MATERNAL DEPRESSIVE SYMPTOMATOLOGY AND FAMILY COHESION: A COMPARISON OF PERCEIVED FAMILY COHESION IN MOTHER-CHILD DYADS

LORI McDONALD

MATERNAL DEPRESSIVE SYMPTOMATOLOGY AND FAMILY COHESION: A COMPARISON OF PERCEIVED FAMILY COHESION IN MOTHER-CHILD DYADS

by

Lori McDonald

A thesis submitted to the
School of Graduate Studies
in partial fulfilment of the
requirements for the degree of
Master of Science

Department of Psychology
Memorial University of Newfoundland

December, 1994

St. John's Newfoundland

ISBN 0-612-01888-1

Canada

Abstract

Perceptions of family cohesion were compared in two groups of mother-child dyads. Two measures of cohesion (the FES and FACES III) were obtained from 17 mothers who reported depressive symptomatology and their children (ages 11 to 17 years). Each family was matched with a community comparison family on age and sex of child, family size, and single versus dual parent status. Three hypotheses were tested: (a) target mothers would perceive lower family cohesion than would comparison mothers; (b) children of target mothers would perceive lower family cohesion than would the children of comparison mothers; and (c) there would be more congruence between children's ratings of cohesion and their mothers' ratings in the target group than in the comparison group. The results of a multivariate analysis of variance revealed that mothers and children in the target group did not differ in reported cohesion from mothers and children in the comparison group. However, the group means were in the direction predicted in the first two hypotheses. In addition, the correlation coefficients between mothers' and children's cohesion scores did not differ between groups for either measure. The results are discussed with respect to the relationship between cohesion, maternal depressive symptomatology, and child adjustment.

Acknowledgements

I would like to thank my co-researcher, Jacqueline Goodwin, for her support and encouragement (especially for the late night pep calls) in completing this research. Additional thanks are extended to my supervisor, Dr. Christine Arlett, and the other members of my thesis committee, Dr. Mary Courage and Dr. Ray Penny. Also, special thanks are due to my friends, Ignace Gysbers and Derek Gould, Systems Analysts, for their invaluable assistance in preparing this document. I would like to thank Dr. John Evans and Dr. Al Kozma for their recommendations for statistical analyses and Dr. Andrée Liddell for allowing me to use the Psychology Clinic for data collection. For their assistance in contacting families I would like to extend my appreciation to Paul Hillyard and the section leaders of Scouts Canada, Danita Power of the St. John's Boys and Girls Club, Todd McDonald (Bantam A Developmental Coach) and Dr. Hassan Khalili and other members of the Psychology and Psychiatry Departments of the Waterford Hospital. Additional thanks are extended to Deanna Stokes-Sullivan of the Lifestyles section of the Evening Telegram and the staff of Cable 9 for their advertising assistance. Finally, greatest thanks are extended to the families for giving freely of their time to contribute to this research.

TABLE OF CONTENTS

List of Tables

List of Figures

Introduction

Maternal Depressive Symptomatology and Family Cohesion: A Comparison of Perceived Family Cohesion in Mother-child Dyads

In the last two decades, numerous researchers have conducted studies of maternal depression with the objective of identifying its relationship to child adjustment and family cohesion. Studies of children of depressed parents originated from the need for a psychiatric control group in studies of the offspring of schizophrenic parents (Sameroff, Seifer, & Barocas, 1983; Sameroff, Seifer, & Zax, 1982; Seifer, Sameroff, & Jones, 1981). These studies led to the serendipitous conclusion that children of depressed parents are at an equivalent, if not higher, risk for disturbance as the children of schizophrenic parents (Downey & Coyne, 1990; Grunebaum & Cohler, 1983; Sameroff et al., 1982; Sameroff et al., 1983; Seifer et al., 1981). In fact, Sameroff et al. (1982) summarized their findings by concluding that: "...if one were to choose a diagnostic group where children were most at risk, it would be neurotic depression rather than schizophrenia" (p. 58).

Research findings have since indicated that offspring of parents with depressive disorders have higher rates of physical, psychological, and behavioral difficulties than do offspring of parents without depression. In particular, cross-sectional research has documented that children of

parents with unipolar depression appear to be at a greater risk for a wide range of problems that include affective disorders, internalizing and externalizing problems, deficits in social and academic competence, and physical health problems (Beardslee, Bemporad, Keller, & Klerman, 1983; Billings & Moos, 1983, 1985c; Blatt & Homann, 1992; Downey & Coyne, 1990; Fendrich, Warner, & Weissman, 1990; Jaenicke et al., 1987; Lee & Gotlib, 1989; Richters & Pellegrini, 1989; Weissman et al., 1987). Two extensive longitudinal studies of children of depressed mothers, the Rochester Longitudinal Study (RLS; Sameroff et al., 1983) and the National Institute of Mental Health (NIMH) Colorado Collaborative Studies (Davenport, Zahn-Waxler, Adland & Mayfield, 1984; Gaensbauer, Harmon, Cytryn & McKnew, 1984) suggest that maternal depression is related to increased risk for child adjustment difficulties (see also Coyne, Kessler, et al., 1987).

Children of unipolar parents are at an increased risk for affective disorder, having three times the rate of affective disorders overall, and six times the rate of major depressive disorders when compared with control children (Coyne, Burchill & Stiles, 1990; Downey & Coyne, 1990). Other studies have documented an elevated frequency of problems within this population of children in infancy and early childhood (Cohler, Gallant, Grunebaum, Weiss, & Gamer, 1977; Downey & Coyne, 1990; Sameroff et al., 1983; Seifer et al., 1981), in the primary school years (Beardslee et al., 1983; Fisher, Kokes,

Harder, & Jones, 1980; Hammen, 1991; Hammen, Adrian, et al., 1987; Hammen, Gordon, et al., 1987a, 1987b; Jaenicke et al., 1987; Welner, Welner, McCrary, & Leonard, 1977) and in adolescence (Hammen, 1991; Kauffman, Grunebaum, Cohler, & Gamer, 1979; Weissman, 1983). Difficulties have become apparent through self-report, and through the reports of peers, teachers, and parents.

Considered collectively, these studies provide persuasive evidence of a link between parental depression and child difficulties. An even bleaker picture of the adjustment of children of depressed mothers is created by research that showed that, despite improvement in mother's depressive symptomatology, difficulties in child adjustment were still evident 10 months later (Lee and Gotlib, 1989; 1991). Billings and Moos (1985c) also observed that parents with remitted depression continued to report adjustment difficulties in their children in their 1-year longitudinal study. These children showed little improvement and continued to evidence more dysfunction than children of control parents. These findings indicate that the influence of maternal depression on child adjustment may be of a prolonged nature. Intervention other than simply treating the mother's depression may be required in order to alleviate child difficulties.

The present study explored mothers' and children's perceptions of their family environment in families in which

mothers reported depressive symptomatology. A large body of literature exists to support the notion that one aspect of family environment, cohesion, is associated with several aspects of well-being in family members. It is noteworthy, therefore, that depressed patients, as well as their nondepressed spouses, have been found to perceive their family environments as being lower in cohesion than matched controls (Billings, Cronkite & Moos, 1983; Mitchell, Cronkite & Moos, 1983). Interestingly, only one study has examined perceptions of family cohesion by the children of depressed mothers (Fendrich et al., 1990). Therefore, the primary interest of the current study was to measure children's perceptions of cohesion in families in which there lived a mother who reported depressive symptomatology. This interest was kindled by previous correlational research that documented a number of interesting relationships between perceived family cohesion and child outcome.

The following review examines the interpersonal context of depression, with a description of the parenting behaviours characteristic of depressed mothers. The latter description is provided to delineate the interpersonal means by which maternal depression may affect offspring. A discussion ensues which focuses on the importance of research concerning maternal depressive symptomatology and adolescent populations. The relationship between perceived family cohesion and child outcome is subsequently examined to illustrate that cohesion

is a positive factor in the overall adjustment of children. A study conducted by Fendrich et al. (1990) is then discussed, with emphasis on the finding that the offspring of depressed parents reported lower family cohesion than did the offspring of nondepressed parents. The present paper argues that this perception of low cohesion may be related to parenting styles characteristic of depressed mothers. Additional research findings are presented suggesting that depressed mothers also perceive their families to have low cohesion. A discussion of the degree of concordance in perceptions of cohesion among family members follows, with emphasis placed on a comparison of clinical and nonclinical populations.

Interpersonal context of depression

Some researchers have insisted that the target of study should be the interpersonal system of the depressed person, not just the person's intrapersonal structure (Burge & Hammen, 1991; Coyne et al., 1990; Coyne, Kahn, & Gotlib, 1987; Coyne, Kessler et al., 1987). The interpersonal context of depression refers to conditions such as family stress and perceived family support that may precede, precipitate, co-occur with, or follow from depression.

It has been suggested that both clinical depression and child behaviour problems are often expressions of a distressed interpersonal context (Coyne, Kahn, & Gotlib, 1987). On the other hand, numerous researchers have focused on the negative impact of depression on close relationships. In particular,

one suggestion is that maternal depression interferes with the formation and maintenance of positive family relationships (Coyne, Kahn, & Gotlib, 1987). It is argued in the following discussion that depressed mothers often exhibit distinct parenting behaviours that may have serious implications for the mother-child relationship.

Parenting behaviours of depressed mothers

Studies of the impact of the parenting behaviour of depressed mothers on children's adjustment have focused on the negative aspects of living with a depressed parent. In sum, the findings suggest that parenting of depressed mothers is related to children's depressive symptomatology, school-related difficulties, and social competence (assessed by peer ratings and problem solving abilities).

Weissman (1983) found that all of the social relationships of depressed mothers were impaired when compared to those of a matched control group, and that of these, their relationships with their children were the most impaired. Optimally, the mother-child tie is characterized by continuing maternal availability which is, according to Cohler and Musick (1983), "appropriate to the stage of the child's own social and cognitive development" (p. 149) and also sufficiently flexible to adapt to the child's changing developmental needs. Fisher et al. (1980) suggested that "depressed patients may display high degrees of non-acknowledgement such that they do not interact meaningfully with the child" (p. 354).

Depressed mothers are thought to experience "difficulties in the parenting role that reflect the symptoms of their disorder" (Downey & Coyne, 1990, p. 61). The symptoms of maternal depression (i.e., withdrawal and self-focus) may have serious implications for the mother-child relationship. According to Gizynski (1985), the depressed mother is withdrawn, apathetic, and narcissistically preoccupied with her own melancholy which makes it difficult for her to meet the emotional and physical needs of an infant. A number of researchers have found that individuals experiencing unipolar depression are characterized by a heightened state of self-focused attention (Anthony, 1983; Ferster, 1973; Ingram, Lumry, Cruet, & Seiber, 1987). One effect of this increased self-focus in depressed mothers would be a relative lack of awareness and responsiveness to the emotional needs of their children. Accordingly, it would be expected that when depressed mothers are unable to respond congruently to the needs of their children, the children experience their mothers as distant from them and "emotionally unavailable" (Cohler & Musick, 1983, p. 148). Prolonged self-focus, therefore, and the consequent unavailability of the parent may be one mechanism through which difficulties in children's adjustment are established.

Cross-sectional studies examining the effect of maternal depression on social behaviour have revealed that during interactions with their young children, depressed mothers show

poorer social behaviour and affective expression. Specifically, they have been found to express little positive affect, respond more slowly, less contingently, and less consistently to the children, and be less likely to utilize infant-directed speech (Bettes, 1988; Cohn, Matias, Tronick, Connell, & Lyons-Ruth, 1986; Cohn & Tronick, 1989; Hops et al., 1987; Lyons-Ruth, Connell, Grunebaum, & Botein, 1990). Other studies have reported that depressed mothers are more irritable toward their infants than are control mothers (Cohn et al., 1986; Downey & Coyne, 1990).

Depressed parents themselves report that they are less affectionate, more emotionally distant, irritable, and preoccupied, and that they experience difficulty communicating with their children (Weissman & Paykel, 1974). Using the Parental Acceptance-Rejection Questionnaire, Colletta (1983) found that adolescent mothers who were depressed tended to be hostile, indifferent, and rejecting of their children. Additionally, in a study of depressed mothers and their adolescents, Weissman (1983) found that depressed mothers had considerable difficulties with their offspring. These mothers were only moderately involved in their children's lives, had difficulty in communicating with the children, reported considerable friction, and expressed a loss of affection toward their adolescents. In a similar vein, Sameroff et al. (1982) described depressed mothers as being less spontaneous,

less vocal, less positive, and more distant than control mothers when playing with their 4-month-old children.

These findings support the view that there is a generalized behavioral deficit associated with maternal depression which affects the parenting of depressed mothers and their children's adjustment. It is suggested in the following section that the parenting behaviour of depressed mothers has implications for child adjustment.

Maternal versus paternal depressive symptomatology

The interest of the present study focuses specifically on *maternal* depressive symptomatology, as opposed to the broader concept of parental depressive symptomatology which must obviously be extended to include paternal distress. Paternal depressive symptomatology does not appear to be as salient a factor in children's adjustment as is maternal depressive symptomatology.

In a study of 37 families in which at least one biological parent had a past or present depressive disorder, Keller et al. (1986) found that depression in the mother was more strongly associated with impairment in adaptive functioning in the children than was depression in the father. Adaptive functioning was assessed by an Adaptive Function Rating which included scores for dealing with relationships and school. Additionally, a series of papers entitled "Child Competence and Psychiatric Risk" present a mass of data concerning children whose parents had a psychiatric disorder

and were included in the University of Rochester Child and Family Study (URCAFS). These papers report on some of the relationships found between child competence and family and parental variables (Fisher et al. 1980; Harder, Kokes, Fisher, & Strauss, 1980; Kokes, Harder, Fisher, & Strauss, 1980). One of the findings to emerge was that the occurrence of depression, incongruous affect, and withdrawal in mothers, but not in fathers, was related to lower competence in their children.

While the importance of paternal influence on child adjustment is acknowledged, paternal depressive symptomatology appears to be of less significance than is maternal depressive symptomatology. Moreover, since epidemiological studies indicate that depression is more prevalent in women than in men (Wetzel, 1984), mothers were selected as the focus of the present study.

Maternal depression and adolescence

The research has pointed to a wide range of deleterious effects of parental depression on children of all age levels. Although the effects of parental depression on child adjustment may vary depending on the age of the child, it is clear that implications have been found across the age range from infancy to adolescence.

Numerous researchers have noted that the problems between depressed mothers and their offspring become exacerbated as children move into the adolescent years (Cummings & Davies,

1994; Gizynski, 1985; Johnson & Irvin, 1983). Adolescence is a period of rapid cognitive, social, and physical change; consequently, the adaptational capacities of the individual may be stressed which increases their vulnerability to stressors such as maternal distress (Burt, Cohen, & Bjorck, 1988; Feldman, Rubenstein, & Rubin, 1988). Moreover, adolescence is a period in which the individual struggles to achieve separation and individuation from the family. The process of becoming more independent often involves difficult behaviours such as testing of parental limits, rebellion and defiance (Gizynski, 1985; Johnson & Irvin, 1983). It follows that the depressed mother's difficulties with the parenting role would be intensified by the maladaptive behaviours of the adolescent, thereby increasing the "opportunity for pathological interaction" between the mother-adolescent dyad (Johnson & Irvin, 1983, p. 118). Because of the potentially stressful demands of the adolescent period on both mothers and adolescents, the present study focused on the pre-adolescent and adolescent age range.

Maternal depression, depressive symptomatology and distress

Researchers have argued that diagnosable depression is conceptually and empirically distinct from both depressive symptoms and milder, more transient forms of psychological distress (Coyne, 1994; Fechner-Bates, Coyne, & Schwenk, 1994). Some of the early studies of depression relied solely on measures of self-reported distress or hospital records when

describing their target samples as depressed. These studies should be interpreted cautiously to reflect their nondiagnostic sampling methods. Specifically, the samples should be considered as representative of distressed rather than depressed individuals. Unclear diagnosis has made it difficult to integrate findings of earlier studies of child adjustment and parental depression with more recent investigations that have taken a more rigorous approach (e.g., structured, diagnostic interviews) in establishing the presence of depression.

Sole reliance on self-report measures when describing nonclinical samples as depressed is considered problematic because persons may achieve elevated scores on self-report questionnaires without meeting the criteria necessary for a diagnosis of depression. According to Coyne (1994) diagnosable depression is less common than the presence of elevated scores in self-reports such as the Beck Depression Inventory (BDI; Beck, Rush, Shaw, & Emery, 1979). In nonclinical populations, a considerable proportion of elevated scores on self-report questionnaires has been shown to reflect nonspecific psychological distress rather than clinical depression (Fechner-Bates et al., 1994). Therefore, reliance on cut-off scores on self-report inventories as criteria for inclusion of subjects in a depressed sample will result in a considerable number of false diagnoses of depression for

individuals who can be better described as experiencing psychological distress.

Maternal psychological distress and child adjustment

The concept of maternal psychological distress has also been used to explore difficulties in children's adjustment across different maternal diagnostic categories (Coyne, 1994; Lee & Gotlib, 1989; Lee & Gotlib, 1991). Lee and Gotlib (1989) examined the relationship between child adjustment and maternal psychopathology in a study of four groups of mother-child dyads. Maternal psychiatric status was determined through the use of a diagnostic semistructured interview. The groups included clinically depressed psychiatric patients, nondepressed psychiatric patients, nondepressed medical patients, and nondepressed nonpatients. One of the issues addressed in this study concerned the specificity of child adjustment difficulties to maternal depression. Accordingly, two relevant hypotheses were tested: the depression-specificity hypothesis (i.e., that only the children of depressed patients would show adjustment difficulties), and the psychological distress hypothesis (i.e., that the children in both psychiatric groups would show greater difficulty than would children in the nonpsychiatric groups). The results showed that the children of depressed mothers had significantly more internalizing problems than did children in the nonpsychiatric groups (i.e., nondepressed medical and nondepressed nonpatient groups). There were no differences on

any of the internalizing problems between the children of depressed and nondepressed psychiatric patient mothers. This finding suggested that child internalizing difficulties were not specific to diagnosable depression but rather were related to maternal psychological distress.

Other recent studies support the argument that childhood adjustment difficulties are related to nonspecific maternal distress and not just to diagnosable depression. In an investigation of the role of negative self-concepts in childhood in inducing vulnerability to depression, Jaenicke et al. (1987) compared children at risk because of maternal major affective disorder (e.g., unipolar depression and bipolar disorder) with children of medically ill and control mothers on various indices of cognitions about the self. They found that children's negative self-concept was significantly related to both maternal unipolar depression and bipolar disorder. Thus children of psychologically distressed mothers displayed more negative views about themselves than did children of medically ill and control mothers. Another study by Hammen, Gordon et al. (1987b) also compared children's behaviour problems, school functioning, and social competence across these four groups. The results showed that the children of unipolar depressed mothers exhibited more impairment than children of bipolar mothers, although children in the affective disorder groups had the highest rates of psychiatric diagnoses. These findings suggest that children's

diagnostic status was related to maternal psychological distress.

In a 6-month follow-up design, Burge and Hammen (1991) investigated the quality of maternal interaction and task involvement as predictors of measures of the children's affective diagnoses, school behaviour, and academic competence. They examined a sample of children (ages 8 to 16 years) considered to be at high and low risk for depression from a previous study (Hammen, Adrian et al., 1987). The children were considered to be at high risk for depression because of maternal depressive symptomatology (assessed by the BDI) and/or chronic stress. Low risk for depression was determined on the basis of the absence of both of these variables. Mothers and their children were asked to discuss a common topic of disagreement and attempt to reach an agreement. The discussion was videotaped and maternal utterances were transcribed and coded on the basis of two categories: (a) task involvement or communication clarity and (b) affective quality. Subsequently, two scores were computed which included the degree of positive maternal communication (e.g., positive feedback and confirmatory remarks) and an index of task involvement (e.g., stating opinions, giving directions, and asking for feedback or information).

The results suggested that both negative or critical interaction quality and lack of maternal task involvement were associated with children's depressive symptomatology and

maladaptive school behaviour at the time of follow-up assessment (Burge & Hammen, 1991). They found that mothers' depressive symptomatology was associated with difficulty in maintaining task focus, whereas maternal ongoing stressful life conditions were associated with negative quality of communications with the child. The authors proposed that chronic stress may impair a distressed mother's patience so that she is easily angered during discussions with her child that involve conflict and more likely to engage in critical interaction with the child. The authors added that the results point to the role of psychosocial factors, and impaired parenting in particular, in increasing children's risk for disorder. Furthermore, they stated that: "Rather than viewing a mother as exhibiting defects that directly lead to children's risk, it is more helpful to conceive of the mother as caught in a vicious cycle of environmental and interpersonal circumstances that impair her ability to function adaptively with her children" (Burge & Hammen, 1991, p. 178).

Additional studies have documented a correlation between maternal depressed mood and depression in children, in the absence of diagnosable maternal depression (e.g., Lefkowitz & Tesiny, 1985; Seligman et al., 1984). It is also noteworthy that the parenting difficulties that have been identified in studies of depression are not specific to mothers who have depressed mood. Similar parenting difficulties have been

found in mothers coping with several different stressors, including divorce (Hetherington, Cox & Cox, 1982). These findings suggest that the parenting difficulties observed in depressed mothers may be common to mothers who are distressed because of other stressors (e.g., marital conflict) that may be correlates of depression.

Researchers who study the impact of maternal depressive symptomatology on offspring have come to recognize the interdependence between distressed persons and their social context. Grotevant and Carlson (1989) have proposed that: "Problems no longer reside within the individual; they may be symptoms of other problems in the family or the broader environment" (p. 7). Accordingly, the link between maternal depressive symptomatology and the individual's most immediate social environment, the family, has emerged as a viable area for research investigation.

Family cohesion: Definitions

The dimension of cohesion has been incorporated into the work of professionals of many disciplines, including psychiatrists, psychologists, family therapists, family sociologists, group therapists, and anthropologists. It is noteworthy that each discipline recognizes its own distinct definition of cohesion (for a review of definitions of cohesion by the respective disciplines see Olson et al., 1983). Within the area of family research, a number of theoretical models have been developed to describe and assess

family functioning, and each places considerable emphasis on the measurement of cohesion. The multidisciplinary nature of family therapy and research may provide partial explanation both for the number of models that exist, and for the distinct theories and definitions of cohesion that accompany each model (Skinner, 1987). Due to the association of the word "cohesion" with various definitions, it is necessary to provide the specific definition(s) to be used in the present study.

L'Abate and Bagarozzi (1993) defined cohesion as "...the emotional bonding that family members have toward one another and the degree of individual autonomy a person experiences in the family system" (p. 168). This definition is in accordance with a recent Three-dimensional Circumplex Model of Family Functioning (Olson, 1993), in which there are four levels of cohesion ranging from "disengaged" (very low) to "separated" (low to moderate) to "connected" (moderate to high) to "enmeshed" (very high). The Family Adaptability and Cohesion Scales - Third Edition (FACES III; Olson, Portner, & Lavee, 1985) has been developed to measure cohesion as it is defined by the Circumplex Model of Family Functioning. A hypothesis derived from this model is that optimal family functioning occurs in the "balanced" or central levels of cohesion (i.e., separated and connected) whereas the "unbalanced" or extreme levels (i.e., disengaged and enmeshed) are generally seen as problematic. From a theoretical perspective, extremes on this

continuum are thought to be pathological in the sense that extreme cohesion is thought to prevent differentiation and individuation of the child whereas low cohesion is thought to be related to excessive autonomy, estrangement from family members and a limited commitment of family members to one another (Minuchin, 1974).

Recent studies have contributed to an ongoing debate concerning the theory of curvilinearity as it relates to the Cohesion dimension of the FACES III (for more detailed discussions of this debate see Cluff, Hicks, & Madsen, 1994; Green, Harris, Forte, & Robinson, 1991; Hampson, Beavers, & Hulgus, 1988). The debate is focused on the argument that the FACES III is not a true measure of the Circumplex model. In a sample of 2440 male members of the Virginia National Guard and their families, Green et al. (1991) examined the relationship between FACES III and two valid and reliable measures of family and individual well-being. Their results showed that FACES III Cohesion was related to measures of well-being in a linear manner. Moreover, the Adaptability Subscale was unrelated to the measures of well-being, thus balanced families were no more likely than other family types to report high scores on the well-being measures. Green et al. (1991) concluded that FACES III may not be an accurate measure of the Circumplex Model. In fact, in the scoring and interpretation manual that accompanied the FACES III, Olson and Tiesel (1991) reported that the FACES III Cohesion

dimension was linear and that high scores "are reinterpreted as 'very connected'" rather than enmeshed (p. 1). Olson (1991) conceded that, on the basis of previous research (e.g., Green et al., 1991), a linear relationship exists between FACES III and individual and family well-being. Thus, high FACES III scores represent Balanced family types and low scores represent Extreme types.

More recently, Cluff et al. (1994) proposed that there are negative, confounding variables at the extremely high ends of the Cohesion dimension which are endorsed by "dysfunctional subjects". Thus, dysfunctional families are expected to have either low or extremely high Cohesion scores, creating a "pseudocurvilinear effect" (p. 467). However, no evidence has been put forth to support this proposition by Cluff et al. (1994); therefore the present study will follow the direction set forth by the most recent recommendations of Olson (1991) and the findings of Green et al. (1991). In short, FACES III Cohesion will be treated as a linear measure in the present study, with high scores representing better family functioning than low scores.

Proponents of a different approach to family functioning purport that behaviour is "...a joint function of the person and the environment" (Skinner, 1987, p. 433). Accordingly, the social climate of the family, as measured by the Family Environment Scale (FES; Moos & Moos, 1986), has been taken as a means of characterizing unique human environments on

dimensions of relationship, personal development, and system maintenance (Skinner, 1987). Within the relationship dimension, the authors have defined cohesion as "... the degree of commitment, help, and support family members provide for one another" (Moos & Moos, 1986, p. 2). Compared with the definition of cohesion provided by L'Abate and Bagarozzi (1993), this definition seems to focus less on the closeness of family members on an emotional level and more on the helpfulness and commitment of family members toward one another.

The present study investigated cohesion in light of these two definitions and their respective models and measurement devices. Although the models differ with respect to theory and measurement, they share one common element: the recognition of cohesion as an important construct of family functioning.

Relationship between family cohesion and child functioning

As the following review demonstrates, research findings have supported the role of family cohesion as a positive factor in child development, regardless of age level. A large segment of this research has been concerned with investigating the perceptions of family cohesion by parents or their offspring in clinical and nonclinical youth samples. Brown and Mann (1990) used Pearson product moment correlations to evaluate the relationship between family cohesion, as measured by the FACES (Olson, Sprenkle, & Russell, 1979), and

adolescent decision-making. The results indicated that adolescents in more cohesive families showed greater decision-making competence than those in less cohesive families.

Numerous studies have shown that parental perceptions of high cohesion are associated with more favourable family adjustment under adverse circumstances. For instance, high FES cohesion, as reported by parents, has been associated with parents' ability to cope with children with autism (Bristol, 1984) and mental retardation (Nihira, Meyers, & Mink, 1980). Parental perceptions of cohesive family environments have also been linked to the promotion of cognitive development (Garmezy, 1987) and general competence among primary school children (Amato, 1989; Garmezy, 1987). Feldman et al. (1988) proposed that a supportive family milieu is likely to confirm the adolescent's self image as a competent, worthwhile, and desirable individual.

The results of the study by Billings and Moos (1985c) showed that children of parents with remitted unipolar depression showed significantly lower levels of psychological, physical, and behavioural problems than did children of parents with nonremitted depression. Furthermore, these parents reported significantly higher FES cohesion than did parents with nonremitted depression.

Collectively, the above studies point to a relationship between high family cohesion and positive outcomes for children and adolescents. Several studies have documented a

relationship between low family cohesion and the presence of family disturbance. For example, parental perception of low FES cohesion has been found in families with abusive parents (Perry, Wells, & Doran, 1983), substance abusers (Filstead, McElfresh, & Anderson, 1981), and medical patients with chronic physical symptoms of obscure etiology (Waring & Russell, 1980). The results of the following studies have revealed a link between undesirable outcomes for children and their perceptions of the family as having low FES or FACES cohesion (Burt et al., 1988; Feldman et al., 1988; Fendrich et al., 1990; Moos & Moos, 1986; Walker & Greene, 1987).

Walker and Greene (1987) investigated the role of family cohesion (measured by the FACES II) in protecting adolescents from psychophysiological symptoms associated with negative life events. The adolescent sample consisted of 123 males and females at an outpatient medical clinic. The results indicated that adolescents who perceived their families as low in cohesion generally reported more symptoms than those with high cohesion, except when the latter had a high incidence of negative life events. Furthermore, the results showed that lack of family cohesion may be associated with high symptomatology even in the absence of negative life events.

A study by Burt et al. (1988) also uncovered a relationship between adolescents' psychological functioning (i.e., depression, anxiety and self-esteem) and their perceptions of FES cohesion. Cross-sectional analyses

revealed that cohesion was significantly and positively correlated with adolescents' self-esteem and significantly and negatively correlated with their depression and anxiety. Similarly, in a community sample of early adolescents, Feldman et al. (1988) found through regression analyses that adolescents reported more depressive affect if they perceived their families to be low in FACES III cohesion. Consistent findings were revealed in a study of family risk factors in depressed parents and their offspring (Fendrich et al., 1990). In this study, Chi square analyses showed that the children of depressed parents were significantly more likely to report low FACES family cohesion and were more likely to be diagnosed with major depression and conduct disorder than were children of nondepressed parents.

Kleinman, Handal, Enos, Searight, and Ross (1989) investigated the relationship between FES subscales, including cohesion, and adolescent distress in a sample of 966 high school students. Adolescent distress was defined as the presence of a psychological disorder and was assessed using the Langner Symptom Survey (LSS; Langner, 1962) and the General Health Questionnaire (GHQ; Goldberg, 1972 in Kleinman et al., 1989). Significant negative correlation coefficients were obtained between the FES Cohesion Subscale and both measures of distress. Specifically, family climates that were perceived as high in cohesion were related to less distress

and better adjustment for adolescents of all ages and both sexes.

A number of researchers have concentrated on the cohesion of the family unit in efforts to uncover the correlates and predictors of adolescent suicidal behaviour (Asarnow, Carlson, & Guthrie, 1987; Asarnow & Carlson, 1988; Asarnow, 1992; Garrison, Addy, Jackson, McKeown, & Waller, 1991; King, Raskin, Gdowski, Butkus, & Opipari, 1990; Miller, King, Shain, & Naylor, 1992; Mitchell & Rosenthal, 1992; Rubenstein, Heeren, Housman, Rubin, & Stechler, 1989). Investigations into the correlates of suicidal behaviour in populations of psychiatric youth have found a strong relationship between suicidal behaviour and youths' perceptions of their family environments as unsupportive and lacking in cohesion (Asarnow, 1992; Asarnow, et al., 1987; Asarnow & Carlson, 1988; Miller et al., 1992). The findings of these studies point to a possible protective influence of cohesion with respect to adolescent suicidal behaviour. It has been suggested that suicidal behaviour may occur coincident with an experience of isolation (i.e., lack of cohesion) within the family system (Miller et al., 1992).

In a study of children of depressed parents, Billings and Moos (1983) found that exposure to environmental stressors coupled with a less cohesive family environment (as perceived by the parent) was related to a higher rate of child disturbance (measured by the Health and Daily Living Form

developed for this study). They concluded that stressors and an unsupportive family environment placed the children's health at risk, and speculated that low stress and high support may function as "protective" factors. This conclusion was supported by the finding of a much lower rate of disturbance among children exposed to low stress and high family support. One year later, these authors found that parental reports of low cohesion were found to be as strongly correlated with child functioning as was the severity of the parents' depressive symptomatology (Billings & Moos, 1985c). They concluded that a relative lack of family stressors and high cohesion may be the common elements that buffer the effect of parental depression on children's health and adjustment. These authors surmised that the children of depressed parents may be doubly disadvantaged since social resources may have indirect stress-buffering effects in addition to direct positive effects on functioning. That is, since an association has been found between low cohesion (as perceived by the depressed parents, not the children) and nonremitted parental depression, the potential stress-buffering effects of family cohesion are precluded.

In short, based on reports from both children's and parents' perspectives, the presence of parental depression is related to perceptions of low family cohesion and negative outcome for offspring. As several of the above studies illustrate, a growing body of research has focused on

assessing family cohesion from the perspective of adolescents. Exploring adolescents' perspectives of family cohesion is an important effort because other research overwhelmingly points to the importance of family cohesion in children's development at all age levels. The presence of family cohesion has been shown to be associated with better overall adjustment of family members, while its absence has been correlated with adverse family circumstances and disturbance (e.g., childhood anxiety and depression, stress-related psycho-physiological symptoms, and adolescent suicidal behaviour, for psychiatric and nonpsychiatric youth). Thus, if viewed along a stressor-protector continuum, the presence of family cohesion may be viewed as a potential "protector" within the context of negative life circumstances. Similarly, the absence of family cohesion may, in and of itself, function as a "stressor" within the family system. When viewed in this light, family cohesion may be one of the factors which lessens the negative impact of parental depression on child adjustment (Cummings & Davies, 1994). The potential for an adaptive role of cohesion in families in which there is a depressed mother points to the importance of this construct as a topic for research. Therefore, the present study was designed to provide further information about perceptions of family cohesion in families in which mothers experienced depressive symptomatology.

Depressed persons' perceptions of family cohesion

Being connected to others within a supportive social

network is essential to well-being (Wetzel, 1984). According to Coyne (1976), depressed individuals' poor social interactions and alienation of acquaintances and intimates erode their sources of social support. It is noteworthy that depressed patients report that they have fewer close relationships and less supportive family relationships (Billings et al., 1983; Billings & Moos, 1985b; Wetzel & Redmond, 1980); while depressed patients who have more numerous and more supportive social resources (family, support, and friends) have shown "better-than-expected" post-treatment functioning (Billings & Moos, 1985a, p. 151). According to Wetzel (1984), person-environment interactions may be critical in understanding depression since neither the person nor the environment can be accurately assessed in isolation. Empirical support for the salience of person-environment interactions was documented in a study in which FES cohesion was found to be the most discriminating variable separating a depressed group of women from a nondepressed group (Wetzel & Redmond, 1980).

Since families are seen as a major support system for individuals, examining the family cohesion of depressed parents using the perception of family members (as opposed to outside observer techniques) is of clinical, as well as theoretical, interest. Billings and Moos (1983) found that depressed parents perceived less cohesion in their families than did control parents. In two studies of 424 depressed

adults at intake (Billings et al., 1983) and one year later (Billings & Moos, 1985b), depressed-parent families were characterized by less cohesion than were control families. At one-year follow-up, the family environments of parents with remitted depression were comparable to those of control families on the Cohesion Subscale of the FES (as rated by the parents), while in contrast, the family environments of the parents with nonremitted depression were much lower in cohesion (Billings & Moos, 1985a). In a comparison study of community couples versus couples in which one of the partners was clinically depressed, Mitchell et al. (1983) found that depressed patients experienced more stress and perceived a less positive family environment. Furthermore, the nondepressed spouses of the depressed patients were found to experience greater levels of strain and lower levels of family support than were control subjects. Family support was measured by the Family Relations Index (FRI) which is comprised of the Cohesion, Expressiveness and Conflict Subscales of the Family Environment Scale (Moos & Moos, 1986).

Mitchell and Moos (1984) conducted a longitudinal study of the relationship between stress and support (as measured by the FRI) in a sample of 233 clinically depressed patients. The results indicated that individuals who reported more severe depression also reported more negative events, fewer positive events and lower levels of family support. Furthermore, increases in level of strain (a composite

variable constructed from stressors that included medical illness, children's health problems, work stress and negative physical home environment) were correlated with decreases in family support, even after controlling for depression and SES.

The above findings are consistent with the work of Roehl and Okun (1984) who found that low FES cohesion was related to more life stressors and more depressed mood in a sample of female students. As the level of perceived FES family cohesion rose, the number of negative life events was less strongly associated with depression (i.e., the estimated slope of the regression of depression symptoms on negative life events decreased). Researchers have documented that people with higher levels of family cohesion are less likely to show depressive symptoms (Billings & Moos, 1985a, 1985b) and that social support buffers the effects of life stress in instances where depression does occur (Holahan & Moos, 1981).

Clearly, compared to nondepressed individuals, depressed individuals have been found to experience more stress and to perceive less family cohesion. These studies point to the possibility of a stress-buffering effect of family cohesion in the face of life stressors and depression. Interestingly, the spouses of depressed individuals also report more stress and less perceived cohesion than do the spouses of nondepressed individuals. It is noteworthy that researchers who have focused on the nature of family cohesion in families with a depressed parent have assessed perceptions of cohesion

primarily on the basis of parental reports, and have ignored the child's perspective. For this reason, the present study was designed to obtain perceptions of family cohesion from children, as well as from their distressed mothers. The question thus arises: Do the offspring of mothers who are experiencing depressive symptomatology also perceive low family cohesion?

Congruence of perception of cohesion among family members

An important characteristic of family environment is the extent to which family members agree in their perceptions (Moos & Moos, 1986). As the following review illustrates, numerous researchers have focused on gathering individual family members' perceptions of family cohesion over the last decade. One common finding to emerge from studies of nonclinical families is that adolescents tend to report significantly lower cohesion scores then do either of their parents. It is noteworthy that the lack of concordance between family members perceptions is not confined to cohesion ratings but is found for most ratings of adjustment or family functioning.

Hampson, Beavers, and Hulgus (1989) discussed the results of an unpublished study conducted by the first author. This study utilized the observational (Beavers Interactional Competence and Style Scales) and Self-Report Inventory (SFI) of the Beavers Systems Model (Beavers & Hampson, 1993). The SFI is an instrument that provides a Competence score for each

family member and a Cohesion score which is used as an estimate of Family Style. According to Beavers and Hampson (1993) cohesion "... addresses closeness, togetherness, and tendencies to enjoy time together; as such it is an approximation of some of the major family themes related to style" (p. 77). Strong positive correlations between the SFI Competence Scale and the Cohesion Subscales of FACES II, III, and the FES have been reported (Beavers & Hampson, 1990; Hampson et al., 1988). The results indicated that clinic families showed less within-family variance on family style ratings and SFI cohesion than did the nonclinic families.

Beavers and Hampson (1990) discussed the results of another study of a large sample of nonclinical families. Unfortunately, they did not provide a reference for the study, nor did they report their statistical findings. Nevertheless, their discussion indicated that there was lower variability in SFI scores in families observed and rated as more competent than in less competent families. These findings are inconsistent with the findings of the previous report which revealed less within-family variance in SFI scores in the clinic and less healthy families. The exception to this inconsistency was shown in the higher degree of within-family variance on SFI scores for mothers and adolescents in the least healthy families in the study by Hampson et al. (1989). Clearly, the inconsistencies in the previously stated results point to the need for further investigation into the

patterning of family scores, both for clinical and nonclinical populations.

A finding of particular interest in the study by Beavers and Hampson (1990) was that on most of the scales, adolescents typically rated their family's competence as significantly lower than did their parents. In the case of less competent, clinical families, there was more congruence in family ratings between parents and their adolescents. The authors concluded that: "... an adolescent rater's perspective can tell us relatively little in and of itself; the rater may be a typical adolescent (scoring the family lower) from an adequate or midrange family, or a "clear" perceiver of family dysfunction in a borderline family" (p. 65).

A number of researchers have obtained similar findings concerning adolescents' lower reports of family cohesion relative to their parents. Olson et al. (1983) measured the views of adolescents and their parents in a family study using the FACES II. The results indicated that both male and female adolescents reported significantly lower levels of family cohesion than did either of their parents. The authors interpreted this finding in light of the notion that adolescents view their family as less cohesive in an attempt to differentiate themselves from their family. As their focus of identity during this period shifts away from their family and toward their peer group, they must minimize those positive aspects of family life that encourage dependency (Olson et

al., 1983). In a similar study of 281 community families, Noller and Callan (1986) used the FACES II to assess perceptions of family cohesion in adolescents and their parents. They found that parents reported the family as more cohesive than did their adolescents and this effect became more pronounced as the age of the adolescent increased; in the youngest age group of adolescents (i.e., 13-year-olds), adolescent and parent perceptions were similar.

Overall, the results of the above studies suggest that the level of agreement in perceptions of cohesion among family members may be related to the observer-rated psychological status of the family (i.e., clinical versus nonclinical or healthy versus non-healthy). In addition, the level of agreement may also be related to the presence of psychopathology in an individual family member. Finally, the presence of an adolescent in the family has also been found to contribute significantly to discrepancies in perceptions of cohesion among family members.

In a study investigating perceptions of family interactions in depressed and nondepressed university students, Oliver, Handal, Finn, and Hardy (1987) found that depressed students perceived their families more negatively on the FES Subscale of Cohesion. Moreover, nondepressed siblings of depressed students rated their family as significantly less cohesive than did nondepressed siblings of nondepressed students. This raises the issue that unfavourable perceptions

of family support may not be specific to the individual who is depressed. The state-specificity hypothesis proposed by Oliver et al. (1987) maintains that negative perceptions of the family by depressed individuals would be seen as a reaction to their own condition of being depressed; while negative perceptions of the family by nondepressed members (i.e., offspring) would be seen as a reaction to the presence of a depressed member in the family. In both instances the negative perceptions of family interactions are seen as reactions to the specific state of depression, although they may be mediated through different mechanisms. In other words, for the mother, it is part of her symptomatology to feel isolated and not supported, whereas the children may be responding to their mother's lack of interaction. For different reasons both may share the perception of lack of cohesion in the family.

A single study was found in which perceptions of family cohesion in the offspring of depressed parents were examined (Fendrich et al., 1990). Using the first version of the FACES, the investigators found that relative to children of nondepressed parents, the children of depressed parents were significantly more likely to report lower cohesion scores and were more likely to be diagnosed with major depression. Notwithstanding the value of this finding with respect to the perceptions of cohesion in the offspring of depressed parents, certain methodological weaknesses exist in this study.

First, the study was based on offspring between the ages of 6 and 23 and consequently, it does not take into account developmental factors that may affect perceptions of family cohesion. For instance, studies have shown that cohesion scores decreased as the age of the adolescent respondent increased (Papini, Roggman, & Anderson, 1991) and also became less similar to those reported by their parents (Noller & Callan, 1986).

Second, the study was based on disproportionate sample sizes. Specifically, it compared 153 offspring from 63 families with one or more depressed parent with 67 offspring from 26 families with neither parent depressed. It is possible that having a larger sample of families with one or more depressed parents may have increased the likelihood of obtaining significant differences between the groups.

The Fendrich et al. (1990) study exists as a valuable research effort because it is the first study that closely examined the perceptions of cohesion in children with depressed parent(s). The present study was designed with a similar interest; however, certain refinements were incorporated into the methodology. First, in order to minimize the influence of maturational factors in perceptions of family cohesion, the present study focused on a narrower age range than that utilized in the study by Fendrich et al. (1990). Second, the sample sizes were made equivalent to eliminate unwanted effects due to disproportionate sample

sizes. Although they are not flaws in methodology, there are two additional points worth mentioning concerning the Fendrich et al. (1990) study. Parental perceptions of family cohesion were not obtained in the study; this additional information would have permitted comparisons of perceptions between family members. In addition, the study included one or more depressed parents within the depressed group. Thus it was impossible to determine the relationship between maternal depression and children's perceptions of cohesion. Therefore, the present study was designed to investigate these two concerns by comparing mothers' and their children's cohesion scores, and by examining the presence of maternal depressive symptomatology in the absence of paternal distress.

The present study

The questions addressed by this study concern the perceptions of family cohesion by the offspring of mothers who were experiencing depressive symptomatology. An examination of the perceptions of family cohesion by a mother who was experiencing depressive symptomatology and her offspring was of special interest because both were providing ratings of the same family, yet the children were not themselves identified as distressed. Therefore, consistent with the aforementioned findings (e.g., Fendrich et al., 1990) and the state-specificity hypothesis (Oliver et al., 1987), it was expected that mothers who were experiencing depressive symptomatology and their offspring would perceive lower family cohesion than

a community comparison group. Additionally, it was predicted that target mothers and their children would show a congruent perception of their family as having low cohesion.

The design of the present study involved obtaining assessments of perceived family cohesion by children and their mothers in families with a mother who was experiencing depressive symptomatology and in community-control families. Standardized instruments were used to assess depressive symptomatology and family cohesion. Mothers were included in the target group if they experienced significant depressive symptomatology for a period of at least one month. Thus information concerning lifetime history of affective disorder was not obtained; instead, emphasis was placed on obtaining an index of the current severity of depressive symptoms. This approach was taken in light of a previous finding that it is the mother's current depressive symptomatology more often than her lifetime history that predicted children's adverse school and social functioning (Hammen, Adrian et al., 1987). Comparisons of perceptions of cohesion were made between target and comparison mothers and between the children of target mothers and the children of comparison mothers. Children's ratings of cohesion were compared with their mothers' ratings, both overall and within the target and comparison groups.

Since social background factors are related to adult depression as well as to children's functioning, they need to

be considered in evaluating the link between parental distress and children's health. Being of a low socioeconomic standing is associated with a higher incidence of adult depression (Brown & Harris, 1978; Wetzel, 1984) and a greater likelihood of having children whose functioning is impaired (Weissman & Myers, 1978). Low socioeconomic status has also been linked to greater exposure to environmental stressors (Chandler, Million, & Shermis, 1985) and to less supportive family and social resources (Moos & Moos, 1986). In the research linked with the development of the FES, Moos and Moos (1986) found that the educational and occupational status of each of the partners in normal families were positively related to cohesion. In addition, scores on the Cohesion Subscale tended to decrease as family size increased. Given the established relationships between family background factors (i.e., educational and occupational status of partners and family size) and the variables of interest in the present study (maternal depressive symptomatology and family cohesion), estimates of socioeconomic status (i.e., family income) were obtained for each family. Subsequently, the target sample was compared with a socio-demographically matched group of control families on variables including age and sex of children, family size, and single versus two-parent families.

The following hypotheses were made: First, consistent with previous research, it was predicted that target mothers would perceive lower family cohesion than would comparison

mothers. Second, on the basis of a previous finding (Fendrich et al., 1990), it was predicted that children of target mothers would perceive lower family cohesion than would the children of comparison mothers. Third, consistent with the state-specificity hypothesis, it was predicted that there would be significantly more congruence between children's ratings of cohesion and their mothers' ratings in the target group than in the comparison group. The prediction that there would be less congruence between children and mother's ratings of family cohesion in the community comparison sample was made on the basis of previously discussed research findings (Noller & Callan, 1986; Olson et al., 1983).

Method

Subjects

Two groups of 17 mother-child dyads served as subjects. The entire sample was comprised of a target and a community comparison group. The target group was recruited through therapist referrals, television advertisements, and a newspaper advertisement. The comparison group was recruited through television advertisements, local community groups, and word-of-mouth. Mothers were 18 years of age or older and lived at home with at least one child between the ages of 11 and 17 years. In target families in which there was more than one child, the youngest within this age range was selected as the target child. The mean ages for the target and community comparison children were 13.06 years and 13.24 years, respectively. Both groups consisted of 7 male and 10 female children and 9 married and 8 single mothers. All of the data collected in this study were based on self-report measures.

Target sample selection criteria. The target sample consisted of mothers and children in 17 families with mothers who were experiencing depressive symptomatology. Of the 78 families that agreed to participate in the study, 17 met the target sample inclusion criteria. The existence of depressive symptomatology was determined by the following criteria: (a) depressed mood for most of the day, more days than not for at least one month, as indicated either by subjective account or observation by others; and (b) the presence, during depressed

mood, of at least two of the following: poor appetite or overeating; insomnia or hypersomnia; low energy or fatigue; low self-esteem; poor concentration or difficulty making decisions; and feelings of hopelessness. The depressive symptoms were developed based on the Diagnostic and Statistical Manual of Mental Disorders - Third Edition (1987). The mothers in this group had a mean BDI score of 24.94. It is acknowledged that the current sample cannot be described as depressed since elevated BDI scores are not necessarily indicative of diagnosable depression in nonclinical samples (Coyne, 1994; Kendall, Hollon, Beck, Hammen, & Ingram, 1987). Rather, mothers in this sample are best described as reporting depressive symptomatology at the time of the study.

A mother was excluded from the target sample if she: (a) obtained a BDI score of 10 or less; (b) had a history of manic symptoms, a chronic psychotic disorder, such as Schizophrenia or Delusional Disorder, or significant sustained alcohol abuse; or (c) had a partner living at home with a history of psychotic or affective disturbance.

Community comparison sample. A sample of 17 mother-child dyads were recruited as a comparison group from local advertisements and community recreation groups. Of the 78 families that agreed to participate in the study, 33 met the criteria for inclusion in this group. Mothers were excluded from this group if they had: (a) a score of 10 or more on the BDI; (b) received treatment for depression at any time

following the birth of the target child; (c) a history of manic symptoms, a chronic psychotic disorder, such as Schizophrenia or Delusional Disorder, or significant sustained alcohol abuse; or (d) a partner living at home with a history of psychotic or affective disturbance. A mean BDI score of 3.41 was obtained by mothers in this group.

Sociodemographic factors. The following sociodemographic factors were assessed: (a) mothers were asked to indicate their estimated family income in a questionnaire that was administered during the research appointment (see appendix A); and (b) information concerning family size and structure (i.e., single versus two-parent families) was provided by the families during a brief interview held at the beginning of each appointment.

Measures

Maternal functioning. (i) Depressive Symptomatology Inventory. The Depressive Symptomatology Inventory (DSI) was developed for this study as a checklist for the target sample inclusion criteria. No psychometric data are available for this inventory. It instructed respondents to indicate which, if any, depressive symptoms they had experienced over the past month (see Appendix A). Mothers were also asked to indicate whether any member of their immediate family had ever received help for psychological problems or substance abuse.

(ii) Beck Depression Inventory. The BDI was used to obtain an overall estimate of current depressive

symptomatology. The BDI is a 21-item self-report inventory containing statements which refer to cognitive and behavioural symptomatology. The BDI is generally completed in 5-10 minutes. Total scores range from 0 to 63, with 0 indicating no symptomatology and 63 indicating severe symptomatology.

The BDI has been extensively used in research on depression and there has been considerable research establishing its reliability and validity (e.g., Beck, Steer, & Garbin, 1988; Bettes, 1988). The following guidelines have been distributed by the Center for Cognitive Therapy outlining cut-off scores for patients diagnosed as having affective disorder: none or minimal symptomatology, <10; mild to moderate symptomatology, 10-18; moderate to severe symptomatology, 19-29; and severe symptomatology, 30-63 (Beck et al., 1988). In the present study, mothers who received a BDI score of 10 or more were considered for inclusion in the target sample, since scores of 10 or more are considered to indicate at least mild depressive symptomatology (Shaw & Emery, 1987). Those scoring below 10 were considered for inclusion in the community comparison group.

Family cohesion. (i) Family Environment Scale (FES). The FES (Moos & Moos, 1986) is a 90-item true-false questionnaire that describes the family milieu along 10 dimensions that combine to form three general domains: Relationships (Cohesion, Expressiveness, Conflict), Personal Growth (Independence, Achievement Orientation, Intellectual-Cultural

Orientation, Active Recreational Orientation, Moral-Religious Emphasis) and System Maintenance (Organization and Control).

The FES can be completed by individuals over the age of eleven and generally requires approximately 50 minutes for completion. The Cohesion Subscale consists of nine true-false statements which assess the degree of commitment, help, and support family members provide for one another (Moos & Moos, 1986). The standard instructions for the FES ask individuals to indicate whether or not statements describing, for example, a cohesive family characterize their families. These instructions conclude, "Remember, we would like to know what your family seems like to *you*. So do not try to figure out how other members see your family, but do give us your general impression of your family for each statement" (Moos & Moos, 1986). An example of a statement measuring cohesion is "There is a feeling of togetherness in our family." A false response is assigned a value of 0, and a true response a value of 1. The scores can then be combined to produce a total score of each family dimension (e.g., cohesion). The scores range from 0 to 9 with high scores representing a high degree of family cohesion. For the purposes of this study, the Cohesion Subscale was of primary concern and therefore it was the only subscale that was entered into the analyses.

A general perusal of the literature investigating family cohesion reveals that the FES has been the instrument most commonly administered and evaluated psychometrically. The FES

subscales demonstrate adequate internal consistency ranging from .61 to .78 with test-retest reliabilities ranging from .68 to .86 for a two month interval and .52 to .89 for a 12 month interval (Moos & Moos, 1986). The construct and discriminant validity of the FES has been established in a number of studies (Moos & Moos, 1986). With regards to the Cohesion Subscale, Moos and Moos (1986) reported a substantial internal consistency at 0.78, and a test-retest reliability of 0.86. Significant positive correlations with other subjective and behavioral ratings of family support have been documented (e.g., the Prociando-Heller indices of perceived support from family members and friends; Swindle, 1983). Waring, McElrath, Lefcoe, and Weisz (1981) reported a positive correlation between FES Cohesion and the Locke-Wallace Marital Adjustment Scale.

(ii) Family Adaptability and Cohesion Evaluation Scales - Third Edition (FACES III). The FACES III (Olson et al., 1985) is a 20-item, self-report questionnaire which includes 10 cohesion items and 10 adaptability items. FACES III can be completed in approximately 10-15 minutes. The Family Cohesion dimension contains items reflecting the individual's perception of emotional bonding of family members, supportiveness, family boundaries, time and friends, and interest in recreation (Olson et al., 1985).

Family members are asked to read each statement and indicate how frequently the described item occurs in their

family on a scale that ranges from almost never (1) to almost always (5). An example of a statement measuring cohesion is "Family members ask each other for help." The scores range from 10 to 50 with high scores representing a high degree of family cohesion. The scores of the Cohesion Subscale statements are then summed to obtain a total score of family cohesion.

FACES III has an adequate internal consistency of .77 for the Cohesion Subscale. The test-retest reliability, which has been reported only for FACES II, is .83 for the Cohesion dimension (Olson et al., 1985). The results of a factor analysis of the FACES III items have been taken as empirical evidence for its construct validity (Olson et al., 1985). Further evidence for its construct validity has been documented in studies that have consistently demonstrated the ability of the FACES scales to discriminate between non-clinical and clinical families in predicted directions (Garrison et al., 1991).

The FACES III evolved out of numerous revisions to the original FACES and Circumplex Model. The FACES contained short statements which were used to measure high, balanced, and low levels of cohesion and adaptability in relation to the Circumplex Model. Four years later, it was revised into FACES II coincident with the change in definition of cohesion (i.e., Independence was dropped from the subcategories of Cohesion and Support items were added). The FACES II revision

reflected an effort to improve the psychometric properties of the scale and increase the independence of the Cohesion and Adaptability dimensions. Moreover, it was shorter and the test items were simplified using fewer double negatives. The Likert response format was increased from a 4-point to a 5-point scale. The FACES III reflects further emphasis on making the Cohesion and Adaptability dimensions empirically orthogonal (Cluff et al., 1994). The Assertiveness and Negotiation Subscales were dropped from the Adaptability dimension, while Space and Coalitions were dropped from the Cohesion dimension. The effect of these changes is summarized by Cluff et al.'s (1994) comment: "An evaluation of developments from FACES I to FACES II, and then to FACES III, reveals that attempts to increase reliability and validity resulted in the creation of more linearly correlated scales" (p. 465).

Procedure

Target sample. Data collection was shared with another researcher who was conducting a similar study. The target group was recruited from a newspaper advertisement (see Appendix B), a public advertising television channel (see Appendix C), and therapist referral (see Appendix D for a pictorial display of sources of contact). Families were recruited for the study over a period of 7 months.

A total of 28 families responded to the newspaper and television advertisements, 13 of which were included within

the target group. The advertisements instructed potential subjects to telephone an automated answering service and record their name and phone number. The researcher subsequently telephoned respondents for a brief interview (see Appendix E for interview script) and the scheduling of a research appointment.

Mental health professionals (e.g., psychiatrists, psychologists, and nurses) and physicians (e.g, general and family practitioners) in three local adult hospitals and private settings were approached and asked for their assistance in referring families to the study. Each clinician was provided with a written and verbal description of the study procedures and selection criteria for the target sample (see Appendix F). Clinicians were asked to use their own clinical judgement about the existence of depressive symptomatology, as outlined in the inclusion criteria. Potential subjects were then notified by their therapist of the study and those interested in participating were asked to provide written consent for the disclosure of their name and telephone number to the researcher (see Appendix G for "Consent for Referral" forms). A letter of thanks was enclosed with the "Consent for Referral" forms (see Appendix G). The families were then contacted via telephone by the researcher for a brief interview (see Appendix E) and to schedule a research appointment. Of the 51 mental health professionals approached, one psychiatrist provided two

referrals and one psychologist provided two referrals (one of the latter referrals did not meet the inclusion criteria and therefore was excluded from the study). One family heard about the study through an acquaintance and agreed to be contacted for participation in the study.

The research appointment took place in the family's home or the Memorial University Psychology Clinic. In the initial stage of the appointment, the researcher explained the study procedures to the family and answered questions pertaining to the study. Mothers were then given a written overview of the details of the study which was included in a consent form. The procedures were explained to the child(ren) in language appropriate to their age. Participants were assured of confidentiality and anonymity. Following verbal agreement to participate, each participant signed a consent form (see Appendix H for "Family Consent" form). This consent form outlined the details and voluntary nature of the study and was designed to ensure that the subjects understood the research procedure. In addition, it served to inform subjects of their rights to confidentiality and privacy. Following procurement of consent from each member of the mother-child dyad, the questionnaires were distributed. All questionnaires were administered during a single session and scored at a later date. The FES was administered first to each dyad, followed by the FACES III. Next, mothers completed the BDI and DSI. Mother-child dyads worked independently of one another and

were encouraged to respond to items as honestly as possible. For most participants, the entire procedure took approximately 60 minutes.

Community comparison sample. The comparison group was recruited from a newspaper advertisement (Appendix B), a public advertising television channel (Appendix C), community recreation groups (e.g., Scouts Canada and a junior hockey team), and by word-of-mouth (see Appendix D for a display of sources of contact). The advertisement procedure was similar to that which was utilized to gather subjects for the target group. Of the 28 families who responded to the advertisements, 3 met the criteria for inclusion in the control group.

The local executive of Scouts Canada provided the names and addresses of 50 Section Leaders (each section was comprised of 6 to 18 Scout members) who were subsequently contacted and provided with letters (see Appendix I) to distribute to 749 families of their Scout members. These letters outlined the nature of the research and asked mothers to indicate on an enclosed form whether or not their family agreed to participate in the study. They were also asked to return the completed form to their child's group leader. Follow-up contact with the Section Leaders revealed that of the 14 families who had returned completed forms, eight of them agreed to participate in the study and three of those eight met the inclusion criteria for the control group.

The staff of a local recreation center (i.e., St. John's Boys and Girls Club) provided their current child membership with the same letter (see Appendix I) and asked the children to deliver the letter to their parent(s). Fifty letters were sent home to families, but no responses were returned. Families of a local hockey team were then contacted directly through their coach and asked for their participation. Eleven of the 15 families that were approached by their coach agreed to participate in the study. One of these families met the criteria for inclusion in this group. Finally, of a total of 20 families who heard about the study through friends or acquaintances and agreed to allow their names to be passed to the researcher, 10 met the inclusion criteria for this group.

All families who expressed a willingness to participate were initially contacted by the researcher via telephone for the purpose of conducting the telephone interview (see Appendix E). During the telephone interview, families were offered a choice of location of the research appointment and were subsequently assessed in the same manner as the target sample.

Results

Preliminary analyses

Table 1 displays the sample characteristics of each group. Mothers in the target group reported significantly greater depressive symptomatology (M = 24.94) than did mothers in the community comparison sample (M = 3.41), $t(17.76)$ = 9.08, $p<.001$. The adjusted degrees of freedom are reported here due to the substantially larger variance in the target group than in the comparison group. This correction gives a conservative regard for the assumption of homogeneity of variance that underlies the t test. The target group (M = 30229.18) did not differ significantly from the comparison group (M = 38171.53) on reported family income. As shown in Table 1, the comparison group families were successfully matched to target families on the basis of the target child's age (plus or minus one year) and sex, family size (1, 2, or 3 or more children), and family structure (single versus two-parent families). Figure 1 displays the age distribution of the children in both groups.

Family cohesion

Statistical analyses. Investigation of the first two hypotheses required an examination of group differences in cohesion scores. Due to the fact that the cohesion measures are not conceptually independent, a multivariate analysis of variance (MANOVA) was carried out in which both cohesion measures were treated as dependent variables. Group (i.e.,

Table 1

Sample characteristics according to groups

	Target (n = 17)	Comparison (n = 17)	*t*
Maternal BDI			
M	24.94	3.41	9.08*
SD	9.52	2.24	
Gross family income			
M	30229.18	38171.53	-.96
SD	26764.12	21132.25	
Family structure			
Single-parent	8	8	
Two-parent	9	9	
Child age			
M	13.06	13.24	
SD	1.58	1.79	
Child sex			
Male	7	7	
Female	10	10	

*$p < .001$.

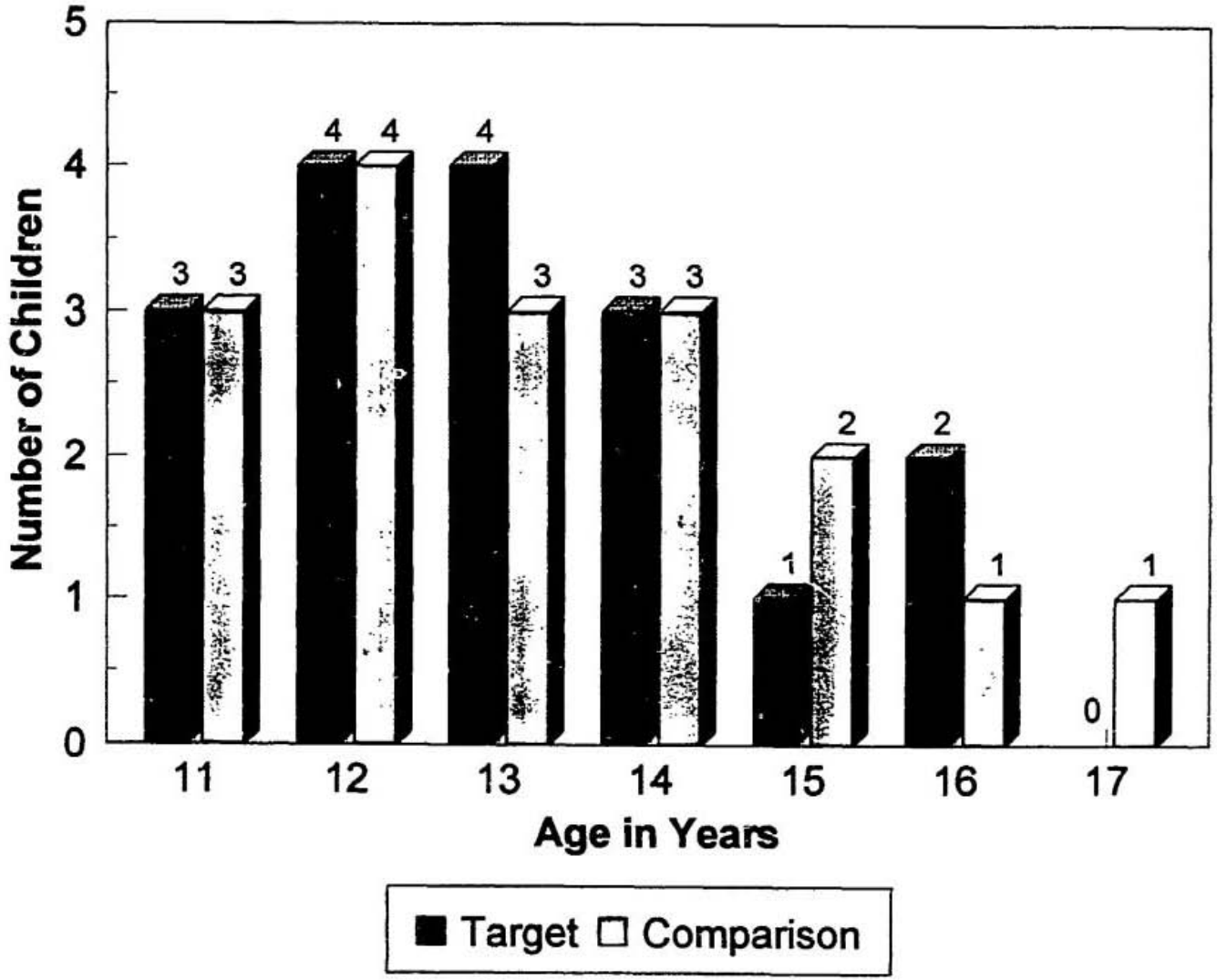

Figure 1. Age distribution of children by group

maternal depressive symptomatology versus no symptomatology) and Family Status (child versus mother) were treated as independent variables in the analysis.[1] Consistent with the first two hypotheses, it was predicted that there would be a significant Group by Status interaction which would warrant further tests of simple main effects (i.e., cell mean comparisons).

The third hypothesis was investigated using a test of the difference between correlation coefficients. For each group (i.e., target and comparison) correlation coefficients were calculated between mothers' and children's scores for each cohesion measure. These correlation coefficients were then transformed into Fisher's z-scores (Hays, 1988) in order to conduct a test of the difference between correlation coefficients. The correlation between mothers' and children's FES scores in the target group was compared with the correlation between mothers' and children's scores in the comparison group. The same test was carried out on the FACES III data.

Statistical assumptions. The assumption that the dependent measures had multivariate normal distributions was tested using the Kolmogorov-Smirnov test for goodness of fit (Hays, 1988). The results of this test indicated that the FES data were not normally distributed, K-S z = 1.72, $p<.05$; rather, the data followed a skewed distribution. According to Mardia (1971), MANOVA is robust to modest violations of

normality caused by skewness when there are at least 20 degrees of freedom, cell sizes are equal, and two-tailed tests are used. Accordingly, the violation of this assumption does not represent a serious concern in the present data, especially in consideration of the nonsignificance of the multivariate tests. The test did not reveal any significant violation of the normality assumption in the FACES III data, K-S z = .53, p>.05.

The statistical assumption that the variances of the dependent measures and their covariances were the same for each group (i.e., equal variance-covariance matrices) was tested by means of Box's m statistic (Hays, 1988). The results of this test did not reveal any significant violation of this assumption, Box's m = 8.08, F(9, 46939) = .85, p>.05.

Tests of hypotheses. The results of the MANOVA are summarized in Table 2. The analysis did not yield any significant multivariate effects; consequently, examining univariate effects was not warranted. Means and standard deviations of FES and FACES III cohesion scores of mothers and children in both groups are shown in Table 3. The Group by Status multivariate effect was not significant, thus indicating that the effects of maternal depressive symptomatology status on cohesion scores did not change at different levels of the Status variable.

Consistent with the nonsignificant multivariate and univariate Group by Status effects, the results of planned

Table 2

Source table for the MANOVA

Effect	Error df	Exact F	Sig. of F
	Multivariate F-tests (Wilk's lambda)		
Group	63	2.42	.10
Status	63	1.03	.36
Group By Status	63	1.27	.29
Variable	**F**		**Sig. of F**
	Univariate F-test (Group)		
FES	4.85*		.03
FACES III	2.84		.10
	Univariate F-test (Status)		
FES	.26		.61
FACES III	1.79		.19
	Univariate F-test (Group By Status)		
FES	.03		.87
FACES III	1.11		.30

*$p < .05$.

Table 3

Means and standard deviations of FES and FACES III cohesion scores for mothers and children in each group

Group	M	SD
	FES	
Target		
Mother	5.76	1.92
Child	5.59	2.62
Comparison		
Mother	7.00	1.90
Child	6.65	2.06
	FACES III	
Target		
Mother	35.94	8.57
Child	31.47	8.15
Comparison		
Mother	37.12	5.79
Child	36.59	8.01

comparisons of the cell means were not significant. Specifically, although the means were in the predicted direction, the differences in mothers' FES and FACES III cohesion scores between groups were not significant *Fs*(1, 64) = 2.84 and .20, *ps*>.05, respectively. Similarly, the difference in children's FES and FACES III cohesion scores between groups was not significant *Fs*(1, 64) = 2.07 and 3.75, *ps*>.05, respectively. The latter means were also in the predicted direction. However, the results did not support the first two hypotheses.

The third hypothesis, that there would be greater congruence in perceived family cohesion between mothers and children in the target group than in the comparison group, was tested using a test of the difference between correlation coefficients. Correlation coefficients between mothers' and children's scores on each cohesion measure for each group are shown in Table 4. It is noteworthy that the correlation of .42 found between mothers' and their children's FACES III scores is similar to the correlation of .39 previously reported for mothers and adolescents using the FACES II (Olson et al., 1983). No significant differences were found between groups. Therefore, the results of the tests of differences between correlation coefficients did not support the third hypothesis since correlations were not shown to be significantly higher in the target group on either measure.

Table 4

Comparison of FES and FACES III correlation coefficients between mothers and children in each group

Measure	Target	Comparison	Test statistic
FES			
r	.25	.18	.22
FACES III			
r	.09	.42	-.95

Tests of statistical power. Power calculations were conducted for the statistical tests to determine the probability of obtaining statistically significant results (i.e., the probability of rejecting the null hypotheses given that medium-sized effects were present). A medium-sized effect, as defined by Cohen (1992), was set for each statistical test to provide a conservative estimate of power. It is recognized that the proposed operational definitions of effect size (e.g., small, medium and large) may be problematic because they were made subjectively by Cohen; however, he notes that "...these conventions have been fixed since the 1977 edition of the Statistic Power Analysis for the Behavioral Sciences and have come into general use" (p. 157).

The statistical tests of the first two hypotheses of the present study involved testing the difference between two independent means, each based on 17 scores. At an alpha level of .05, the power of these tests to detect a medium-sized effect (d = .50) was .41. Thus there was not quite a fifty-fifty chance of obtaining a significant result with this test. The third hypothesis was tested using a test of the difference between two correlation coefficients. At an alpha level of .05, the power of this test to detect a medium size effect (q = .30) was .20 (Cohen, 1988). Thus the chance that this test would yield a significant result was 1 in 5.

In relation to Cohen's suggestion that researchers should aim for a power of .80, the power of the statistical tests in

the present study was considered to be low. Consequently, the nonsignificant results obtained in this study should be viewed as inconclusive, since the probabilities of rejecting the null hypotheses would have been low, even if medium-sized effects existed. It is therefore reasonable to report that the data do not warrant the conclusion that the population means do not differ (Cohen, 1988).

Brief mention must be made of the consideration given to the statistical assumptions of normality and homogeneity of variance in the present power calculations. As previously, documented in this paper, the assumptions were not violated with the exception that the FES data were not normally distributed. With respect to the statistical tests used in the present study, a moderate departure from the normality assumption is considered to have negligible effects on the validity of Type I and Type II error calculations (Cohen, 1988). Consequently, the violation of the normality assumption in the FES data did not represent a serious concern in the present power calculations.

Description of data. The FES and FACES III cohesion scores for the entire sample were significantly correlated in a positive direction, $r(66) = .69$, $p<.01$. Correlational analyses were performed between mothers' and their children's cohesion scores for both the FES and FACES III. Mothers' and children's FES scores showed a low, although statistically significant, positive correlation, $r(32) = .35$, $p<.05$.

Mothers' and children's FACES III scores were not significantly correlated, $r(32) = .27$, $p > .05$. This correlation was lower than that between mothers' and children's FACES III scores which was reported by Olson et al. (1985) in the normative sample ($r = .38$). These authors did not report whether this correlation was significant.

In addition to analyses of the data for investigation of the hypotheses, the data was examined for trends which may prompt further inquiry. Thus, the following discussion serves to highlight interesting aspects of the data which are not necessarily related to the hypotheses of the present study.

The results of the univariate analyses indicated that different results were obtained between the target and comparison groups, depending on the measure used in the analysis. This observation will be discussed in further detail in the next section.

As indicated in Table 2, the Status effect was not significant. Table 5 shows mean FES and FACES III cohesion scores for mothers combined across groups and children combined across groups. Mothers' FES and FACES III cohesion scores were not significantly different from their children's cohesion scores combined across groups.

Although the interaction between Group and Status was not significant, a visual examination of the matrix cell means in Table 3 revealed an interesting tendency in the FACES III data. The cell mean for the children of target mothers was

Table 5

Mean FES and FACES III cohesion scores for mothers combined across groups and children combined across groups

Measure	Mothers	Children
FES	6.38	6.12
FACES III	36.53	34.03

31.47. This mean was lower than those of target mothers, comparison mothers, and comparison children (M = 35.94, 37.12, and 36.59, respectively), although it was not significantly different from these means. Nevertheless, the FACES III Cohesion mean obtained by the target children appears discrepant because the remaining three means are similar to each other.

The results of the MANOVA revealed a significant univariate Group effect in the FES data. This finding must be interpreted with caution because the multivariate Group effect was not significant. Table 6 shows the mean FES and FACES III cohesion scores combined across mothers and children in each group. As shown in Table 2, mothers' and children's combined FES scores were significantly lower in the target group (M = 5.68) than in the comparison group (M = 6.83), $F(1, 64) = 4.85$, $p<.05$. However, Table 2 shows that mothers' and children's combined FACES III scores did not differ between the target group (M = 33.71) and the comparison group (M = 36.86), $F(1,64) = 2.84$, $p>.05$.

Figures 2 and 3 illustrate these findings for the FES and FACES III data, respectively. In short, FES cohesion scores in the target group were significantly lower than those reported by the comparison group only when mothers' and children's scores were combined; significant differences were not found when cell means were analysed for mothers and children separately.

Table 6

Mean FES and FACES III cohesion scores combined across mothers and children in each group

Measure	Target	Comparison
FES	5.68	6.83
FACES III	33.71	36.86

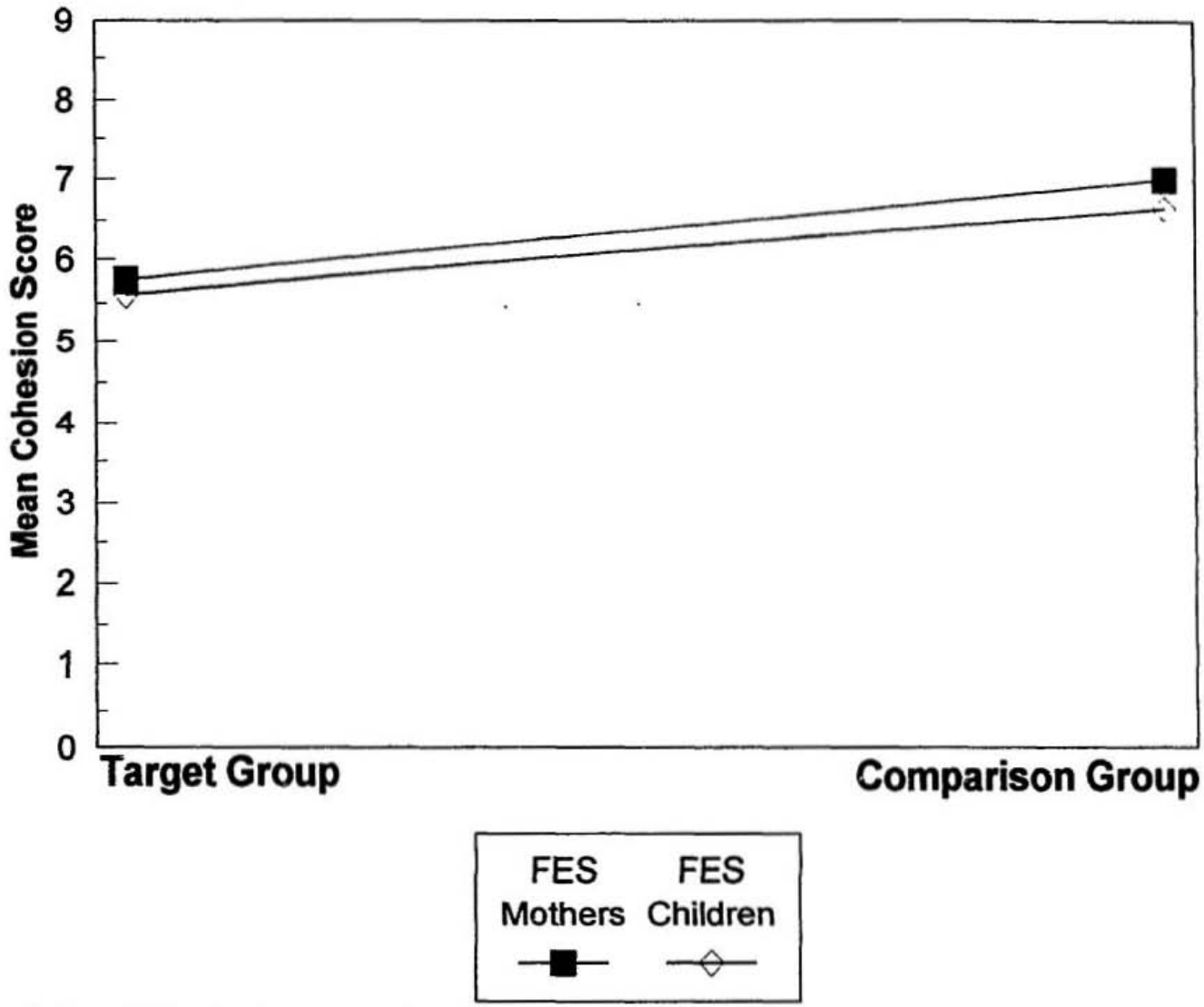

Figure 2. Mean FES cohesion scores of mothers and children by group

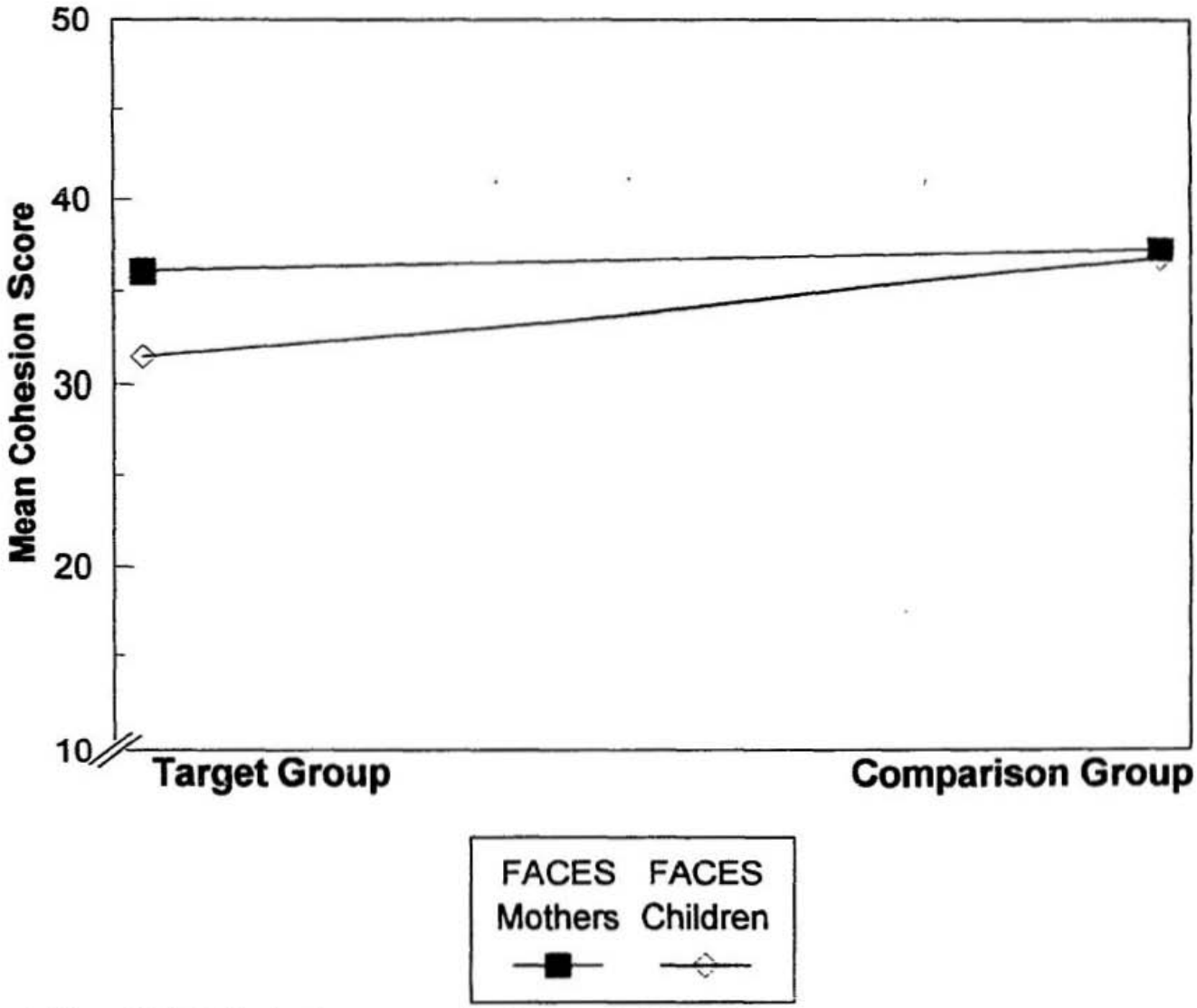

Figure 3. Mean FACES III cohesion scores of mothers and children by group

Discussion

The hypotheses of this study were that: (a) target mothers would perceive lower family cohesion than would comparison mothers; (b) children of target mothers would perceive lower family cohesion than would children of comparison mothers; and (c) there would be significantly more congruence between children's ratings of cohesion and their mothers' ratings in the target group than in the comparison group. The first two hypotheses were not supported by the results; however, the group means were in the predicted direction. Although the differences were not significant, target mothers reported lower cohesion than comparison mothers; children of target mothers reported lower cohesion than children of comparison mothers.

These means are consistent with previous research in which depressed individuals reported lower family cohesion than did matched controls (Billings & Moos, 1983, 1985a, 1985b, 1985c; Billings et al., 1983; Mitchell et al., 1983; Mitchell & Moos, 1984; Roehl & Okun, 1984). In addition, the present means are consistent with the work of Fendrich et al. (1990) which showed that the offspring of depressed parents reported less family cohesion than did matched controls. The present study shows that this tendency is still found in a smaller sample with a narrower age range of offspring, more proportionate sample sizes, and depressive symptomatology in

mothers alone, versus mothers and fathers combined, as the primary interest.

The third hypothesis predicted that there would be a higher correlation between children's and mothers' ratings of cohesion in the target group than in the comparison group on each measure. Since the magnitude of the correlation between mothers' and children's cohesion scores did not differ between the target and comparison groups, the third hypothesis was not supported by the present results.

It is noteworthy that children in both groups reported lower cohesion than that reported by their mothers, although this difference was not significant. This tendency is consistent with previous research in which adolescents reported lower cohesion scores than their mothers or fathers in community families (Hampson et al., 1989; Noller & Callan, 1986; Olson et al., 1983). One explanation for the lack of replication of this previously significant effect may lie in the much smaller sample size used in the present study. The small sample size limited the power of the statistical analysis and increased the probability of making a Type II error. To illustrate this point, it is noted that the sample size of community families in the Noller and Callan (1986) study was 281; as a result, the power of the statistical analysis used was greater than the statistical power in the present study. Consequently, in the Noller and Callan (1986) study, there was a greater likelihood of detecting significant

differences in family members' perceptions of cohesion and a lower probability of making a Type II error than in the present study. Therefore, it is possible that a significant difference in perception of cohesion between mothers and their children might have been found with a larger sample size, and support for previous research would have been obtained.

A Group main effect was found for the FES cohesion scores. Families with a target mother reported significantly lower FES cohesion than families in a comparison group. This overall finding that target mothers and children reported less FES cohesion is consistent with the state-specificity hypothesis which maintains that unfavourable perceptions of family support may not be specific to the individual who reports depressive symptomatology (Oliver et al., 1987). Previous research that lends support to the state-specificity hypothesis includes the work of Billings et al. (1983) and Oliver et al. (1987) in which significant agreement was found between the reports of the depressed person and a non-depressed family member. It is noted that the past and present results do not necessarily "prove" the state-specificity hypothesis. A better test of the state-specificity hypothesis would be a longitudinal study of families selected on the basis of depressive symptomatology in a mother to determine whether, as the symptomatology improves or remits, perceptions of family cohesion become more favourable as reported by the mother and offspring (Oliver et

al., 1987). In any case, these results have implications for intervention strategies with individuals who report depressive symptomatology and their families and will be discussed in a later section.

A group main effect was not found for the FACES III data. The children of target mothers reported lower (although not statistically different) FACES III cohesion scores relative to their matched controls; target and comparison mothers were more similar in their reported FACES III cohesion scores. Several possibilities exist that may account for such a difference between the cohesion measures. First, the FES Cohesion Subscale may be more sensitive to detecting differences between target and comparison mothers than the FACES III Cohesion Subscale. Second, the measures were not counterbalanced in their administration; consequently it is possible that scores were systematically higher on the FES due to the fact that it was invariably administered first to each subject. Third, as previously mentioned, each measure is associated with a distinct definition of cohesion. Therefore, consistent with the definition of cohesion related to the FES, it may be the case that target mothers perceive family members to be less helpful and committed toward one another than do comparison mothers. Additionally, in keeping with the definition associated with the FACES III, the perception of the closeness of family members on an emotional level might not differ between target and comparison mothers.

Another tendency to emerge from the data analysis across both measures was that the lowest cohesion scores were reported by the children of target mothers. This tendency raises concern in light of the literature that has documented associations between children's reports of low cohesion and difficulties in their own adjustment. For example, children's perception of cohesion has been negatively correlated with psychophysiological symptoms (Walker & Greene, 1987) and diagnoses of depression (Feldman et al., 1988). In addition, children who have engaged in suicidal behaviour (Asarnow, 1992; Asarnow et al., 1987; Miller et al., 1992) or have diagnoses of depression, anxiety, or conduct disorder (Fendrich et al., 1990; Stark, Humphrey, Crook & Lewis, 1990) have reported lower family cohesion than control children. Therefore, a suggestion for future research is to replicate the present study using a larger sample size to determine whether this trend reaches the level of a significant effect. If the children of mothers who report depressive symptomatology perceive less family cohesion relative to their mothers, and their mothers are the only family members presenting to health agencies for assistance, the problems associated with low support may not be addressed for these children.

A few points concerning the design of the present study need to be discussed. First, it is acknowledged that the sample size was small and therefore the statistical power of

the analysis was limited. The original aim of the study was to obtain a sample size similar to those obtained by previous researchers (approximately 20-25 families per group); however, difficulties were encountered in obtaining referrals from community professionals. As shown in Appendix D, the largest proportion of subjects in the target group was obtained through community advertisements and this procedure took approximately 7 months. In addition, given that 75 percent of the families in the target group were advertisement respondents, the generalizability of the results may be limited to a specific group of women who are interested in research and who may not be entirely representative of distressed women in general.

Second, in the present study, depressive symptomatology was defined as the existence of mild to severe symptomatology and the presence of clinical diagnoses of depression was not established. This approach is in contrast to most of the previously discussed research in which hospital and clinic samples of parents with diagnosable depression were the subjects of study. This study shows that even in the absence of an established diagnosis, a significant effect between groups was still found with respect to the FES scores, suggesting that perception of low FES cohesion is related to depressive symptomatology as well as to diagnosable depression.

The results of this study contribute to a rationale for developing preventive programs whereby support is provided to individuals who report depressive symptomatology to preclude the necessity for intensive professional assistance. For instance, a distressed mother's participation in a program focused on improving perceived cohesion in the family environment may function "... to decrease her emotional burden, resulting in a lower incidence of rehospitalization, increased participation in job training, or other desirable outcomes" (Goodman, 1984, p. 671). In a study of home observations of family interactions of depressed women, Hops et al. (1987) found significantly more suppression of dysphoric affect in depressed subjects than in control subjects when their family members displayed caring affect. In addition, the problems experienced by children of mothers who are experiencing depressive symptomatology that are related to perceived low cohesion may be circumvented, or at least, alleviated. This will allow the potentially vulnerable child to make an adequate adjustment overall.

In conclusion, the results did not support the hypotheses of the study, although the means were in the direction predicted by the first two hypotheses. Future research with a larger sample size is warranted to investigate further whether these tendencies are replicable at a statistically significant level. Mothers and children did not differ significantly in their reported cohesion scores in either

group. An additional finding was that target mothers together with their children reported significantly lower FES cohesion than did comparison mothers and their children. It is emphasized that one cannot draw causal inferences from this finding. It is difficult to determine whether maternal depressive symptomatology reduces family cohesion, low family cohesion precipitates maternal depressive symptomatology, or if the two are coincident in their origin. As Billings and Moos (1985c) pointed out, prospective studies with multiple follow-ups are needed to probe the reciprocal causal links between maternal depressive symptomatology, family cohesion and children's functioning. Such research efforts could lead to the development of family-related intervention and prevention programs which might serve to alleviate maternal distress and reduce the incidence of children's psychological and behavioural problems (Billings & Moos, 1985c).

References

Amato, P. R. (1989). Family processes and the competence of adolescents and primary school children. Journal of Youth and Adolescence, 18, 39-53.

American Psychiatric Association. (1987). Diagnostic and statistical manual of mental disorders (3rd ed.). Washington, DC: Author.

Anthony, E. J. (1983). An overview of the effects of maternal depression on the infant and child. In H. L. Morrison (Ed.), Children of depressed parents: Risk, identification, and intervention (pp. 1-16). New York: Grune & Stratton.

Asarnow, J. B. (1992). Suicidal ideation and attempts during middle childhood: Associations with perceived family stress and depression among child psychiatric inpatients. Journal of Clinical Child Psychology, 21, 35-40.

Asarnow, J. B., & Carlson, G. (1988). Suicide attempts in preadolescent child psychiatry inpatients. Suicide and Life-Threatening Behavior, 18, 129-137.

Asarnow, J. R., Carlson, G. A., & Guthrie, D. (1987). Coping strategies, self-perceptions, hopelessness, and perceived family environments in depressed and suicidal children. Journal of Consulting and Clinical Psychology, 55, 361-366.

Beardslee, W. R., Bemporad, J., Keller, M. B., & Klerman, G. L. (1983). Children of parents with major affective

disorder: A review. American Journal of Psychiatry, 140, 825-832.

Beavers, W. R., & Hampson, R. B. (1990). Successful families: Assessment and intervention. New York: W. W. Norton & Company.

Beavers, W. R., & Hampson, R. B. (1993). Measuring family competence: The Beavers Systems Model. In F. Walsh (Ed.), Normal family processes (2nd ed.), (pp. 73-95). New York: The Guilford Press.

Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, B. (1979). Cognitive therapy of depression. New York: The Guilford Press.

Beck, A. T., Steer, R. A., & Garbin, M. G. (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. Clinical Psychology Review, 8, 77-100.

Bettes, B. A. (1988). Maternal depression and motherese: Temporal and intonational features. Child Development, 59, 1089-1096.

Billings, A. G., Cronkite, R. C., & Moos, R. H. (1983). Social-environmental factors in unipolar depression: Comparisons of depressed patients and nondepressed controls. Journal of Abnormal Psychology, 92, 119-133.

Billings, A. G., & Moos, R. H. (1983). Comparisons of children of depressed and nondepressed parents: A social-

environmental perspective. Journal of Abnormal Child Psychology, 11, 463-486.

Billings, A. G., & Moos, R. H. (1985a). Life stressors and social resources affect posttreatment outcomes among depressed patients. Journal of Abnormal Psychology, 94, 140-153.

Billings, A. G., & Moos, R. H. (1985b). Psychosocial processes of remission in unipolar depression: Comparing depressed patients with matched community controls. Journal of Consulting and Clinical Psychology, 53, 314-325.

Billings, A. G., & Moos, R. H. (1985c). Children of parents with unipolar depression: A controlled 1-year follow-up. Journal of Abnormal Child Psychology, 14, 149-166.

Blatt, S. J., & Homann, E. (1992). Parent-child interaction in the etiology of dependent and self-critical depression. Clinical Psychology Review, 12, 47-91.

Bristol (1984). Family resources and successful adaptation to autistic children. In E. Schopler & G. Mesibov (Eds.), The effects of autism on the family (pp. 289-310). New York: Plenum Press.

Brown, G. W., & Harris, T. O. (1978). Social origins of depression: A study of psychiatric disorder in women. London: Tavistock Publications.

Brown, J. E., & Mann, L. (1990). The relationship between family structure and process variables and adolescent decision making. Journal of Adolescence, 13, 25-37.

Burge, D., & Hammen, C. (1991). Maternal communication: Predictors of outcome at follow-up in a sample of children at high and low risk for depression. Journal of Abnormal Psychology, 100, 174-180.

Burt, C. E., Cohen, L. H., & Bjorck, J. P. (1988). Perceived family environment as a moderator of young adolescents' life stress adjustment. American Journal of Community Psychology, 16, 101-122.

Chandler, L. A., Million, M. E., & Shermis, M. D. (1985). The incidence of stressful life events of elementary school-aged children. American Journal of Community Psychology, 13, 743-746.

Cluff, R. B., Hicks, M. W., & Madsen, C. H. (1994). Beyond the Circumplex Model: I. A moratorium on curvilinearity. Family Process, 33, 455-470.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Hillsdale, New Jersey: Lawrence Erlbaum Associates.

Cohen, J. (1992). A power primer. Psychological Bulletin, 112, 155-159.

Cohler, B. J., Gallant, D. H., Grunebaum, H. U., Weiss, J. L., & Gamer, E. (1977). Attention dysfunction and child-care attitudes among mentally ill and well mothers and their young children. In J. C. Glidewell (Ed.), The social context of learning & development (pp. 133-162). New York: Gardner Press Inc.

Cohler, B. J., & Musick, J. S. (1983). Psychopathology of parenthood: Implications for mental health of children. Infant Mental Health Journal, 4, 140-164.

Cohn, J., Matias, R., Tronick, E., Connell, D., & Lyons-Ruth, K. (1986). Face-to-face interactions of depressed mothers and their infants. In E. Tronick & T. Field (Eds.), Maternal depression and infant disturbance (pp. 31-46). San Francisco: Jossey-Bass.

Cohn, J. F., & Tronick, E. (1989). Specificity of infants' response to mothers affective behavior. Journal of American Academy of Child and Adolescent Psychiatry, 28, 242-248.

Colletta, N. D. (1983). At risk for depression: A study of young mothers. The Journal of Genetic Psychology, 142, 301-310.

Coyne, J. C. (1976). Toward an interactional description of depression. Psychiatry, 39, 28-40.

Coyne, J. C. (1994). Self-reported distress: Analog or ersatz depression? Psychological Bulletin, 116, 29-45.

Coyne, J. C., Burchill, S. A. L., & Stiles, W. B. (1990). An interactional perspective on depression. In C. R. Snyder & D. O. Forsyth (Eds.), Handbook of social and clinical psychology: The health perspective (pp. 327-349). New York: Pergamon.

Coyne, J. C., Kahn, J., & Gotlib, I. H. (1987). Depression. In T. Jacob (Ed.), Family intervention and

psychopathology: Theories, methods, and findings (pp. 509-533). New York: Plenum Press.

Coyne, J. C., Kessler, R. C., Tal, M., Turnbull, J., Wortman, C. B., & Greden, J. F. (1987). Living with a depressed person. Journal of Consulting and Clinical Psychology, 55, 347-352.

Cummings, E. M., & Davies, P. T. (1994). Maternal depression and child development. Journal of Child Psychology and Psychiatry, 35, 73-112.

Davenport, Y. B., Zahn-Waxler, C., Adland, M. L., & Mayfield, A. (1984). Early child rearing practices in families with a manic-depressive parent. American Journal of Psychiatry, 142, 230-235.

Downey, G., & Coyne, J. C. (1990). Children of depressed parents: An integrative review. Psychological Bulletin, 108, 50-76.

Fechner-Bates, S., Coyne, J. C., & Schwenk, T. L. (1994). The relationship of self-reported distress to depressive disorders and other psychopathology. Journal of Consulting and Clinical Psychology, 62, 550-559.

Feldman, S. S., Rubenstein, J. L., & Rubin, C. (1988). Depressive affect and restraint in early adolescents: Relationships with family structure, family process and friendship support. Journal of Early Adolescence, 8, 279-296.

Fendrich, M., Warner, V., & Weissman, M. M. (1990). Family risk factors, parental depression, and psychopathology in offspring. Developmental Psychology, 26, 40-50.

Ferster, C. (1973). A functional analysis of depression. American Psychologist, 28, 857-870.

Filstead, W., McElfresh, O., & Anderson, C. (1981). Comparing the family environments of alcoholic and "normal" families. Journal of Alcohol and Drug Education, 26, 24-31.

Fisher, L., Kokes, R. F., Harder, D. W., & Jones, J. E. (1980). Child competence and psychiatric risk: VI. Summary and integration of findings. The Journal of Nervous and Mental Disease, 168, 353-355.

Gaensbauer, J. J., Harmon, R. J., Cytryn, L., & McKnew, D. H. (1984). Social and affective development in infants with a manic-depressive parent. American Journal of Psychiatry, 141, 223-229.

Garmezy, N. (1987). Stress, competence, and development: Continuities in the study of schizophrenic adults, children vulnerable to psychopathology, and the search for stress-resistant children. American Journal of Orthopsychiatry, 57, 159-174.

Garrison, C. Z., Addy, C. L., Jackson, K. L., McKeown, R. E., & Waller, J. L. (1991). A longitudinal study of suicidal ideation in young adolescents. Journal of the American Academy of Child and Adolescent Psychiatry, 30, 597-604.

Gizynski, M. N. (1985). The effects of maternal depression on children. Clinical Social Work Journal, 13, 103-116.

Goodman, S. H. (1984). Children of disturbed parents: The interface between research and intervention. American Journal of Community Psychology, 12, 663-687.

Green, R. G., Harris, R. N., Forte, J. A., & Robinson, M. (1991). Evaluating FACES III and the Circumplex Model: 2240 families. Family Process, 30, 55-73.

Grotevant, H. D., & Carlson, D. I. (1989). Family assessment: A guide to methods and measures. New York: The Guilford Press.

Grunebaum, H., & Cohler, B. J. (1983). The mentally ill parent: Children of parents hospitalized for mental illness: I. Attentional and interactional studies. In M. Frank (Ed.), Children of exceptional parents (pp. 43-55). New York: The Haworth Press, Inc.

Hammen, C. (1991). Depression runs in families: The social context of risk and resilience in children of depressed mothers. New York: Springer-Verlag.

Hammen, C., Adrian, C., Gordon, D., Burge, D., Jaenicke, C., & Hiroto, D. (1987). Children of depressed mothers: Maternal strain and symptom predictors of dysfunction. Journal of Abnormal Psychology, 96, 190-198.

Hammen, C., Gordon, D., Burge, D., Adrian, C., Jaenicke, C., & Hiroto, D. (1987a). Communication patterns of mothers

with affective disorders and their relationship to children's status and social functioning. In K. Hahlweg & M. J. Goldstein (Eds.), Understanding major mental disorder: The contribution of family interaction research (pp. 103-119). New York: Family Process Press.

Hammen, C., Gordon, D., Burge, D., Adrian, C., Jaenicke, C., & Hiroto, D. (1987b). Maternal affective disorders, illness, and stress: Risk for children's psychopathology. American Journal of Psychiatry, 144, 736-741.

Hampson, R. B., Beavers, W. R., & Hulgus, Y. F. (1988). Commentary: Comparing the Beavers and Circumplex Models of family functioning. Family Process, 27, 85-92.

Hampson, R. B., Beavers, W. R., & Hulgus, Y. F. (1989). Insiders' and outsiders views of family: The assessment of family competence and style. Journal of Family Psychology, 3, 118-136.

Harder, D. W., Kokes, R. F., Fisher, L., & Strauss, J. S. (1980). Child competence and psychiatric risk: IV. Relationships of parent diagnostic classifications and parent psychopathology severity to child functioning. The Journal of Nervous and Mental Disease, 168, 343-347.

Hays, W. L. (1988). Statistics (4th ed.). Orlando, Florida: Holt, Tinehart and Winston, Inc.

Hetherington, E. M., Cox, M., & Cox, R. (1982). Effects of divorce on parents and children. In M. Lamb (Ed.),

Nontraditional families (pp. 233-288). Hillsdale, New Jersey: Erlbaum.

Holahan, C. J., & Moos, R. H. (1981). Social support and psychological distress: A longitudinal analysis. Journal of Abnormal Psychology, 90, 365-370.

Hops, H., Biglan, A., Sherman, L., Arthur, J., Friedman, L., & Osteen, V. (1987). Home observations of family interactions of depressed women. Journal of Consulting and Clinical Psychology, 55, 341-346.

Ingram,, R. E., Lumry, A., Cruet, D., & Seiber, W. (1987). Attentional processes in depressive disorders. Cognitive Therapy and Research, 11, 351-360.

Jaenicke, C., Hammen, C., Zupan, B., Hiroto, D., Gordon, D., Adrian, C., & Burge, D. (1987). Cognitive vulnerability in children at risk for depression. Journal of Abnormal Child Psychology, 15, 559-572.

Johnson, C. L., & Irvin, F. S. (1983). Depressive potentials: Interface between adolescence and midlife transition. In H. L. Morrison (Ed.), Children of depressed parents: Risk, identification, and intervention (pp. 99-114). New York: Grune & Stratton.

Kauffman, C., Grunebaum, H., Cohler, B. & Gamer, E. (1979). Superkids: Competent children of psychotic mothers. American Journal of Psychiatry, 136, 1398-1402.

Keller, M. B., Beardslee, W. R., Dorer, D. J., Lavori, P. W., Samuelson, H., & Klerman, G. R. (1986). Impact of severity

and chronicity of parental affective illness on adaptive functioning and psychopathology in children. Archives of General Psychiatry, 43, 930-937.

Kendall, P. C., Hollon, S. D., Beck, A. T., Hammen, C. L., & Ingram, R. E. (1987). Issues and recommendations regarding use of the Beck Depression Inventory. Cognitive Therapy and Research, 11, 289-299.

King, C. A., Raskin, A., Gdowski, C. L., Butkus, M., & Opipari, L. (1990). Psychosocial factors associated with urban adolescent female suicide attempts. Journal of the American Academy of Child and Adolescent Psychiatry, 29, 289-294.

Kleinman, S. L., Handal, P. J., Enos, D., Searight, H. R., & Ross, M. J. (1989). Relationship between perceived family climate and adolescent adjustment. Journal of Clinical Child Psychology, 18, 351-359.

Kokes, R. F., Harder, D. W., Fisher, L., & Strauss, J. S. (1980). Child competence and psychiatric risk: V. Sex of patient parent and dimensions of psychopathology. The Journal of Nervous and Mental Disease, 168, 348-352.

L'Abate, L., & Bagarozzi, D. A. (1993). Sourcebook of marriage and family evaluation (pp. 167-185). New York: Brunner/Mazel Inc.

Langner, T. S. (1962). A twenty-two item screening score of psychiatric symptoms indicating impairment. Journal of Health and Human Behavior, 3, 269-276.

Lee, C. M., & Gotlib, I. H. (1989). Maternal depression and child adjustment: A longitudinal analysis. Journal of Abnormal Psychology, 98, 78-85.

Lee, C. M., & Gotlib, I. H. (1991). Adjustment of children of depressed mothers. A 10-month follow-up. Journal of Abnormal Psychology, 100, 473-477.

Lefkowitz, M. M., & Tesiny, E. P. (1985). Depression in children: Prevalence and correlates. Journal of Consulting and Clinical Psychology, 53, 647-656.

Lyons-Ruth, K., Connell, D. B., Grunebaum, H. U., & Botein, S. (1990). Infants at social risk: Maternal depression and family support services as mediators of infant development and security of attachment. Child Development, 61, 85-98.

Mardia, K. V. (1971). The effect of non-normality on some multivariate tests and robustness to non-normality in the linear model. Biometrika, 58, 105-121.

Miller, K. E., King, C. A., Shain, B. N., & Naylor, M. W. (1992). Suicidal adolescents' perceptions of their family environment. Suicide and Life-Threatening Behavior, 22, 226-239.

Minuchin, S. (1974). Families and family therapy. Cambridge: Harvard University Press.

Mitchell, R. E., Cronkite, R. C., & Moos, R. H. (1983). Stress, coping, and depression among married couples. Journal of Abnormal Psychology, 92, 433-448.

Mitchell, R. E., & Moos, R. H. (1984). Deficiencies in social support among depressed patients: Antecedents or consequences of stress? Journal of Health and Social Behavior, 25, 438-452.

Mitchell, M. G., & Rosenthal, D. M. (1992). Suicidal adolescents: Family dynamics and the effects of lethality and hopelessness. Journal of Youth and Adolescence, 21, 23-33.

Moos, R. H., & Moos, B. S. (1986). Family environment scale manual (2nd ed.). Palo Alto, CA: Consulting Psychologists Press Inc.

Nihira, K., Meyers, C. E., & Mink, I. (1980). Home environment, family adjustment, and the development of mentally retarded children. Applied Research in Mental Retardation, 1, 5-24.

Noller, P., & Callan, V. J. (1986). Adolescent and parent perceptions of family cohesion and adaptability. Journal of Adolescence, 9, 97-106.

Oliver, J. M., Handal, P. J., Finn, T., & Herdy, S. (1987). Depressed and nondepressed students and their siblings in frequent contact with their families: Depression and perceptions of the family. Cognitive Therapy and Research, 11, 501-515.

Olson, D. H. (1991). Commentary: Three-dimensional (3-D) Circumplex Model and revised scoring of FACES III. Family Process, 30, 74-79.

Olson, D. H. (1993). Circumplex Model of marital and family systems: Assessing family functioning. In F. Walsh (Ed.), Normal family processes (pp. 104-137). New York: The Guilford Press.

Olson, D. H., McCubbin, H. I., Barnes, H. L., Larsen, A. S., Muxen, M. J., & Wilson, M. A. (1983). Families: What makes them work. Beverly Hills: Sage Publications.

Olson, D. H., Portner, J., & Lavee, Y. (1985). FACES III. St. Paul, MN: Family Social Science, University of Minnesota.

Olson, D. H., Sprenkle, D. H., & Russell, C. S. (1979). Circumplex Model of marital and family systems I: Cohesion and adaptability dimensions, family types, and clinical applications. Family Process, 18, 3-28.

Olson, D. H., & Tiesel, J. (1991). FACES III: Linear scoring and interpretation. St. Paul, Minnesota: University of Minnesota.

Papini, D. R., Roggman, L. A., & Anderson, J. (1991). Early-adolescent perceptions of attachment to mother and father: A test of the emotional-distancing and buffering hypothesis. Journal of Early Adolescence, 11, 258-275.

Perry, M., Wells, E., & Doran, L. (1983). Parent characteristics in abusing and non-abusing families. Journal of Child Clinical Psychology, 12, 329-336.

Richters, J., & Pellegrini, D. (1989). Depressed mothers' judgements about their children: An examination of the

depression-distortion hypothesis. Child Development, 60, 1068-1075.

Roehl, J. E., & Okun, M. A. (1984). Depression symptoms among women reentering college: The role of negative life events and family social support. Journal of College Student Personnel, 25, 251-254.

Rubenstein, J. L., Heeren, T., Housman, D., Rubin, C., & Stechler, G. (1989). Suicidal behavior in "normal" adolescents: Risk and protective factors. American Journal of Orthopsychiatry, 59, 59-71.

Sameroff, A. J., Seifer, R., & Barocas, R. (1983). Impact of parental psychopathology: Diagnosis, severity, or social status effects? Infant Mental Health Journal, 4, 236-249.

Sameroff, A. J., Seifer, R., & Zax, M. (1982). Early development of children at risk for emotional disorder. Monographs of the Society for Research in Child Development, 47(7, Serial No. 199).

Seifer, R., Sameroff, A. J., & Jones, F. (1981). Adaptive behavior in young children of emotionally disturbed women. Journal of Applied Developmental Psychology, 1, 251-276.

Seligman, M., Peterson, C., Kaslow, N., Tanenbaum, R., Alloy, L., & Abramson, L. (1984). Attributional style and depressive symptoms among children. Journal of Abnormal Psychology, 93, 235-238.

Shaw, D. S., & Emery, R. E. (1987). Parental conflict and other correlates of the adjustment of school-age children

whose parents have separated. Journal of Abnormal Child Psychology, 15, 269-281.

Skinner, H. A. (1987). Self-report instruments for family assessment. In T. Jacob (Ed.), Family intervention and psychopathology: Theories, methods, and findings (pp. 427-452). New York: Plenum Press.

Stark, K. D., Humphrey, L. L., Crook, K., & Lewis, K. (1990). Perceived family environments of depressed and anxious children: Child's and maternal figure's perspectives. Journal of Abnormal Child Psychology, 18, 527-547.

Swindle, R. (1983). An experimental evaluation of the social support buffering hypothesis (Doctoral dissertation, Indiana University, 1983). Dissertation Abstracts International, 44, 929B.

Walker, L. S., & Greene, J. W. (1987). Negative life events, psychosocial resources, and psychopathological symptoms in adolescents. Journal of Clinical Child Psychology, 16, 29-36.

Waring, E. M., McElrath, D., Lefcoe, D., Weisz, G. (1981). Dimensions of intimacy in marriage. Psychiatry, 44, 169-175.

Waring, E. M., & Russell, L. (1980). Family structure, marital adjustment and intimacy in patients referred to a consultation/liasion service. General Hospital Psychiatry, 3, 198-203.

Weissman, M. M. (1983). The depressed mother and her rebellious adolescent. In H. L. Morrison (Ed.), Children of depressed parents: Risk, identification, and intervention (pp. 99-114). New York: Grune & Stratton.

Weissman, M. M., Gammon, D., John, K., Merikangas, K. R., Warner, V., Prusoff, B. A., & Sholomskas, D. (1987). Children of depressed parents. Archives of General Psychiatry, 44, 847-853.

Weissman, M. M., & Myers J. K. (1978). Affective disorders in a United States community: The use of research diagnostic criteria in an epidemiological survey. Archives of General Psychiatry, 35, 1304-1311.

Weissman, M. M., & Paykel, E. S. (1974). The depressed woman: A study of social relationships. Chicago: University of Chicago Press.

Welner, Z., Welner, A., McCrary, M. D., & Leonard, M. A. (1977). Psychopathology in children of inpatients with depression: A controlled study. The Journal of Nervous and Mental Disease, 164, 408-413.

Wetzel, J. W. (1984). Clinical handbook of depression. New York: Gardner Press.

Wetzel, J. W., & Redmond, F. C. (1980). A person-environment study of depression. Social Service Review, 54, 363-375.

Appendix A

Depressive Symptomatology Inventory

Date:_____

DSI

Group I.D. _____ Marital Status: _____ Age: _____

Sex: _____ Occupation: _____ Education: ____

Gross family income: $_____

Part A of this questionnaire consists of 13 statements. After reading each statement carefully, please put an "X" in the blank provided at the left of each statement that describes the way you have felt during the past month. Then, at the end of each statement you checked, pleace put another "X" in the column that best describes how long you have felt this way. Please read and answer the questions in Part B.

Part A:

		Months		
		0-1	1-6	6+
1.	____ Feelings of sadness	____	____	____
2.	____ Poor appetite	____	____	____
3.	____ An increase in eating	____	____	____
4.	____ Difficulty in falling or staying asleep	____	____	____
5.	____ An increase in sleeping	____	____	____
6.	____ Low energy or feeling tired	____	____	____
7.	____ Low self-esteem	____	____	____
8.	____ Feeling worthless	____	____	____
9.	____ Feeling guilty	____	____	____
10.	____ Poor concentration	____	____	____
11.	____ Difficulty making decisions	____	____	____
12.	____ Feeling hopeless	____	____	____
13.	____ Loss of interest or pleasure in activities	____	____	____

Part B:

1. Have you or anyone in your immediate family ever received help for psychological problems? yes/no (please circle). If yes, please specify:

2. Have you or anyone in your immediate family ever received help for drug or alcohol abuse? yes/no (please circle). If yes, please specify:

Appendix B

Newspaper advertisement

Thursday, February 24, 1994

LIFESTYLES Heal

Study to probe maternal depression

Little known about effect on family

By DEANA STOREC SULLIVAN
The Evening Telegram

Depression is a major public health problem and one of the most common emotional disorders.

Still, little is known about the effect on families when parents have the disorder.

Lori McDonald and Jacqueline Goodwin are both clinical psychology graduate students at Memorial University. As part of their masters' thesis, they are intending to explore this area.

Goodwin said most studies have focused on negative effects, but a study she and McDonald are planning on maternal depression will look more generally at how people in a family see each other

Their research will focus on the adjustment of the individual with depression and the effects on the family as a whole. The family will be looked at in terms of a system or unit, said Goodwin.

McDonald said the effects on the children and mother will be assessed.

Both McDonald and Goodwin are interested in child psychology, but agree there is little research in areas such as this where children's perceptions are examined, although the trend is now moving toward looking more at interpersonal relationships.

As part of their research project, McDonald and Goodwin are planning to obtain information from about 50 mothers with children aged eight to 15 years.

The are hoping to get 25 to 35 mothers participating who experience depression and are receiving treatment from a professional, as well as 20 to 25 who are not affected by depression. The information needed will be gathered in a brief interview with each participant and through a questionnaire.

McDonald said participants interested in feedback will be provided with a summary of the study results.

Goodwin said the results should be useful to clinicians. If there are effects from depression on family members, it will be important for professionals working with families to keep this in mind, she said. They might have to change their approach in some areas in view of this.

McDonald and Goodwin have spent two years researching this area. They agree the prevalence of depression is fairly common in society. "Depression is a common presenting problem in clinic situations," said Goodwin.

McDonald said a study from 1976 indicated half of all psychiatric admissions were linked with depression.

Goodwin said it is not certain what causes maternal depression. It is often accompanied by other family problems, such as marital problems and financial difficulties. However, it is difficult to determine if depression causes these problems or if it is a result of family difficulties. Sometimes it is part of a cycle, said Goodwin.

Both American and British statistics suggest that the lifetime expectancy of developing depression is about 20 per cent in women and 10 per cent in men. Depression is likely prevalent among people from the lower socioeconomic group, the divorced and separated.

All information gathered for the maternal depression study will be strictly confidential and anonymous.

Interested parents may contact the researchers at 754-6126, leaving their name and telephone number on an answering machine. Those who respond will be contacted by the researchers for a brief phone interview and the scheduling of a research appointment at the family's convenience.

Participants may withdraw from the study process at any point, said Goodwin.

FAMILY FALL-OUT

Little is known about children's perceptions of maternal depression or the effect it has on the family as a whole. A study involving about 50 mothers by two clinical psychology students at Memorial University will explore this area.

ATTENTION INTERESTED PERSONS

We are looking for:
- mothers being treated for depression & their children
- mothers NOT experiencing depression & their children
- children aged approx. 8-16 years
- confidential questionnaires will take one hour only

CONTACT RESEARCHERS BY LEAVING MESSAGE ON ANSWERING MACHINE AT 726-0674

Appendix C

Advertisement on public television channel

MUN STUDY ON DEPRESSION

Exploring mothers' and children's views on family relationships. Need mothers experiencing depression with children between ages 8 - 16. Involves one meeting to complete ANONYMOUS, confidential forms. Leave name and number on confidential machine at 726-0674.

Appendix D

Sources of contact for each group

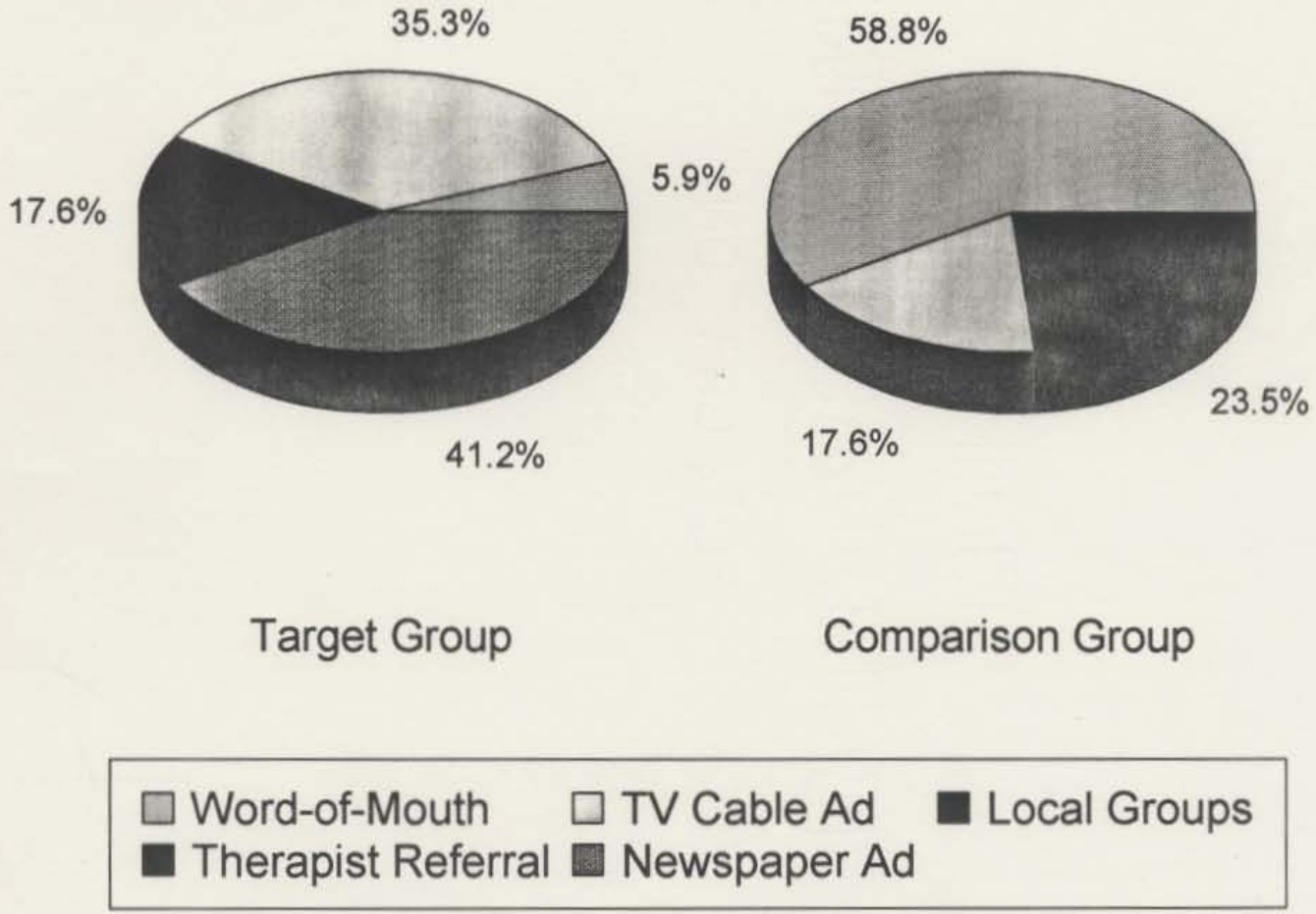

Figure B-1. Sources of Contact with families for each group (values may not total 100% due to the effects of rounding)

Appendix E

Telephone interview script

Semi-structured telephone script

Identify interviewer: My name is Lori McDonald. I am one of the researchers mentioned (by your therapist/in the Lifestyles article/in the letter sent home by Scouts/hockey coach).

Is this an okay time for you to talk?

I am checking to see if you still wish to participate in this study.

If no: Thanks for your interest in the study. Good-bye.

If yes: I'll give you a little more information about the study. We are trying to gather information about family relationships from two types of families: (1) families in which mothers are experiencing depression and (2) those families where mothers are not. We are interested in finding out how family members see each other in these families. We plan to look at these views through the use of brief questionnaires which allow mothers and children to describe how they see their family relationships.

Do you have (a) child(ren) between the ages of 8 and 15 years?

How many _____?

Ages?

The meeting to complete the questionnaires will take approximately one hour and will be scheduled at your family's convenience. Keep in mind that your family may withdraw from the study at any point if you wish. All information gathered in the study will be strictly confidential.

Do you have any questions or concerns about the study?

Still wish to participate?

Set up appointment time.

Appendix F

Letters of contact provided to clinicians

May, 1994

RE: Request for Participation in Research

Dear Physician:

We are Clinical Psychology researchers who are conducting a research programme through the MUN Department of Psychology. We ask that you assist us in completing this research. The following text describes the nature and criteria of our investigation and what your participation would entail.

Recent research has highlighted the need to explore the effects of depression not only on the adjustment of the individual, but also on their family. Research has shown that depression in a parent is associated with difficulties in children's adjustment. Problems have been documented in children's social, behavioural, and emotional functioning. Although conflictual relationships and low family support often occur in families with a depressed parent, little is known about how children perceive family relationships when a parent is depressed. Therefore, we are interested in investigating whether there are differences in children's perceptions of family relationships in families in which mothers experience depression versus those that do not. **Such research will aid clinicians with the identification of treatment goals that reflect meaningful family dynamics.**

We plan to explore these views through the use of brief, anonymous questionnaires which allow mothers and children to describe how they see their family relationships. This procedure will take place during a single 75-minute appointment and will be scheduled at the family's convenience. All information gathered in the study will be strictly confidential. Participants may withdraw from the study at any point they wish. Written feedback of the research findings will be provided to those participants who express interest.

If you wish to support this research, your participation will initially involve discussing this research with your patients who fit our inclusion criteria (see below). Those interested patients who wish to be contacted by the researchers will then complete the enclosed "Consent for Referral" form. This required form will be provided by you to ensure participants understand that their name and telephone number will be forwarded to the researchers for subsequent contact.

Individual arrangements may be made for the forwarding of the completed consent forms to the researchers. For example, we can contact your office weekly to gather available referrals and necessary information (i.e., patients' name and telephone number). Once the referral forms have been gathered, the researchers will contact each interested client for a brief telephone interview and the scheduling of a research appointment.

INCLUSION CRITERIA

NOTE: We are seeking participants who meet the following inclusion criteria:

A. Mothers, who are at least 18 years of age, and receiving outpatient treatment for depression. Treatment may consist of various modalities (e.g., psychotherapy, pharmacotherapy, a combination of both, etc).

B. Have one or more child(ren) in the age range of 8 to 16 years and living in the same home.

C. Depressed mood for most of the day, more days than not, as indicated either by subjective account or observation by others, for at least ONE MONTH.

D. Presence, while depressed, of at least two of the following:

(1) poor appetite or overeating
(2) insomnia or hypersomnia
(3) low energy or fatigue
(4) low self-esteem
(5) poor concentration or difficulty making decisions
(6) feelings of hopelessness

E. Has never had a manic episode or a chronic psychotic disorder, such as Schizophrenia or Delusional Disorder.

F. Does not have a history of significant sustained substance abuse at any time following the birth of the child(ren).

G. No history of psychotic or affective disturbance in their partner living at home.

Thank you for considering this research. We will contact you shortly to determine if you are wish to become involved in this research.

Lori McDonald

Jacqueline Goodwin

Appendix G

Consent for referral form

CONSENT FOR REFERRAL

It has been explained to me that a research programme is being carried out through the Department of Psychology of Memorial University of Newfoundland by two graduate students, Jacqueline Goodwin and Lori McDonald. I understand that the purpose of this research is to explore the relationships in families with mothers who have experienced depression. My family's participation in this study will involve filling out forms. I understand that if I choose not to participate in this study, it will not change the treatment I receive from the hospital.

I give permission for my therapist/physician to give my name and phone number to the researchers so that they may contact me about this study. I understand that all information gathered in this study is private/confidential. I know that the participation of my child(ren) and myself is of our own free will and my family may leave the study at any time should we choose to no longer participate.

_____ _____

(Print your name) (Signature)

_____ _____

(Signature of Therapist) (Date)

Thank you for agreeing to participate in our study about relationships within families with mothers who have experienced depression and families with mothers who have not experienced depression. We will be contacting you within the next few weeks to provide further details and schedule an appointment. In the meantime, if you have any questions or concerns you may contact us (Jacqueline Goodwin or Lori McDonald, 737-8496), our research supervisor (Dr. Christine Arlett, MUN Psychology Department, 737-7676), or the MUN Psychology Department Head (Dr. William McKim, 737-8495).

Lori McDonald

Jacqueline Goodwin

Appendix H

Family consent form

FAMILY CONSENT FORM

This research is being carried out through the Department of Psychology of Memorial University of Newfoundland by two graduate students, Jacqueline Goodwin and Lori McDonald. The purpose of this research is to explore family relationships. We are interested in learning more about how mothers and children see their relationships with other family members.

I understand that this visit will be about 75 minutes and will involve filling out forms provided by the researchers. These forms will ask questions about how family members see each other and how they get along with one another. I can choose to not answer a question which I do not wish to answer. All information gathered in this study is strictly private/confidential.

I understand that for the purposes of this research, the forms will identify my family only by a code number. If I wish to do so, I can provide the researchers with my mailing address so that they can send me information about the findings of this study. I also understand that papers arising from this research will not present individual results, but only report general findings of groups of children and their families. I am aware that I may contact Jacqueline Goodwin or Lori McDonald at Memorial University Department of Psychology (737-8496), their research supervisor (Dr. Christine Arlett, 737-7676), or the Psychology Department Head (Dr. William McKim, 737-8495) to ask any questions about the study.

I understand that participation of my child(ren) and myself in this study is entirely of our own free will. If I choose not to participate in this study, it will not change the treatment I receive from the hospital. I know that my family can leave the study at any time should we no longer choose to participate.

Lori McDonald	Jacqueline Goodwin

I have been provided with a cover letter that describes the study and gives a list of names and phone numbers of persons I may contact if I have any questions or concerns about the study. I understand the study procedures as they have been explained to me and I give permission for my child(ren) and myself to participate in this study.

(Print your name)	(Signature of Mother)
(Date)	(Names of child(ren) in study)

Children's consent:

I have been told about this study and I agree to answer questions about what my family is like to me.

(Print or write your name)

To be signed by investigator:

To the best of my ability I have fully explained to each of the involved family members the nature of this research study. I have invited questions and provided answers. I believe that the subjects fully understand the implications and voluntary nature of the study.

(Signature of investigator)	(Date)

Appendix I

Letters provided to families of community groups

Spring, 1994

Dear Parent(s):

We are Clinical Psychology graduate students completing a research programme through the MUN Department of Psychology. We are interested in exploring whether there are differences in children's views of family relationships in families in which mothers experience depression versus those that do not.

We are requesting your participation as we wish to gather information from a group of community based families for comparison purposes.

We plan to gather this information through the use of brief, anonymous questionnaires which allow **mothers and children** to report how they see their family relationships. These questionnaires have both true-false and multiple-choice questions to answer. This procedure will take place during a single 75-minute meeting and will be scheduled at your family's convenience. All information gathered in the study will be strictly confidential. Your family may withdraw from the study at any point. A written report of the research findings will be provided to your family if you wish.

We feel that research exploring family relationships is very important. Your participation in our research will play a valuable role in furthering our understanding of family relationships. Please fill out and detach the form provided on the second page. This form should then be returned to your child's group leader. We will then collect your form and, if you agree to participate, we will telephone you shortly to provide further details.

Thank you for considering this research,

Lori McDonald

Jacqueline Goodwin

Please read and check #1 OR #2 below:

1. I wish to be contacted by the researchers so that they may provide me with more details about this study. _____.

My name is _____.

My phone number is _____.

2. I do not wish to be contacted by the researchers _____.

Footnotes

[1]An argument can be made that cohesion ratings from a mother and child within the same family are not independent of each other such that the Family Status variable should be treated as a repeated measure. However, mothers and their children are separate individuals with independent ratings. A statistician was consulted on this question and it was following his recommendation that Family Status was treated as an independent variable.