td>
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<td>4. I have to spend too much time by myself at home</td>
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<tr>
<td>5. My mum and I are good friends most of the time</td>
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<tr>
<td>6. Sometimes I am afraid that someone in my family may die</td>
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<tr>
<td>7. We like being together in my family</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>8. No-one gets hit in my family</td>
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<tr>
<td>9. Sometimes I am afraid that everyone I love will go away</td>
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<tr>
<td>10. We don't go out together enough in our family</td>
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<tr>
<td>11. At home no-one loses their temper</td>
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<tr>
<td>12. If I don't do things right my parents will not love me</td>
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<td></td>
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<tr>
<td>13. There is not enough time and attention for everyone in our family</td>
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<tr>
<td>14. We fight a lot in our family</td>
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<tr>
<td>15. I get afraid that one day no-one will be left to look after me</td>
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<tr>
<td>16. Most of the time my mum is happy</td>
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</tbody>
</table>
APPENDIX 3. CORRELATION MATRIX FOR FACTORS 1-9.

<table>
<thead>
<tr>
<th>FACTORS</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>.793</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>.759</td>
<td>.723</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4</td>
<td>.477</td>
<td>.477</td>
<td>.643</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>.682</td>
<td>.560</td>
<td>.631</td>
<td>.260</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>.509</td>
<td>.364</td>
<td>.416</td>
<td>.227</td>
<td>.348</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>.548</td>
<td>.595</td>
<td>.453</td>
<td>.723</td>
<td>.352</td>
<td>.276</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>.473</td>
<td>.394</td>
<td>.361</td>
<td>.182</td>
<td>.392</td>
<td>.350</td>
<td>.325</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>.816</td>
<td>.673</td>
<td>.577</td>
<td>.374</td>
<td>.522</td>
<td>.433</td>
<td>.440</td>
<td>.307</td>
</tr>
</tbody>
</table>

Apart from the correlation between factors 4 and 8 which has a probability of .003, all correlations here are significant at the .001 level.
APPENDIX 4. FACTOR ITEMS.

The following items make up the nine extracted factors of the CDS. Next to each item number is the code for the CDS subscale the item belongs to (AR=Affective Response; SP=Social Problems; SE=Self-esteem; PSD=Preoccupation with own sickness or death; G=Guilt; MD=Miscellaneous Depression; PE=Pleasure and Enjoyment; and MP=Miscellaneous Pleasure). Following each item the factor loading is given.

FACTOR 1. DEPRESSION OR DEPRESSIVE IDEATION

10 (AR) Sometimes I wish I was dead (.348)
32 (AR) Often I feel miserable/weepy/unhappy (.361)
33 (AR) Sometimes I feel that life is not worth living (.420)
51 (AR) Sometimes I don't know why I feel like crying (.402)
16 (SP) Often I feel nobody cares for me (.409)
18 (SP) Often I feel lonely (.508)
20 (SP) Often I can't show anybody how unhappy I feel inside (.358)
40 (SP) Most of the time I feel nobody understands me (.452)
49 (SP) Nobody knows how unhappy I really am inside (.426)
56 (SP) Often I feel I am no use to anyone (.503)
9 (SE) Often I feel I'm not worth much (.421)
19 (SE) Often I am annoyed with myself (.364)
25 (SE) I hate the way I look or the way I act (.379)
35 (SE) Often I hate myself (.503)
38 (SE) Often I feel ashamed of myself (.617)
52 (SE) Sometimes I wonder whether I may be a very bad person inside (.566)
53 (SE) When I fail at school I feel that I am a nobody (.361)
58 (SE) Most of the time I feel I am not as good as I wish to be (.493)
30 (PSD) Often I feel dead inside (.448)
60 (PSD) I often imagine myself hurt or killed (.446)
21 (G) Often I feel as if I'm letting my mother/father down (.659)
23 (G) Sometimes I believe that my mother/father do or say things which make me feel as if I've done something terrible to them (.453)
37 (G) Sometimes I am afraid that I do things which might harm or upset my mother/father (.607)
39 (G) Often I feel I deserve to be punished (.554)
46 (G) I sometimes feel upset because I don't love my mother/father as much as I should (.374)
47 (G) I feel that people love me even though I don't deserve it (.416)
55 (G) Sometimes I believe that I do things which could make my mother/father ill (.464)
61 (G) I sometimes feel upset because I can't give my mother/father the attention and love that they need (.529)
42 (MD) Often my schoolwork makes me miserable (.393)
43 (MD) Often I am upset about my mother's health (.364)
50 (MD) Sometimes in my dreams I am hurt or killed (.378)
59 (MD) Often I'm very upset because I don't get the opportunity to do things I want to do (.414)
62 (MD) Often I feel I'm not getting anywhere (.491)
63 (MD) Sometimes I feel there are two persons inside me pulling me in different directions (.494)

FACTOR 2. INABILITY TO EXPERIENCE PLEASURE

27 (AR) I feel like crying often when I am at school (.391)
33 (AR) Sometimes I feel that life is not worth living (.420)
54 (AR) I feel that life is miserable for me (.589)
16 (AR) Often I feel nobody cares for me (.447)
28 (SP) When I am at school I often feel lonely and lost (.495)
40 (SP) Most of the time I feel nobody understands me (.327)
49 (SP) Nobody knows how unhappy I really am inside (.330)
56 (SP) Often I feel I am no use to anyone (.402)
9 (SE) Often I feel I'm not worth much (.442)
30 (PSD) Often I feel dead inside (.363)
23 (G) Sometimes I believe that my mother/father do or say things which
make me feel as if I've done something terrible to them (.354)
1 (PE) I enjoy myself most of the time (.550)
2 (PE) I'm always looking forward to the next day (.407)
22 (PE) I get fun out of the things I do (.602)
24 (PE) Often I enjoy myself at school (.316)
41 (PE) I'm a very happy person (.614)
66 (PE) I'm successful in most of the things I try (.441)
5 (MP) I feel proud of most of the things I do (.427)
11 (MP) Most of the time my mother/father make me feel the things I do
are pretty good (.661)
15 (MP) In our family we all have lots of fun together (.702)
29 (MP) I feel my mother/father are very proud of me (.643)
36 (MP) I have many friends (.476)
44 (MP) I spend my time doing many interesting things with my father (.408)
57 (MP) Many people care about me a lot (.627)

FACTOR 3. ANERGIA

7 (AR) Often school makes me miserable (.414)
27 (AR) I feel like crying often when I am at school (.326)
54 (AR) I feel that life is miserable for me (.344)
40 (SP) Most of the time I feel nobody understands me (.327)
53 (SE) When I fail at school I feel that I am a nobody (.332)
13 (PSD) I feel more tired than most children I know (.601)
14 (PSD) Most of the time I am not interested in doing anything (.506)
48 (PSD) I feel tired most of the time when I am at school (.557)
42 (MD) Often my schoolwork makes me miserable (.380)

**FACTOR 4. UNHAPPINESS AT SCHOOL**

7 (AR) Often school makes me miserable (.411)
42 (MD) Often my schoolwork makes me miserable (.410)
8 (PE) I'm always keen to do lots of things when I am at school (.573)
24 (PE) Often I enjoy myself at school (.518)

**FACTOR 5. DEPRESSED AFFECT**

27 (AR) I feel like crying often when I am at school (.397)
32 (AR) Often I feel miserable/weepy/unhappy (.343)
20 (SP) Often I can't show anybody how unhappy I feel inside (.382)
19 (SE) Often I am annoyed with myself (.430)
4 (MD) When someone gets angry with me I get very upset (.497)
6 (MD) When I feel very angry I usually end up crying (.458)
FACTOR 6. SLEEP PROBLEMS

12 (PSD) Often I wake up during the night (.666)
34 (MP) I sleep like a log and never wake up during the night (.811)
[50 (MD) Sometimes in my dreams I am hurt or killed (.287)]

FACTOR 7. NEGATIVE SELF-CONCEPT

25 (SE) I hate the way I look or the way I act (.314)
65 (PE) I feel I'm a beaut person (.609)
66 (PE) I'm successful in most of the things I try (.359)

FACTOR 8. OVER-INVOLVEMENT AT HOME

45 (AR) When I am away from home I feel very unhappy (.507)
64 (SP) When I am away from home I feel empty inside (.741)
55 (G) Sometimes I believe that I do things which could make my mother/father ill (.329)

FACTOR 9. SUICIDAL IDEATION

10 (AR) Sometimes I wish I was dead (.564)
33 (AR) Sometimes I feel that life is not worth living (.379)
35 (SE) Often I hate myself (.300)
50 (MD) Sometimes in my dreams I am hurt or killed (.309)