Expressed emotion and child disturbance: An investigation of parent and family functioning.

Jodi G. Kershner
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EXPRESSED EMOTION AND CHILD DISTURBANCE:

AN INVESTIGATION OF PARENT AND FAMILY FUNCTIONING

Jodi G. Kershner

A Dissertation
Submitted to the Faculty of Graduate Studies
through the Department of Psychology
in Partial Fulfillment of the
Requirements for the Degree
of Doctor of Philosophy at the
University of Windsor

Windsor, Ontario, Canada
1991
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ABSTRACT

The expressed emotion index is a measure of emotional attitudes that is thought to reflect the affective quality of the home environment. Studies have consistently shown that a high level of expressed emotion (i.e., high levels of criticism and/or excessive emotional involvement) in caregivers is associated with poor clinical outcome in patients with schizophrenia, depression, and eating disorders. The present study examined the association between expressed emotion in parents and two other family risk factors known to contribute to child disturbance, psychological distress in parents and overall family dysfunction. The degree to which this set of risk factors predicted child problem behaviour ratings was also examined. The sample comprised 20 two-parent families of 7-16 year old children drawn from the general clinical population and 19 nonclinical families. The results indicated that a high level of expressed emotion was associated with a greater number of overall problems in children, and higher ratings of internalizing and externalizing symptoms. Expressed emotion was not associated with level of psychological distress in parents but there was overlap between aspects of expressed emotion and parents' perceptions of overall family functioning. Hierarchical multiple regression analyses indicated that level of expressed emotion made a significant contribution to the prediction of
child problem behaviour ratings after the effects of mothers' psychological distress and family functioning were considered. The implications of the present findings are discussed focusing on the relevance and applicability of the expressed emotion construct for the general clinical population of children. It is concluded that particular aspects of expressed emotion, especially the expression of positive emotional attitudes, may be useful to assess and identify in clinically referred families.
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I wish to dedicate this study to my husband, James MacPherson and our daughter, Paige Tyler. Our bond is a continued source of inspiration.
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CHAPTER I

INTRODUCTION

The following literature review begins with an overview of clinical research on expressed emotion. Studies are then reviewed that focus on psychological distress in parents and family functioning as two risk factors associated with child disturbance.

Expressed Emotion; Emotional Attitudes about Children

The role of the family is of primary importance in understanding the etiology, course, treatment, and prevention of childhood psychopathology (Jacob, 1987; Rutter, 1981; Sameroff & Seifer, 1983). In particular, research on family interaction and child disturbance has consistently underscored the importance of affective factors, or the emotional climate within the family (Asarnow, Lewis, Doane, Goldstein, & Rodnick, 1982; Doane, Hill, Kaslow, & Quinlan, 1988; Markman & Notarius, 1987). The amount and/or intensity of affective expression has repeatedly discriminated between functional and disturbed families (Jacob, 1975), with families characterized by negative affect (e.g., excessive criticism, hostility, antagonism) seen as contributing to low feelings of self worth, problem solving difficulties, and psychiatric
disturbance in family members (Forgatch, 1989; Jacob, 1975; Markman & Notarius, 1987).

Empirical demonstrations of the association between the affective quality of the home environment and psychopathology originated with studies of expressed emotion (EE), a measure of a relative's negative affect (i.e., critical or hostile attitudes) or intrusive overconcern (i.e., emotional overinvolvement) expressed about a psychiatric patient during a clinical interview. These studies, carried out with schizophrenic patients in England and later in the United States, consistently showed that patients who returned to homes characterized by high levels of EE, or high levels of critical or hostile attitudes toward the patient and/or excessive emotional involvement, tended to experience significantly higher rates of relapse (Brown, Birley, & Wing, 1972; Leff & Vaughn, 1981; Vaughn & Leff, 1976a, 1976b; Vaughn, 1989). Specifically, schizophrenic patients returning to high-EE homes had a three-to-fourfold greater risk of relapse in the nine or 12 months following discharge than patients returning to low-EE homes (Brown et al., 1972; Leff & Vaughn, 1985; Vaughn & Leff, 1976b). Although the direction of causality in the association between patient psychopathology and family attitudes cannot be inferred from these studies, it is noteworthy that family interventions that have successfully reduced the level of EE among relatives have decreased the relapse rates in patients with schizophrenia
(Leff, Kuipers, Berkowitz, Eberlein-Fries, & Sturgeon, 1982; Tarrier, Barrowclough, Vaughn, Bamrah, Porceddu, Watts, & Freeman, 1988). Furthermore, the relation between high-EE and increased relapse does not appear to be mediated by the degree of disturbance in schizophrenic patients (Vaughn, 1989). Research findings have generally indicated that schizophrenic patients from high-EE and low-EE families do not differ with regard to symptom severity (Brown et al., 1972; Miklowitz, Goldstein, & Falloon, 1983; Miklowitz, Goldstein, Doane, Neuchterlein, Strachan, Snyder, & Magana-Amato, 1989; Vaughn & Leff, 1976b).

Most of the earlier studies on EE were conducted on patients with established diagnoses of schizophrenia. Subsequently, researchers began to study the affective environment in families of disturbed adolescents to assess the validity of EE attitudes in predicting the onset of schizophrenia and related disorders. Doane and her colleagues (1981) found that adolescents who were beginning to exhibit signs of behavioural disturbance and whose parents' verbalizations showed extremely critical, guilt inducing, or intrusive affective styles had poorer outcome in early adulthood than disturbed adolescents from families without these attitudes. Negative affective style was associated more closely with the onset of schizophrenia spectrum disorders (i.e., schizophrenia, borderline personality, schizoid personality) than were forms of more benign or less harsh
criticism or intrusiveness. Asarnow et al. (1982) further reported that a consideration of both parent and adolescent affective behaviours improved the prediction of diagnosis at a 5 year follow up. The measure of affective style used in these two studies is analogous to the original EE index developed by Vaughn and Leff (1976a) and essentially taps the same components (i.e., criticism, hostility, and overinvolvement) but it is assessed from behavioural data rather than interview data. When the actual EE interview was conducted with families from the same subject pool, similar results were obtained. Norton (1982) reported that in families where both parents were defined as high-EE, 91% of the adolescents received follow up diagnoses of schizophrenia or related disorders. Goldstein (1985) also found that high expressed emotion in families with disturbed adolescents was associated with schizophrenia and schizophrenia spectrum disorders at a 15 year follow up.

With adequate evidence of the predictive validity of the EE construct, researchers sought behavioural validation, or evidence to support the assumption that EE attitudes are actually reflected in interpersonal behaviour. Interviewer impressions have consistently highlighted a number of characteristics that distinguish between high- and low-EE relatives. Low-EE relatives have been described as more likely to be empathic, tolerant of disturbed behaviour, flexible, adaptable, calmer in times of crisis, more skilled
at problem solving, and less intrusive and confrontational
(Vaughn, 1989). Studies relating EE to observed parent-child
interaction provide more empirical evidence of the validity of
EE attitudes. Valone, Norton, Goldstein, and Doane (1983)
found that parents rated as high-EE on the basis of critical
attitudes toward disturbed, nonpsychotic adolescent offspring
were more critical in direct parent-child interaction than
parents rated as low-EE. Miklowitz and his colleagues (1989)
also found that high-EE parents made more harshly critical
statements toward adolescent offspring with recent-onset
schizophrenia whereas low-EE parents expressed more supportive
statements. Similar findings have been reported in couples
with a depressed spouse (Hooley, 1986). In families of
adolescents with anorexia nervosa, a high correlation was
found between EE criticism ratings from parent interviews and
criticism ratings from family interviews (Szmukler, Berkowitz,
Eisler, Leff, & Dare, 1987). Moreover, the expression of
critical attitudes appears to be an enduring feature of the
parent-child relationship in some families. Parents rated as
high-EE, primarily critical, both when their child was
hospitalized and 5 1/2 months post-discharge were more
critical in their interactions than parents who were rated as
low-EE post-discharge (Miklowitz et al., 1989).

Lately, there has been increased interest in the role of
expressed emotion in disorders other than schizophrenia
(Vaughn, 1989). As Koenigsberg and Handley (1986) remark,
"There is nothing intrinsic to the expressed emotion concept that should limit it to schizophrenic patients" (p. 1371). This same point has been made by others (e.g., Kuipers & Bebbington, 1988). Indeed, links have been found between EE attitudes and outcome in patients suffering from depression, bipolar disorder, and eating disorders (Goering, 1985; Miklowitz, Goldstein, Nuechterlein, Snyder, & Mintz, 1988; Szmukler, Eisler, Russel, & Dare, 1985; Vaughn, 1989) and there is growing interest in the role of expressed emotion in children's disorders. Investigations are currently underway looking at EE in relation to childhood epilepsy, child sexual abuse, and autism (Vaughn, 1989).

As the scope of EE research has expanded to include a range of clinical disorders, advances also have been made in the development of alternate measures of expressed emotion. The Camberwell Family Interview (CFI) was developed for use as the original measure of expressed emotion. The CFI is a standardized, semi-structured interview designed to obtain information about attitudes, feelings, and events in the home. In its shortened form (Vaughn & Leff, 1976b) which takes 1.5 to 2 hours to administer, the patient's key relative, usually a parent or a spouse, is asked questions pertaining to the emotional climate in the home, the onset and development of the patient's disturbance, and the degree to which it affected various aspects of family life. The most crucial aspect of the interview, however, concerns the assessment of the
relative's feelings he/she expresses about the patient during the course of the interview; it is on this basis that ratings of EE are made (Hooley, 1985; Vaughn, 1989).

Although the CFI continues to be used, EE ratings have been successfully adapted for use with other measurement techniques, including alternate forms of parent and family interviews (Magan, Goldstein, Kano, Miklowitz, Jenkins, & Falloon, 1986; Norton, 1982; Szmukler et al., 1987; Valone et al., 1983). Recent advances especially have been made in the development of simpler, more economic methods of assessing expressed emotion (Cole & Kazarian, 1988; Magana et al., 1986). In particular, the Five Minute Speech Sample (FMSS) devised by Gottschalk and Gleser (1969) and developed for use as a measure of expressed emotion by Magana et al. (1986) has been gaining acceptance as a brief method of assessing emotional attitudes (Hahlweg, Goldstein, Nuechterlein, Magana-Amato, Mintz, Doane, Miklowitz, & Snyder, 1989; Miklowitz et al., 1989; Strachan, Feingold, Goldstein, Miklowitz, & Nuechterlein, 1989). The FMSS retains the involvement of a patient's key relative and the application of EE ratings from the original CFI procedure but rather than administering a lengthy interview with questions about the patient's psychiatric history, household activities, etc., EE attitudes are assessed from a brief verbal sample. The advantages of this measure, which include its comparability to the CFI, brevity, ease of administration, and construct validity, have
been highlighted in a number of reports (Hahlweg et al., 1989; Miklowitz et al., 1989; Strachan et al., 1989).

In summary, there is considerable evidence to suggest that parents' emotional attitudes expressed about a child are related to the course of psychological disturbance and are reflected in parent-child interaction. Moreover, the EE concept seems relevant as a "marker" variable or risk indicator for various disorders (Vaughn, 1989) and there has been a greater impetus toward developing brief assessment methods that can be easily administered and integrated into the clinical interview.

Despite these advances, however, it is not yet clear whether the EE construct is tapping anything unique about the family or whether it overlaps with other parental or family characteristics known to contribute to child disturbance. There is increasing evidence that risk factors are intercorrelated and that failure to incorporate multiple risk factors in research on childhood psychopathology may obscure the effects of critical aspects of family functioning or reduce the ability to identify interactive effects (Lancaster, Prior, & Adler, 1989; Walker, Downey, & Bergman, 1989). The majority of studies to date have considered EE as an isolated indicator of risk, although research findings have suggested the involvement of other characteristics of patient and family functioning. Intercorrelations between EE, life events, medication, and the relapse of schizophrenia have been
reported (Leff, Kulpers, Berkowitz, Vaughn, & Sturgeon, 1983). In addition, Miklowitz et al. (1988) found that the combination of EE ratings and affective style measured during a family interaction task predicted relapse in patients with bipolar disorder more powerfully than either of these variables considered alone. Currently, a multifactorial approach is being recommended in investigations of expressed emotion (Miklowitz et al., 1988; Vaughn, 1989).

The aim of the present study was to examine the association between expressed emotion in parents and two family characteristics previously found to be associated with child disturbance, psychological distress in parents and dysfunction within the family as a whole, and to understand how these variables are related to problem behaviours in children.

Parents' Psychological Distress and Child Disturbance

The identification of parental characteristics associated with the expression of emotional attitudes is important in understanding the nature and meaning of the EE construct. In particular, the role of parents' psychological health has been questioned (Goldstein, 1987; Miklowitz et al., 1988). We know that the emotional status of parents has a significant impact on children's functioning. There is abundant evidence that children of parents with clinical disorders such as schizophrenia and major affective disorder are at risk for a wide range of psychological problems (Rolf & Garmezy, 1974;
Weintraub, Neale, & Liebert, 1975; Weissman, Gammon, John, Merikangas, Warner, Prusoff, & Sholomskas, 1987). In addition, recent reports have highlighted the risk to children of parents reporting elevated levels of depressive symptoms and/or symptoms of general psychological distress (e.g., anxiety symptoms, somatic complaints, etc.). Specifically, these children have been characterized by a higher incidence of depressive disorders, conduct or behaviour problems, hyperactivity, and psychological problems generally (Forehand, Lautenschlager, Faust, & Graziano, 1986; Hammen, Adrian, Gordon, Burge, Jaenicke, & Hiroto, 1987; Holahan & Moos, 1987; McGee, Silva, & Williams, 1984; Sandberg, Wieselberg, & Shaffer, 1980). There is also evidence of disturbances in personality functioning. Kershner and Cohen (1991) reported that clinically referred boys of mothers with depressive symptoms exhibited a more negative self concept, a more external locus of control, and lower social perspective taking ability than boys of mothers without these symptoms.

Symptoms of psychological distress in parents may also affect perceptions of child functioning, which in turn influence parent-child interactions and caretaking decisions, including judgements about the need for psychological intervention (Lancaster et al, 1989; Panaccione & Wahler, 1986). Specifically, mothers reporting symptoms of depression and/or emotional distress have been shown to have negative perceptions of child behaviour (Brody & Forehand, 1986;
Lancaster et al., 1989; Panaccione & Wahler, 1986) that have not always been confirmed by objective observation (Panaccione & Wahler, 1986; Rogers & Forehand, 1983) or teacher reports (McGee, Williams, Kashani, & Silva, 1983). In studies of parent-child interaction, mothers reporting elevated levels of emotional distress have been described as critical, punitive, and relatively unsuccessful at behavioural control in interactions with their children (Forehand et al., 1986; Panaccione & Wahler, 1986; Webster-Stratton & Hammond, 1988), and maternal depressive symptoms were shown to interact with parenting behaviour in predicting child outcome (Forehand et al., 1986; Walker et al., 1989).

Thus, evidence from a variety of sources indicates that children of parents experiencing symptoms of psychological distress are at increased risk for psychological problems and that dysfunctional parent-child relationships are a contributing factor. Moreover, disturbances in parent-child interaction appear to involve dimensions similar to those tapped in the assessment of expressed emotion (i.e., negative perceptions, criticism, hostility), suggesting that parents' psychological distress may play a role in the expression of negative emotional attitudes. If this is the case, the psychological health of parents should certainly be taken into account in the assessment of expressed emotion and the development of interventions aimed at modifying negative parental attitudes.
Family Functioning and Child Disturbance

The extent to which families provide the psychological resources necessary to promote adjustment plays a critical role in children's psychological development (Billings & Moos, 1983; Wynne, Jones, & Al-Khayal, 1982). The emergence of family theories of schizophrenia in the 1950's (e.g., Bateson, Jackson, Haley, & Weakland, 1956) had a particularly strong impact on our understanding of the role of family interaction, and in recent years, disturbances in family functioning have been related to a variety of problems in children drawn from both clinical and community samples.

Many of the studies in this area have relied on family members' perceptions of family functioning. While it may be argued that an individual's view of his/her family may not adequately reflect the actual workings of the family, the tendency to describe one's family in positive or negative terms is a characteristic that has repeatedly distinguished between clinical and nonclinical families (Miller, Epstein, Bishop, & Keitner, 1985; Oliveri & Reiss, 1984; Scoresby & Christensen, 1976; Skinner, 1987). From a practical viewpoint, perceptions of family functioning can be assessed with self-report measures which are easily administered, scored, and made part of the clinical assessment procedure.

Using self-report data, Holahan and Moos (1987) found that parents' perceptions of healthy family functioning were
associated with fewer concurrent and later psychological problems in a community sample of children. In fact, of the various risk factors (i.e., negative life events, avoidance coping behaviour, parental dysfunction) and resistance factors (i.e., family support, parental self-confidence, easygoing disposition) examined, parents' perceptions of family support (an index comprised of scores on subscales measuring cohesion - the degree to which family members are helpful and supportive of one another; expressiveness - the extent to which family members are encouraged to act openly and express their feelings directly; and conflict - the extent to which the expression of anger and conflict-laden interactions are characteristic of the family) emerged as the variable most strongly linked to children's psychological and physical health. Parents' perceptions of problems in these same areas of family functioning have been related to behaviour problems in school-aged children (McGee et al., 1984) and to adjustment problems in the siblings of chronically ill children (Daniels, Moos, Billings, & Miller, 1987).

The risk associated with a negative family environment is further evident from children's reports of family functioning, most notably in studies of child depression and suicidal behaviour. Kaslow, Rehm, and Siegel (1984) found that school aged children who reported higher levels of depressive symptoms tended to describe their families in negative terms. These children were asked questions concerning the degree of
enjoyment they experienced with their family, how well family members got along with one another, and how psychologically available parents were to children. Along similar lines, Asarnow, Carlson, and Guthrie (1987) reported that 8-13 year old children who attempted suicide perceived their families as unsupportive and stressful, with poor control and a lack of cohesiveness. Again, the strongest predictor of suicidal behavior was children's perceptions of their family environment; other variables studied included hopelessness in children, perceived competence, and coping strategies.

The role of family functioning has also been investigated in research aimed at clarifying why children of parents with psychiatric disturbance are at risk for psychological problems. Fisher and Jones (1980) found that disturbed communication among family members was associated with poor teacher and peer ratings of problem solving and social-emotional competence in school aged boys of psychiatrically ill parents. In families with depressed parents, parents' perceptions of an unsupportive family environment, characterized by dysfunction in the areas of cohesion, expressiveness, and conflict, have been related to emotional, behavioural, and physical problems in school aged and adolescent offspring (Billings & Moos, 1983). These authors further reported that the ability to maintain an emotionally supportive family environment seemed to enhance children's adaptation and help them resist the stress of having a
depressed parent. Similarly, children of alcoholic parents have been shown to have more favourable psychosocial outcomes when their families are cohesive, expressive, and well organized (Moos & Billings, 1983).

Taken together, the results of these studies indicate that reduced emotional supportiveness, problems with healthy affective expression, poor communication, and increased conflict are all critical features of family interaction that are associated with maladjustment in children. These findings raise the possibility that negative emotional attitudes expressed by parents about children are a reflection of a more pervasive, negative affective environment which extends across the entire family network. This idea is consistent with family systems theory which considers the individual's behaviour within the context of the relationships and organizational characteristics of the family as a whole. Individual and dyadic units within the family are recognized as distinct within themselves, but they are simultaneously viewed as subsystems or different levels of functioning that are relating in an interdependent, dynamic fashion within the larger family system (Cromwell & Peterson, 1983; Epstein, Bishop, & Levin, 1978; Jacob, 1987; Steinglass, 1987).

An assessment of family functioning has not been included in any EE investigations although there is evidence to support a more systemic view of emotional expression. Strachan et al. (1989) reported that the EE index not only reflected
behaviour in parents, but also reflected transactional patterns of communication between parents and schizophrenic offspring. In low-EE families, parents interacted with their children in a neutral, noncritical manner and their children made fewer critical and more autonomous statements. In contrast, high-EE attitudes were associated with reciprocal levels of criticism by parents and children. Moreover, family intervention programs for schizophrenia which focus on the whole family have been shown to reduce EE and prevent relapse (Strachan, 1986). Clearly, whether the expression of negative emotional attitudes is unique to the parent-child relationship or a reflection of more widespread family dysfunction is of clinical relevance in the formulation of problems and decisions about the target of treatment intervention.
Research Objectives and Hypotheses

The aims of the current investigation were to:
(1) examine the association between expressed emotion in parents and (1) parents' psychological distress and (ii) dysfunction within the family as a whole, and (2) determine the extent to which these variables predicted problem behaviours in 7-16 year old clinically referred and nonreferred children.

A global index of problem behaviours in children was used in addition to indices of internalizing symptoms (e.g., depression, anxiety, withdrawal) and externalizing symptoms (e.g., conduct problems, aggression, delinquency, hyperactivity). There is general consensus among both clinicians and researchers in the area of developmental psychopathology regarding the validity of these two constellations of symptoms. They have consistently emerged across a large number of studies using different measures, child samples, and statistical methods (Kazdin, 1989).

Hypotheses

The following hypotheses were proposed:

Hypothesis 1: Parents of clinically referred children would be characterized by higher levels of expressed emotion than parents in nonclinical families.

Hypothesis 2: A high level of expressed emotion would be related to elevated ratings of symptoms of current
psychological distress in parents.

Hypothesis 3: A high level of expressed emotion in parents would be associated with parents' perceptions of dysfunction in the family as a whole. Due to the lack of previous research, hypotheses were not made about the relation between EE and specific dimensions of family functioning.

Hypothesis 4: Since it has been shown to be such a powerful predictor of clinical outcome, it was hypothesized that despite its association with the risk factors identified above, a high level of expressed emotion would predict higher symptom ratings in children after the effects of maternal psychological distress and family dysfunction were accounted for. No hypotheses were made about the prediction of specific symptom patterns (i.e., internalizing and externalizing symptoms) in children.
CHAPTER II

METHOD

The present study was part of a larger investigation of characteristics of clinical and nonclinical post-adoptive and nonadoptive families. The latter has been funded by The Hospital for Sick Children Foundation (principal investigator - Dr. Nancy J. Cohen) and has received clearance by the Ethics Review Committee at Thistletown Regional Centre (see Appendix A). A protocol for the current study has been approved by the Ethics Committee, Department of Psychology, University of Windsor (see Appendix B).

Subjects

The total sample comprised 39 two-parent families of children between 7 and 16 years old. Twenty families were referred for clinical service for child and family problems to one of three mental health settings: York County Hospital Child and Family Clinic, the Weston Jacob Centre in Orangeville, Ontario, and the Mental Health Centre in Stouffville, Ontario. Reasons for referral included depression, behaviour problems, learning problems, family dysfunction, and parenting difficulties. Exclusion criteria
for children included the presence of an organic mental disorder, mental retardation, or a major physical disability. There were 8 boys and 12 girls with a mean age of 11.65 years. The median family income level for the clinical group was $59,500.00.

The nonclinical group consisted of 19 families in which no member received mental health services in the past 18 months or was currently in treatment. There were 10 boys and 9 girls in the nonclinical group with a mean age of 11.68 years. The median family income level was $65,200.00.

Measures

Expressed Emotion. The Five Minute Speech Sample (FMSS; Gottschalk & Gleser, 1969) and the scoring procedure developed by Magana et al. (1986) were used to assess expressed emotion in parents. The FMSS invites a relative to speak without interruption for five minutes about the patient and their relationship. It is aimed at identifying the relative's attitudes and feelings about the patient as well as perceptions of the quality of their relationship.

Each parent individually was given the following instructions:

I'd like to hear your thoughts about (child's name) in your own words and without my interrupting you with any questions or comments. When I ask you to begin, I'd like you to speak for 5 minutes, telling me what kind of a person (child's name) is and how the two of you get along together. After you have begun to speak, I prefer not to answer any questions. Are there any questions you would like to ask me before we begin?.....Please begin.
The FMSS coding system developed by Magana et al. (1986) incorporates the two scales of the Camberwell Family Interview found to be the most powerful predictors of clinical outcome in schizophrenic and depressed patients (i.e., criticism, emotional overinvolvement) (Vaughn, 1989) and in addition, bases ratings on dimensions tapping the emotional valence of the parent-child relationship (i.e., quality of initial statement, quality of relationship). Classification of key relatives of schizophrenics as high- or low-EE by the FMSS coding system has shown reasonably high correspondence to ratings based on the CFI (75% agreement). Furthermore, an excellent correspondence between the specific attitude scored on both instruments has been reported; a critical or emotionally overinvolved attitude on one was highly likely to be rated similarly on the other. There was a lower degree of correspondence between the two assessment methods for relatives rated low on the FMSS. About one third of these cases received high ratings on the CFI (Magana et al., 1986). Thus, the FMSS may be less likely to elicit certain attitudes judged as high-EE on the CFI.

The validity and clinical utility of this measure is supported by data showing that emotional attitudes measured by the FMSS are highly predictive of interactional behaviour between parents and schizophrenic offspring. More specifically, high levels of expressed emotion have been associated in the expected direction with the use of harshly
critical and supportive statements by parents (Miklowitz et al., 1989) and with negative nonverbal behaviour in families (Hahlweg et al., 1989).

EE attitudes were scored from audiotaped FMSS sessions by the developer of the scoring manual, Ana Magana-Amato (Magana-Amato, 1989). Both the content and tone of each speech sample were analysed. FMSS scale descriptions, scoring criteria, and criteria for assigning EE status are provided in detail in Appendix C. Briefly, families received a rating of high-EE if one or both parents were rated high on Criticism or Emotional Overinvolvement (EOI) or both Criticism and EOI. If none of the criteria for high-EE was met, a rating of low-EE was assigned. A third classification, borderline high-EE was assigned to speech samples which included some evidence of high expressed emotion but less than that required for a rating of high-EE. The breakdown within families according to level of EE rating is shown in Table 1.

It is up to the individual investigator to decide whether borderline speech samples are classified as high- or low-EE (Magana-Amato, personal communication, February 15, 1990). The decision depends on the nature of the sample and circumstances of the research. For instance, it is expected that the threshold for a high-EE rating would be lower in younger aged samples as parents of children are likely to tone down the harshness of expressed emotional attitudes (Magana-Amato, 1989).
Table 1

Level of EE Ratings Within Families

<table>
<thead>
<tr>
<th>Breakdown by parent rating</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Both parents high-EE</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>- One parent high-EE, other borderline high-EE</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>- Both parents borderline high-E</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>- One parent high-EE, other low-EE</td>
<td>10</td>
<td>26</td>
</tr>
<tr>
<td>- One parent borderline high-EE, other low-EE</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>- Both parents low-EE</td>
<td>10</td>
<td>26</td>
</tr>
<tr>
<td>(-One parent borderline high-EE, other missing FMSS data)</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>39</strong></td>
<td></td>
</tr>
</tbody>
</table>
In order to decide how to classify the borderline high-EE speech samples in the present study, child problem behaviour ratings on the Child Behavior Checklist (Achenbach & Edelbrock, 1983) from mothers classified as borderline high-EE (n=7), high-EE (n=15), and low-EE (n=17) were compared using a one-way analysis of variance. There was a significant group effect (F(2,37)=6.01, p<.0005) and follow-up Bonferroni t-tests indicated that children of low-EE mothers received lower symptom ratings (\(\bar{x}=54.39\)) than children in either the high-EE (\(\bar{x}=68.47\)) or borderline high-EE (\(\bar{x}=69.43\)) groups. The difference in behaviour ratings between children of high-EE and borderline high-EE mothers was not significant. On the basis of this set of results, clinical expectation, and research findings mentioned earlier showing that the PMSS may underestimate the prevalence of high-EE attitudes compared to the CFI, borderline high-EE speech samples were classified as high-EE in subsequent analyses. This affected the family level EE rating in ten families, distributed evenly between the clinical and nonclinical groups.

Table 2 shows the distribution of specific EE attitudes (i.e., Critical, EOI, Critical/EOI) in high-EE mothers and fathers. The categorization of high-EE family subgroups (Miklowitz et al., 1983) based on type of high EE attitude was as follows: (a) Critical group (n=8) in which at least one parent scored high or borderline high on Criticism but neither received a high rating on EOI; (b) EOI group (n=13) in which
Table 2

Distribution of Specific EE Attitudes in High-EE Mothers and Fathers

<table>
<thead>
<tr>
<th>High-EE attitude</th>
<th>Mothers</th>
<th>Fathers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical</td>
<td>n 8</td>
<td>n 4</td>
<td>n 12</td>
</tr>
<tr>
<td>Emotional Overinvolvement (EOI)</td>
<td>8</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>Critical and EOI</td>
<td>6</td>
<td>2</td>
<td>8</td>
</tr>
</tbody>
</table>
at least one parent scored high or borderline high on Emotional Overinvolvement but neither received a high rating on Criticism; and (c) Critical/EOI group (n=8) in which one or both parents received high ratings on Criticism and Emotional Overinvolvement.

**Parents' psychological distress.** A 25-item version of the *Hopkins Symptom Checklist* (HSCL-25; Appendix D) was used to assess current overall psychological distress in parents (Hesbacher, Rickels, Morris, Newman, & Rosenfeld, 1980). Items on this self-report scale are particularly useful in tapping symptoms related to anxiety and depression. Symptoms are rated on a 4-point scale according to the extent that they have bothered the respondent during the past three months. The HSCL-25 has been found to correlate highly with the standard 58-item version (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974) and has been shown to be useful in screening patients for high anxious and depressive distress requiring intervention (Coyne, Kessler, Tal, Turnbull, Wortman, & Greden, 1987; Hesbacher et al., 1980). A high concurrence between physician assessment of psychiatric illness and patient assessment of emotional symptomatology as measured by the HSCL-25 has been reported (Hesbacher et al., 1980). In addition, this measure has been described as displaying a superior balance of sensitivity and specificity in predicting a clinical diagnosis of depression (Hough, Landsverk, Stone, & Jacobson, 1981).
The total score on the HSCL-25 was used as a measure of current psychological distress. Scores above 43 are considered indicative of a need for psychological intervention (Coyne et al., 1987; Hesbacher et al., 1980).

**Family functioning.** The Family Assessment Device (FAD; Appendix E) was used to assess parents' perceptions of functioning within the family as a whole (Epstein, Baldwin, & Bishop, 1983). The FAD is based on the McMaster Model of Family Functioning (Epstein et al., 1978) and is well suited to the research goal of understanding EE in relation to multiple dimensions of family functioning. The McMaster Model of Family Functioning applies a general systems theory approach in describing structural and organizational properties of the family unit and transactional patterns among family members which clinically have been found to distinguish between healthy and unhealthy families. It focuses on a number of interacting dimensions as the foundation for conceptualizing family behaviour: Problem Solving, Communication, Roles, Affective Responsiveness, Affective Involvement, and Behavior Control. This model allows an examination of families along a continuum ranging from healthy to severely pathological functioning.

Problem Solving refers to the family's ability to resolve problems in both instrumental and affective areas to a level that maintains effective family functioning. Communication
focuses on whether verbal communication in instrumental and affective areas is clear or masked with respect to content, and direct or indirect in the sense that the person spoken to is the person for whom the message is intended. Roles refers to the extent to which the family has established patterns of behaviour for handling family functions, both instrumental (e.g., the provision of basic resources) and affective (e.g., the provision of nurturance and support). Affective Responsiveness is defined as the ability to respond to a range of stimuli with appropriate quality and quantity of feelings. The less restricted the range and the more appropriate the responses are to affective stimuli, the more effective the family is presumed to be. Affective Involvement is defined as the degree to which family members are interested in and place value on each other's activities and concerns. A range of possible styles is considered, from a total lack of involvement at one end to symbiotic involvement at the opposite end of the spectrum; empathic involvement is viewed as the optimal form. Behavior Control focuses on the ways in which a family expresses and maintains standards for the behaviour of its members. Four styles of behavior control are described - rigid, flexible, laissez-faire, and chaotic (Epstein et al., 1978).

There are seven subscales in the FAD, six of which correspond to the dimensions of the McMaster model presented above. The seventh is a General Functioning scale which
provides an overall assessment of the level of family functioning. The 60 items in the questionnaire are statements a person could make about his or her family. They are rated on a 4-point scale ranging from "strongly agree" to "strongly disagree". A higher score on each subscale is associated with greater family dysfunction. Acceptable levels of internal consistency, test-retest reliability, concurrent validity, and discriminative validity have been reported (Miller et al., 1985). Reliabilities for the subscales range from .72 to .92. The interscale correlations in the standardization sample ranged from .4 to .6, values which Epstein and his colleagues consider reasonable in view of the interrelations among dimensions of family functioning. In the present sample, the interscale correlations ranged from .29 to .70 for mothers and from .08 to .71 for fathers. Scores on the FAD have successfully discriminated clinically presenting families from nonclinical families (Epstein et al., 1983; Miller et al., 1985) and recent evidence supports a correspondence between FAD scale scores and clinicians' ratings of clinically referred families (Fristad, 1989). In addition, the effects of social desirability are indicated as low (Miller et al., 1985).

A mean of both parents' scores on each subscale was used to reflect level of family functioning after ensuring that parents' perceptions were not too discrepant. A number of authors have highlighted the importance of deriving a "family
level" index of family functioning that takes into account the perceptions of various family members rather than an "individual level" score based on single respondent data. The latter has been criticized in the family literature for widening the gap between systemic theorizing and empirical research. Because family members may vary in their perceptions of family life, relying on one individual's perceptions limits the ability to draw conclusions about family functioning (Cromwell & Peterson, 1983; Feldman, Wentzel, & Gehring, 1989; Fisher, 1982; Fisher, Kokes, Ransom, Phillips, & Rudd, 1985). The use of a mean score is also consistent with prior use of the FAD (Epstein et al., 1983).

The suitability of using the mean of parents' scores on the FAD as a measure of family functioning was evaluated by examining differences between parents' scores on each subscale. Statistical averaging is considered appropriate when the discrepancy between family members' scores is small (Fisher, Kokes, Ransom, Phillips, & Rudd, 1985; Jacob, Tennenbaum, & Krahn, 1987). Clinical and nonclinical groups were considered separately in this set of analyses as level of within-family agreement has been shown to vary as a function of degree of family dysfunction (Skinner, 1989).

There were no significant differences between subscale means of mothers and fathers in the clinical group. In the nonclinical group, mothers' and fathers' scores differed on two subscales, Problem Solving (t(36)=-2.57, p<.025) and
Communication ($t(36)=-2.46, p<.025$), but not on the General Functioning scale. Fathers rated their families as more dysfunctional than mothers in these two areas of family functioning. This set of findings is consistent with other reports of a higher degree of within family agreement in clinical compared to nonclinical families (Skinner, 1987). Since the discrepancy between parents' scores was considered to be within reasonable limits, a mean of parents' scores was used as an index of family functioning.

**Child behaviour.** The Behavior Problem Scale of the Achenbach Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1983) completed by mothers was used as an index of the child's problem behaviours. The 118-item CBCL yields a total score, two broadband scores reflecting general behavioural patterns of internalizing (fearful, inhibited, and overcontrolled) and externalizing (aggressive, antisocial, and undercontrolled) problems, and scores on narrow-band subscales reflecting specific problem behaviours. The advantages of the CBCL which is one of the most widely used child behaviour rating scales include a large item pool, a broad range of symptom scales, and norms that reflect both age and gender differences in the prevalence and pattern of symptoms. High test-retest reliability ($r=.93$) and high internal consistency (alpha=.98) have been reported (Achenbach & Edelbrock, 1983). Scores on the CBCL have been shown to significantly discriminate between clinic-referred and non-referred children.
and the validity of mothers' ratings is reportedly not compromised by the effects of maternal depression (Conrad & Hammen, 1989; Friedlander, Weiss, & Traylor, 1986).

The total behavior problem score and scores on the internalizing and externalizing scales of the 6-12 year old and 13-16 year old versions of the CBCL were used in the present study. The average of the Pearson product-moment correlations between Internalizing and Externalizing scale T scores in Achenbach and Edelbrock's (1983) standardization sample of 6-16 year olds was .63 for the clinical sample and .82 for the nonclinical sample. For the present sample, the Pearson product-moment correlation between Internalizing and Externalizing scale T scores was .63 for the clinical group and .85 for the nonclinical group.

Procedure

Clinical agencies sent a letter to newly referred families who met the inclusion criteria briefly explaining the project and asking permission for the client's name, address, and telephone number to be released to the research project staff (Appendix G). This allowed confidentiality to be maintained for families who did not wish to participate. A research assistant then telephoned those families who agreed to be contacted and arranged an appointment time for the assessment battery to be administered. Basic demographic data collected on families who declined to participate indicated
that they were similar to clinical participants with regard to children's gender, age, and reason for referral.

Nonclinical families were solicited by advertising the study in community newspapers. The ad requested the participation in a child and family study of families with at least one child aged 7-16 years. Respondents were screened over the telephone to ensure that no family members had received mental health services in the previous 18 months. In families that had more than one child between the ages of 7-16 years, the aim of matching clinical and nonclinical children on age determined the selection of the target child.

All measures and questions about background information (e.g., family composition; income level; type, source, and length of current and past clinical service received by family members) were administered in the family's home by a research assistant upon obtaining consent from parents and children over 12 years of age (see Appendix H). Measures were completed separately and independently by both parents in the following order: HSCL-25, CBCL, FAD, FMSS. As an incentive and small compensation for participation, all families received a certificate for dinner at a local restaurant.
CHAPTER III

RESULTS

Clinical and nonclinical group differences, the intercorrelations of background characteristics and clinical scale scores, the effects of child gender, and background characteristics of the EE groups and subgroups are presented first. Results of the testing of the study hypotheses follow. Readers can assume that differences reported on were statistically significant.

Clinical and nonclinical group differences

Clinical and nonclinical families did not differ with regard to children's age ($t(37) = -0.17, p = 0.87$) or gender ($x^2 (1, N=39) = 0.38, p = 0.54$). There was a significant group difference in CBCL ratings (Total T score: $t(37) = 7.50, p < 0.0001$; Internalizing scale T score: $t(37) = 6.75, p < 0.0001$; Externalizing scale T score: $t(37) = 7.31, p < 0.0001$) and on mothers' and fathers' scores on the General Functioning scale of the FAD ($t(37) = 4.38, p < 0.0001; t(37) = 2.72, p < 0.01$). Clinical families had higher problem ratings than nonclinical families on both of these measures. The difference between clinical and nonclinical mothers' ratings on the HSCL-25 was marginally significant ($t(37) = 1.65, p < 0.10$) in the expected direction.
Fathers' ratings on the HSCL-25 were not different across the two groups. These results are summarized in Table 3.

**Intercorrelations of variables**

Table 4 presents the Pearson product-moment correlations of background variables and clinical scale scores for the total sample. Children's age was not correlated with total family income or any of the clinical scale scores. Total income was correlated with mothers' ratings of current psychological distress; a higher family income was associated with fewer symptoms in mothers. Mothers' ratings of current psychological distress were also significantly correlated in the expected direction with fathers' ratings of psychological distress, mothers' and fathers' ratings of family functioning, and child behaviour ratings. Similarly, mothers' ratings of family functioning were correlated with fathers' ratings of family functioning and child behaviour ratings.

There were fewer associations between fathers' ratings of personal and family functioning and their ratings of child problem behaviours. Specifically, fathers' ratings of psychological distress were correlated with their ratings of family functioning but they were not associated with any of the CBCL scores. Ratings of family functioning were associated with the total problem score on the CBCL but not with the internalizing or externalizing scale scores.

Finally, the intercorrelations of the CBCL scale scores were highly significant. The correlations between the
Table 3

**Background and Clinical Characteristics of Clinical and Nonclinical Families**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Clinical (n=20)</th>
<th>Nonclinical (n=19)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>n</td>
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<tr>
<td>Child's Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- male</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>- female</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>Total Family Income</td>
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</tr>
<tr>
<td>&lt;20,000</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>20-39,000</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>40-59,000</td>
<td>5</td>
<td>7</td>
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<tr>
<td>60-79,000</td>
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<tr>
<td>&gt;99,000</td>
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<table>
<thead>
<tr>
<th></th>
<th>( \bar{X} )</th>
<th>SD</th>
<th>( \bar{X} )</th>
<th>SD</th>
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<tbody>
<tr>
<td>Child's Age</td>
<td>11.65</td>
<td>2.64</td>
<td>11.68</td>
<td>2.88</td>
</tr>
<tr>
<td>Hopkins Symptom Checklist-25</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mothers</td>
<td>41.05</td>
<td>10.78</td>
<td>35.79</td>
<td>8.85</td>
</tr>
<tr>
<td>fathers</td>
<td>37.89</td>
<td>10.75</td>
<td>35.21</td>
<td>8.68</td>
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<tr>
<td>Family Assessment Device -</td>
<td></td>
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<tr>
<td>General Functioning scale</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>mothers</td>
<td>2.02</td>
<td>.50</td>
<td>1.48</td>
<td>.26**</td>
</tr>
<tr>
<td>fathers</td>
<td>2.02</td>
<td>.55</td>
<td>1.62</td>
<td>.38*</td>
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<tr>
<td>Child Behavior Checklist</td>
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</tr>
<tr>
<td>Total T score</td>
<td>72.68</td>
<td>8.44</td>
<td>50.53</td>
<td>9.55**</td>
</tr>
<tr>
<td>Internalizing Scale T</td>
<td>69.32</td>
<td>7.16</td>
<td>51.68</td>
<td>8.85**</td>
</tr>
<tr>
<td>Externalizing Scale T</td>
<td>71.05</td>
<td>8.82</td>
<td>50.53</td>
<td>8.49**</td>
</tr>
</tbody>
</table>

*a - One clinical family did not provide information on income level.

* \( p<.01 \)

** \( p<.0001 \)
Table 4

Product-Moment Correlations of Background Variables and Clinical Scales for Total Sample

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<tbody>
<tr>
<td>1. Child's Age</td>
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<td>2. Total Income</td>
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<td><strong>Psychological distress (HSCL-25)</strong></td>
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<td>3. mothers</td>
<td>-.19</td>
<td>-.32</td>
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<td>4. fathers</td>
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<td>.09</td>
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<td><strong>Family functioning (FAD-GF)</strong></td>
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<td>.10</td>
<td>.04</td>
<td>.48</td>
<td>.38</td>
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</tr>
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<td>6. fathers</td>
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<td>.49</td>
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<tr>
<td><strong>Child Behaviour (CBCL)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Problem Total</td>
<td>-.19</td>
<td>-.22</td>
<td>.42</td>
<td>.27</td>
<td>.49</td>
<td>.32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Internalizing</td>
<td>-.26</td>
<td>-.26</td>
<td>.47</td>
<td>.27</td>
<td>.49</td>
<td>.26</td>
<td>.97</td>
<td></td>
</tr>
<tr>
<td>9. Externalizing</td>
<td>-.16</td>
<td>-.16</td>
<td>.38</td>
<td>.27</td>
<td>.46</td>
<td>.29</td>
<td>.98</td>
<td>.91</td>
</tr>
</tbody>
</table>

* p<.05
** p<.005
*** p<.0001
internalizing and externalizing scale T scores for the clinical ($r=.63$) and nonclinical ($r=.85$) groups are similar in magnitude to those reported by Achenbach and Edelbrock (1983) for their standardization sample.

**Child gender**

There were no differences between boys and girls on any of the demographic variables or clinical scales.

**Background characteristics of EE groups**

Table 5 presents demographic information on high-EE ($n=29$) and low-EE ($n=10$) families. Children from high-EE families were significantly younger than children from low-EE families ($t(37)=2.41, \ p<.05$). Family EE status was unrelated to the child's gender ($x^2(1, N=39)=.21, \ p=.65$). The median family income level was $61,700.00 for high-EE families and $59,500.00 for low-EE families.

High-EE family subgroups were also compared on background characteristics. There were similar proportions of clinical and nonclinical families in the Critical, EOI, and Critical/EOI subgroups ($x^2(2, N=29)=3.87, \ p>.10$). In addition, the high-EE family subgroups did not differ with regard to children's age ($F(2,26)=.16, \ p=.85$) or gender ($x^2(2, N=29)=2.66, \ p=.24$). The median family income level was $59,500.00 for

* - The results of the chi square analysis should be interpreted with caution as at least one cell had a count of less than five.
Table 5

Comparison of High-EE and Low-EE Families on Background Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>High-EE (n=29)</th>
<th>Low-EE (n=10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child's Mean Age</td>
<td>11.07 (2.63)</td>
<td>13.40 (2.63)</td>
</tr>
<tr>
<td>Child's Gender</td>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td>Male</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>Female</td>
<td>15</td>
<td>6</td>
</tr>
<tr>
<td>Total Family Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;20,000</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>20-39,000</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>40-59,000</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>60-79,000</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>80-99,000</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>&gt;99,000</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

a - Numbers in parentheses indicate standard deviations.
* - p<.05
the Critical group, $59,500.00 for the EOI group, and $79,500.00 for the Critical/EOI group. Demographic information for the high-EE subgroups is shown in Table 6.

The following results are organized around specific research hypotheses.

Are parents of clinically referred children characterized by higher levels of expressed emotion than parents in nonclinical families? (Hypothesis 1)

Nineteen of the 20 clinical families were rated as high-EE. In the nonclinical group, ten of the 19 families received a high-EE rating. The proportion of high-EE families in the clinical group was significantly higher ($\chi^2 (1, N=37)=7.08, p<.01$), supporting Hypothesis 1.

A considerable number of nonclinical families (53%) were rated as high-EE, however, which raised questions about the relative functioning of clinical and nonclinical high-EE families. Post hoc analyses aimed at comparing the two groups revealed no significant differences in characteristics related to group composition. Although a higher proportion of nonclinical high-EE families were originally classified as borderline high-EE rather than high-EE (50% vs. 26%), the difference was not significant ($\chi^2 (1, N=29)=.75, p>.05$). Both parents were classified as high-EE more often in clinical high-EE families (48% of cases compared to 20% of nonclinical high-EE families), but this difference was not statistically significant either ($\chi^2 (1, N=29)=1.08, p>.05$). There was also
Table 6

Comparison of High-EE Family Subgroups on Background Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Critical (n=8)</th>
<th>EOI (n=13)</th>
<th>Critical/EOI (n=8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child's Mean Age</td>
<td>10.75</td>
<td>11.00</td>
<td>11.50</td>
</tr>
<tr>
<td></td>
<td>(2.55)</td>
<td>(2.71)</td>
<td>(2.88)</td>
</tr>
<tr>
<td>Child's Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- male</td>
<td>4</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>- female</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Total Income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;20,000</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>20-39,000</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>40-59,000</td>
<td>2</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>60-79,000</td>
<td>4</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>80-99,000</td>
<td>0</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>&gt;99,000</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Subject group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical</td>
<td>6</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Nonclinical</td>
<td>2</td>
<td>7</td>
<td>1</td>
</tr>
</tbody>
</table>

a - Numbers in parentheses indicate standard deviations.
no group difference in the number of times the mother was the parent to receive the high-EE rating in families with only one high-EE parent (78% of cases in clinical high-EE families, 38% \(^2\) in nonclinical high-EE families; \(x^2 (1, N=17)=1.42, p > .05\). Finally, the distribution of high-EE family subgroups (i.e., Critical, EOI, Critical/EOI) was similar across the two groups \(x^2 (2, N=29)=3.87, p > .05\). Scores on the clinical scales, however, did differentiate between high-EE clinical and high-EE nonclinical families. Clinical families had higher problem ratings as measured by the CBCL Total T score (\(t(37)=5.69, p < .0001\)), Internalizing T score (\(t(37)=5.03, p < .0001\)), Externalizing T score (\(t(37)=5.16, p < .0001\)), mothers' HSCL-25 ratings (\(t(37)=2.02, p < .05\)), and mothers' and fathers' ratings on the General Functioning scale of the FAD (\(t(37)=3.28, p < .005; t(37)=3.77, p < .001\)). There were no group differences with regard to children's age, gender, total family income, or fathers' ratings on the HSCL-25. Thus, despite receiving a rating of high-EE, nonclinical families showed less disturbance in other areas of child and family functioning than clinical high-EE families.

Mean scores and standard deviations on the clinical scales for the high-EE clinical and high-EE nonclinical groups are presented in Table 7.

* - The results of the chi square analysis should be interpreted with caution as at least one cell had a count of less than five.
Table 7

Comparison of High-EE Clinical and High-EE Nonclinical Families on Clinical Scales

<table>
<thead>
<tr>
<th>Clinical scale</th>
<th>High-EE Clinical (n=19)</th>
<th>High-EE Nonclinical (n=10)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( \bar{X} )</td>
<td>SD</td>
</tr>
<tr>
<td>HSCL-25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>mothers</td>
<td>41.00</td>
<td>10.78</td>
</tr>
<tr>
<td>fathers</td>
<td>37.74</td>
<td>10.66</td>
</tr>
<tr>
<td>FAD-General Functioning scale</td>
<td></td>
<td></td>
</tr>
<tr>
<td>mothers</td>
<td>1.94</td>
<td>.45</td>
</tr>
<tr>
<td>fathers</td>
<td>1.97</td>
<td>.43</td>
</tr>
<tr>
<td>CBCL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total T score</td>
<td>71.68</td>
<td>8.65</td>
</tr>
<tr>
<td>Internalizing T</td>
<td>68.74</td>
<td>7.37</td>
</tr>
<tr>
<td>Externalizing T</td>
<td>69.42</td>
<td>9.70</td>
</tr>
</tbody>
</table>

* p<.05  
** p<.005  
*** p<.0005
Is high-EE related to elevated ratings of symptoms of current psychological distress in parents? (Hypothesis 2)

One-way between subjects ANOVAs were computed to assess whether level of expressed emotion in parents was related to parents' ratings on the HSCL-25. Data from mothers and fathers were analysed separately to allow a more precise evaluation of the association between level of expressed emotion and parents' psychological distress. This required the use of each parent's individual EE rating rather than the family level EE rating.

High-EE mothers and low-EE mothers did not differ in their ratings on the HSCL-25 ($F(1,37) = 1.98$, $p = .17$). The mean scores of fathers classified as high-EE and low-EE were not significantly different either ($F(1,37) = .00$, $p = .96$). Similarly, high-EE and low-EE parents did not differ in their standing on the HSCL-25 relative to the clinical cutoff score. Thirty percent of low-EE mothers and 31% of high-EE mothers had raw scores greater than or equal to 43 on the HSCL-25 ($X^2(1, N=39) = .11$, $p > .05$). Twenty three percent of low-EE fathers and 20% of high-EE fathers received scores which exceeded the clinical cutoff ($X^2(1, N=39) = .03$, $p > .05$). This set of findings does not support the hypothesized association between EE and parents' psychological distress.

Mean scores and standard deviations on the HSCL-25 for high-EE and low-EE parents are presented in Table 8.

Additional analyses compared the HSCL-25 ratings of high-
Table 8

Comparison of High-EE and Low-EE Parents on Ratings of Psychological Distress

<table>
<thead>
<tr>
<th></th>
<th>High-EE</th>
<th>Low-EE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>X</td>
</tr>
<tr>
<td>HSCL-25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>mothers</td>
<td>17</td>
<td>40.41</td>
</tr>
<tr>
<td>fathers</td>
<td>19</td>
<td>36.00</td>
</tr>
</tbody>
</table>
EE parents characterized by different types of emotional attitudes. Of the 22 high-EE mothers, 8 were rated as Critical, 8 were scored as high on EOI, and 6 were rated as Critical/EOI. A one-way between subjects ANOVA revealed a marginally significant group difference in the symptom ratings of mothers in these three subgroups ($F(2,19)=3.05$, $p<.10$). The mean HSCL-25 score of mothers in the EOI group exceeded the clinical cutoff and was higher than the scores of mothers in the Critical and Critical/EOI groups.

Of the 19 high-EE fathers, 4 were rated as Critical, 13 as EOI, and 2 as Critical/EOI. A one-way between subjects ANOVA indicated that type of high-EE attitude did not have a significant effect on fathers' HSCL-25 ratings ($F(2,16)=1.57$, $p=.24$).

Means and standard deviations on the HSCL-25 for subgroups of high-EE parents are presented in Table 9.

Is high-EE associated with parents' perceptions of dysfunction in the family as a whole? (Hypothesis 3)

A one-way between-subjects multivariate analysis of variance was performed on the mean of parents' ratings on the six FAD subscales (Problem Solving, Communication, Roles, Affective Responsiveness, Affective Involvement, and Behavior Control). The independent variable was FMSS family rating (high-EE or low-EE). Results of the MANOVA (Wilks' criterion) indicated that contrary to Hypothesis 3, scores on the FAD subscales were not significantly affected by the FMSS family
Table 9

Comparison of High-EE Parent Subgroups on Ratings of Psychological Distress

<table>
<thead>
<tr>
<th></th>
<th>High-EE Parent Subgroups</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Critical</td>
<td>EOI</td>
<td>Critical/EOI</td>
<td></td>
</tr>
<tr>
<td>HSCL-25</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>mothers</td>
<td>(n=8)</td>
<td>(n=8)</td>
<td>(n=6)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>38.63</td>
<td>46.88</td>
<td>34.17</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9.21</td>
<td>11.62</td>
<td>7.86</td>
<td></td>
</tr>
<tr>
<td>fathers</td>
<td>(n=4)</td>
<td>(n=13)</td>
<td>(n=2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>32.00</td>
<td>35.62</td>
<td>46.50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.94</td>
<td>9.67</td>
<td>17.68</td>
<td></td>
</tr>
</tbody>
</table>
rating ($F(6,32)=1.52, p=.20$). Means and standard deviations for each of the FAD subscales are presented in Table 10.

To further explore the association between EE and family functioning, family subgroups characterized by different types of high-EE attitudes were compared on the General Functioning scale of the FAD. The procedure used to form high-EE family subgroups characterized by Critical, EOI, or Critical/EOI attitudes was described earlier. The results of a one-way ANOVA indicated that the three high-EE family subgroups did not differ with regard to the mean of parents' scores on the FAD General Functioning scale ($F(2,26)=1.51, p=.24$). Means and standard deviations are shown in Table 11.

**Does expressed emotion contribute to the prediction of child problem behaviour ratings?** (Hypothesis 4)

As a first step, t-tests were used to determine whether children in high-EE families were rated by their mothers as having more problems than children in low-EE families. The results indicated that children of high-EE and low-EE families differed significantly on the Total T score ($t(37)=-2.49, p<.025$), Internalizing scale T score ($t(37)=-2.49, p<.025$), and Externalizing scale T score ($t(37)=-2.29, p<.05$) of the CBCL. Children in high-EE families had higher problem ratings. The means and standard deviations on the three CBCL scales for high- and low-EE families are shown in Table 12.

A chi square analysis also was conducted to assess
Table 10
Comparison of High-EE and Low-EE Families on Ratings of Family Functioning

<table>
<thead>
<tr>
<th>Family Assessment Device</th>
<th>High-EE (n=29)</th>
<th>Low-EE (n=10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem Solving</td>
<td>1.91 .40</td>
<td>1.80 .28</td>
</tr>
<tr>
<td>Communication</td>
<td>1.99 .33</td>
<td>1.80 .28</td>
</tr>
<tr>
<td>Roles</td>
<td>2.15 .32</td>
<td>2.03 .16</td>
</tr>
<tr>
<td>Affective Responsiveness</td>
<td>1.91 .43</td>
<td>1.71 .40</td>
</tr>
<tr>
<td>Affective Involvement</td>
<td>2.02 .35</td>
<td>1.79 .40</td>
</tr>
<tr>
<td>Behavior Control</td>
<td>1.62 .35</td>
<td>1.69 .28</td>
</tr>
</tbody>
</table>

^a - Scores are based on the mean of parents' ratings.
Table 11

Comparison of High-EE Family Subgroups on Ratings of General Family Functioning

<table>
<thead>
<tr>
<th>High-EE Family Subgroups</th>
<th>Critical (n=8)</th>
<th>EOI (n=13)</th>
<th>Critical/EOI (n=8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAD - General Functioning</td>
<td>( \bar{X} ) 2.01, SD 0.50</td>
<td>( \bar{X} ) 1.68, SD 0.39</td>
<td>( \bar{X} ) 1.82, SD 0.37</td>
</tr>
</tbody>
</table>

\( a \) - Scores are based on the mean of parents' ratings.
Table 12

Comparison of High-EE and Low-EE Families on Child Behaviour Ratings

<table>
<thead>
<tr>
<th></th>
<th>High-EE</th>
<th>Low-EE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n=29)</td>
<td>(n=10)</td>
</tr>
<tr>
<td><strong>X</strong></td>
<td><strong>SD</strong></td>
<td><strong>X</strong></td>
</tr>
<tr>
<td>CBCL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total T score</td>
<td>64.76</td>
<td>13.03</td>
</tr>
<tr>
<td>Internalizing T</td>
<td>63.10</td>
<td>11.05</td>
</tr>
<tr>
<td>Externalizing T</td>
<td>63.31</td>
<td>12.49</td>
</tr>
<tr>
<td></td>
<td>52.40</td>
<td>13.72</td>
</tr>
<tr>
<td></td>
<td>53.00</td>
<td>11.10</td>
</tr>
<tr>
<td></td>
<td>52.40</td>
<td>13.17</td>
</tr>
</tbody>
</table>

* p<.05
** p<.025
whether level of EE was associated with scores above and below the clinical cutoff score on the CBCL. Total behavior problem scores falling above the 90th percentile for each sex/age group are considered to be in the clinical range (Achenbach & Edelbrock, 1983). Thirty nine percent of the children of high-EE families had scores in the clinical range on the CBCL compared to 14% in the nonclinical group. This difference was marginally significant ($\chi^2 (1, N=39) = 3.08, p<.10$).

A series of hierarchical multiple regression analyses were then performed to address the question of primary interest, namely, whether level of expressed emotion contributed to the prediction of child symptomatology after the effects of mothers' psychological distress and global family dysfunction were considered. Criterion variables were the Total T score, Internalizing scale T score, and Externalizing scale T score on the CBCL.

To control for the possible impact of children's age and gender on CBCL ratings, these two variables were given highest priority for entry in a set of preliminary hierarchical regression analyses (Tabachnick & Fidell, 1983). Mothers' HSCL-25 ratings were entered on the next step followed by the mean of parents' scores on the FAD General Functioning scale and the EE family rating. Neither age nor gender contributed significantly to the prediction of CBCL scores so they were dropped as predictors in subsequent analyses. The incremental contributions of these two variables are shown in Table 13.
Table 13

Incremental Contributions of Child's Age and Gender in Predicting Child Behaviour Ratings

<table>
<thead>
<tr>
<th>Step</th>
<th>Predictor</th>
<th>( \sum x^2 )</th>
<th>( F )</th>
<th>df</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Age</td>
<td>.04</td>
<td>1.36</td>
<td>(1,37)</td>
<td>.25</td>
</tr>
<tr>
<td>2</td>
<td>Gender</td>
<td>.02</td>
<td>.91</td>
<td>(1,33)</td>
<td>.35</td>
</tr>
</tbody>
</table>

**CBCL - Total T score**

<table>
<thead>
<tr>
<th>Step</th>
<th>Predictor</th>
<th>( \sum x^2 )</th>
<th>( F )</th>
<th>df</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Age</td>
<td>.07</td>
<td>2.68</td>
<td>(1,37)</td>
<td>.11</td>
</tr>
<tr>
<td>2</td>
<td>Gender</td>
<td>.01</td>
<td>.26</td>
<td>(1,33)</td>
<td>.61</td>
</tr>
</tbody>
</table>

**Internalizing scale T**

<table>
<thead>
<tr>
<th>Step</th>
<th>Predictor</th>
<th>( \sum x^2 )</th>
<th>( F )</th>
<th>df</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Age</td>
<td>.03</td>
<td>1.16</td>
<td>(1,37)</td>
<td>.29</td>
</tr>
<tr>
<td>2</td>
<td>Gender</td>
<td>.03</td>
<td>1.20</td>
<td>(1,33)</td>
<td>.28</td>
</tr>
</tbody>
</table>

**Externalizing scale T**
Three hierarchical multiple regression analyses were conducted with the smaller set of predictor variables. Mothers' ratings on the HSCL-25 were entered on the first step, followed by the mean of parents' ratings on the FAD General Functioning scale, and finally, level of expressed emotion. HSCL-25 ratings were given priority for entry over FAD ratings to partial variance associated with negatively slanted perceptions, a possible correlate of heightened psychological distress. Criterion variables were the Total T score, Internalizing scale T score, and Externalizing scale T score on the CBCL. The results of these analyses are shown in Table 14.

Thirty six percent of the variance in total problem behaviour ratings was predicted by mothers' psychological distress, parents' ratings of general family dysfunction, and level of expressed emotion ($F(3, 35)=6.97, p<.001$). $R^2$ was significantly different from zero at the end of each step. Mothers' ratings on the HSCL-25 made a significant contribution toward the prediction of CBCL Total T scores on the first step of the regression: $R^2 = .18$, $F(1, 37)=7.97$, $p<.01$. In Step 2, the mean of parents' ratings on the FAD General Functioning Scale contributed only marginally ($R^2 = .25$, $F(1, 35)=3.44, p<.10$). As hypothesized, the addition of EE increment on Step 3 resulted in a significant increment in $R^2$ ($R^2 = .36$, $F(1, 35)=5.95, p<.025$).

In the second regression analysis, the set of predictor
Table 14

Hierarchical Regression of Mothers' Psychological Distress, Parents' Perceptions of Family Functioning, and Level of EE on Child Behaviour Ratings

<table>
<thead>
<tr>
<th>Step</th>
<th>Predictor</th>
<th>Problem Total</th>
<th>Internalizing Scale</th>
<th>Externalizing Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>a</td>
<td>B</td>
<td>sr</td>
</tr>
<tr>
<td>1</td>
<td>Psychological Distress (HSCL-25)</td>
<td>0.28</td>
<td>0.18</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Family Functioning (FAD-GF)</td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Level of EE (PMSS)</td>
<td>***</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[
\begin{align*}
R^2 &= 0.36 \\
R^2 &= 0.37 \\
R^2 &= 0.30 \\
Adj R^2 &= 0.30 \\
Adj R^2 &= 0.22 \\
Adj R^2 &= 0.23
\end{align*}
\]

- a = standardized regression coefficient
- * $p<.10$
- ** $p<.05$
- *** $p<.025$
- **** $p<.005$
variables accounted for 37% of the total variance in CBCL Internalizing scale T scores. $R$ was significantly different from zero after each step. Mothers' ratings on the HSCL-25 made a significant contribution on Step 1, $(R = .22, F(1,37) = 10.22, p < .005)$. The mean of parents' FAD scores on Step 2 did not account for a significant portion of the variance $(R = .26, F(1,35) = 2.01, p = .17)$. On Step 3, level of expressed emotion added significantly to the prediction of CBCL Internalizing scale T scores $(R = .37, F(1,35) = 6.22, p < .025)$.

Thirty percent of the variance in Externalizing scale T scores was predicted by the set of independent variables. $R$ was significantly different from zero at the end of each step. After Step 1 with mothers' ratings on the HSCL-25 in the equation, $R = .14, F(1,37) = 5.91, p < .025$. The addition of parents' ratings on the FAD General Functioning scale contributed marginally to the prediction of CBCL Externalizing scale scores $(R = .20, F(1,35) = 2.82, p < .10)$ while level of expressed emotion on the third step made a significant contribution $(R = .30, F(1,35) = 4.71, p < .05)$.

Because the outcome measure of child behaviour was based on mothers' reports, and mothers' reports of personal and family functioning served as predictors, it is possible that associations between these variables were in part due to shared method variance. This threat to internal validity is reduced if there is adequate agreement between parents'
reports of child functioning (Holahan & Moos, 1987) and the availability of fathers' ratings of children's behaviour for the present sample enabled the correspondence between parents to be checked. The Pearson product-moment correlation between mothers' and fathers' Total T scores on the CBCL ($r(36) = .72$, $p < .0005$) indicated a significant association between parents' ratings of children's behaviour.

Child symptom ratings in subgroups of high-EE families (i.e., Critical, EOI, Critical/EOI) were also compared using one-way between subjects ANOVAs. The three subgroups did not differ significantly with respect to Internalizing scale T scores ($F(2, 26) = 2.06$, $p = .15$) although there was a significant group difference when Externalizing scale T scores were compared ($F(2, 26) = 4.58$, $p < .025$). Bonferroni t-tests indicated that the mean Externalizing scale T score of the Critical/EOI group was significantly higher than that of the EOI group, with the mean score of Critical families falling in the middle. Mean scores and standard deviations on the CBCL scales are presented in Table 15.

Since scores on the Internalizing and Externalizing scales were highly correlated ($r = .91$), an attempt was made to compare the EE level in families of children distinctly classified as internalizers or externalizers. The latter was determined according to the similarity of each child's profile on the CBCL Total Behavior Problem Scale with the centroids of the profile types from Achenbach and Edelbrock's (1983)
Table 15
Comparison of High-EE Family Subgroups on Child Behaviour
Ratings

<table>
<thead>
<tr>
<th>High-EE Family Subgroups</th>
<th>Critical (n=8)</th>
<th>EOI (n=13)</th>
<th>Critical/EOI (n=8)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
<td>SD</td>
<td>X</td>
</tr>
<tr>
<td>Internalizing T</td>
<td>65.38</td>
<td>11.99</td>
<td>58.77</td>
</tr>
<tr>
<td>Externalizing T</td>
<td>66.50</td>
<td>12.13</td>
<td>56.62</td>
</tr>
<tr>
<td>ab</td>
<td>a</td>
<td></td>
<td>b</td>
</tr>
</tbody>
</table>

**Note.** Means with different subscripts differed significantly at \( p < .05 \)
clinical standardization sample of 6-12 and 12-16 year olds. The intraclass correlation (ICC) is used as the measure of profile similarity and an ICC cutoff of .20 was applied to insure a minimum degree of homogeneity. This value falls within the optimal range recommended by Achenbach and Edelbrock. Unfortunately, however, the present sample yielded too few children distinctly classified as internalizers (n=6) or externalizers (n=8) to conduct group comparisons.

Post hoc analyses of FMSS scoring variables and child and family functioning.

Additional analyses conducted on a post hoc basis were aimed at exploring whether specific scoring categories in the Five Minute Speech Samples of mothers were associated with child and family functioning. Although expressed emotion is typically analysed in a more global manner, raw scores on specific EE components have been considered in previous research (e.g., Vaughn, Snyder, Jones, Freeman, & Falloon, 1984).

There are four scoring categories in the FMSS: Initial Statement, Relationship, Criticism, and EOI. Five subcategories are used to measure EOI (i.e., Self-sacrificing/Overprotection, Emotional Display, Excessive Detail, Statements of Attitude, and Positive Remarks). In addition, speech samples are scored for number of dissatisfaction statements for the purpose of assigning borderline Critical ratings. In the following analyses
ratings on each of the nine scoring categories were examined individually in relation to clinical scale scores.

FMSS scoring categories based on a frequency count (i.e., Criticism, Dissatisfaction, Statements of Attitude, Positive Remarks) were analysed in relation to clinical scale scores using Pearson product-moment correlations. None of the intercorrelations between the FMSS categories themselves was significant (see Table 16).

Criticism, Dissatisfaction, and Positive Remarks were all significantly correlated with children's behaviour ratings. Higher ratings of internalizing and externalizing problems were associated with fewer Positive Remarks and more Critical and Dissatisfaction comments. Positive Remarks was also correlated with mothers' scores on the FAD General Functioning scale. A higher number of positive remarks was associated with more positive perceptions of family functioning. Statements of Attitude were not correlated with any clinical scale scores. The correlations are presented in Table 17.

Scores for the Initial Statement and Relationship categories of the FMSS consist of a rating of positive, neutral, or negative. Mothers differentiated by the quality of their Initial Statement and Relationship ratings were compared on the clinical scales using one-way analyses of variance. A conservative significance level was applied (p<.01) to reduce the Type 1 error associated with multiple comparisons. The results are shown in Table 18.
Table 16

**Intercorrelations of FMSS Scoring Variables in Mothers' Speech Samples**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
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</thead>
<tbody>
<tr>
<td>1. Criticism</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2. Dissatisfaction</td>
<td>.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Statements of Attitude</td>
<td>.21</td>
<td>-.18</td>
<td></td>
</tr>
<tr>
<td>4. Positive Remarks</td>
<td>-.19</td>
<td>-.25</td>
<td>.12</td>
</tr>
</tbody>
</table>
Table 17

Product-Moment Correlations of FMSS Scoring Variables and Clinical Scales for Mothers

<table>
<thead>
<tr>
<th></th>
<th>FMSS</th>
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<tbody>
<tr>
<td></td>
<td>Criticism Dissatis-</td>
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<tr>
<td></td>
<td>faction Statements</td>
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<tr>
<td></td>
<td>of Attitude Positive</td>
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<td></td>
<td>Remarks</td>
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<td>Clinical scales</td>
<td></td>
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<tr>
<td>HSCL-25</td>
<td>-.08</td>
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<tr>
<td></td>
<td>.12</td>
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<td></td>
<td>.25</td>
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<tr>
<td></td>
<td>-.21</td>
</tr>
<tr>
<td>FAD-GF</td>
<td>.28</td>
</tr>
<tr>
<td></td>
<td>.06</td>
</tr>
<tr>
<td></td>
<td>.13</td>
</tr>
<tr>
<td></td>
<td>-.42</td>
</tr>
<tr>
<td>CBCL Internalizing T</td>
<td>*</td>
</tr>
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<td></td>
<td>*</td>
</tr>
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<td></td>
<td>**</td>
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<tr>
<td>CBCL Externalizing T</td>
<td>.34</td>
</tr>
<tr>
<td></td>
<td>.32</td>
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<td></td>
<td>.09</td>
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<td>-.54</td>
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<td>.42</td>
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<tr>
<td></td>
<td>.06</td>
</tr>
<tr>
<td></td>
<td>-.61</td>
</tr>
</tbody>
</table>

* p<.05
** p<.01
*** p<.005
Table 18

Comparison of Mothers Differentiated by FMSS Initial Statement Ratings and FMSS Relationship Ratings on Clinical Scales

| Clinical Scale | Initial Statement | Relationship | | | |
|----------------|------------------|--------------|------------------|------------------|
|                | Pos. (n=18) | Neut. (n=18) | Neg. (n=3) | Pos. (n=15) | Neut. (n=18) | Neg. (n=6) |
|                | X | X | X | X | X | X |
| HSCL-25        | 36.11 | 41.06 | 37.00 | 37.80 | 39.11 | 38.17 |
|                | (8.01) | (11.76) | (7.00) | (9.91) | (11.35) | (6.11) |
| FAD-GF         | 1.54  | 1.94  | 1.95  | 1.47  | 1.90  | 2.07  |
|                | (.39) | (.50) | (.46) | (.25) | (.55) | (.35) |
|                | a     | b     | ab    | a     | b     | b     |
| CBCL           |      |      |      |      |      |      |
| Internalizing  |      |      |      |      |      |      |
|                | 53.94 | 66.68 | 70.67 | 55.40 | 62.11 | 73.17 |
|                | (10.69) | (11.45) | (4.51) | (10.71) | (12.88) | (5.67) |
|                | a     | b     | ab    | a     | ab    | b     |
| Externalizing  |      |      |      |      |      |      |
|                | 53.11 | 66.74 | 68.67 | 54.20 | 61.42 | 75.00 |
|                | (11.48) | (12.02) | (8.32) | (10.51) | (13.14) | (8.67) |
|                | a     | b     | ab    | a     | ab    | b     |

Notes. Values in parentheses indicate standard deviations. Means with different subscripts differed significantly at p<.05.
Mothers differentiated by the quality of their Initial Statement on the FMSS (i.e., positive, neutral, negative) differed on the Internalizing and Externalizing scales of the CBCL \((F(2,35)=7.37, \ p<.0025, \text{ and } F(2,35)=6.14, \ p<.01)\). Follow-up Bonferroni t-tests indicated that mothers with neutral Initial Statements rated their children as having more problems than mothers who made positive Initial Statements. (Only three speech samples received a negative Initial Statement rating.) The difference between FAD General Functioning scale scores of mothers with different Initial Statement ratings was significant at the .05 level \((F(2,35)=3.53, \ p<.05)\). There were no differences on ratings of current psychological distress \(\text{(HSCL-25)}\) \((F(2,35)=1.15, \ p=.33)\).

Mothers differentiated by the quality of their Relationship rating also differed on the CBCL Internalizing \((F(2,35)=6.02, \ p<.01)\) and Externalizing scales \((F(2,35)=6.80, \ p<.005)\) and on the FAD General Functioning scale \((F(2,35)=6.05, \ p<.005)\). Bonferroni t-tests indicated that child symptom ratings were lower for mothers with positive Relationship ratings than for mothers with negative Relationship ratings. Mothers with positive Relationship ratings also perceived their families as functioning better than mothers with either neutral or negative Relationship ratings.

The three remaining EOI subcategories, which consist of a
score of either present or absent, rarely if ever occurred in the FMSSs of mothers. Specifically, Emotional Display was present in the speech samples of two mothers, Excessive Detail was present in one speech sample, and there was no evidence of Self-sacrificing/Overprotection in any of the mothers' speech samples.
CHAPTER IV

DISCUSSION

Expressed Emotion and Child Disturbance

Emotional attitudes expressed by parents about children predicted ratings of problem behaviours in a mixed sample of clinically referred and nonreferred 7-16 year old children. Specifically, a high level of expressed emotion in parents was associated with a greater number of overall problems in children, and higher ratings of internalizing and externalizing symptoms. Moreover, level of expressed emotion accounted for a significant portion of the variance in child problem behaviour ratings with the effects of mothers' psychological distress and family dysfunction given prior consideration. Previous studies, mainly conducted on schizophrenic patients and their families, have indicated that level of expressed emotion is not related to the severity of the clinical disturbance (Hooley, 1985; Vaughn, 1989). In children and adolescents presenting with a range of problems, however, the degree of psychological disturbance may play a more prominent role in relation to parents' emotional attitudes.

Elevated levels of internalizing and externalizing
symptoms were both associated with a high level of expressed emotion. To a certain extent, the high correlation between internalizing and externalizing scale scores reduced the likelihood of discovering differences associated with distinct symptom clusters. Nevertheless, studies conducted on schizophrenic patients have shown that type of symptomatology does not mediate in the relation between EE and increased relapse. Miklowitz et al. (1989) found that level of expressed emotion was unrelated to ratings on specific symptom dimensions (i.e., anergia, anxious-depression, thought disturbance, activation, and hostile-suspiciousness) in patients with recent onset schizophrenia. These findings emerged despite the fact that symptoms perceived by relatives as not being a direct function of the schizophrenic illness (e.g., withdrawal) were more likely to provoke critical responses than symptoms that were attributed to the disorder (e.g., hallucinations) (Vaughn & Leff, 1981). Data from two additional reports (Asarnow et al., 1982; Valone et al., 1983) also failed to reveal an association between parental affective behaviour and specific problem behaviours in adolescents.

In addition, expressed emotion may appear to play a nonspecific role in relation to internalizing and externalizing symptoms because of the overlap in parenting behaviours associated with these two symptom clusters. This overlap is particularly evident when parenting behaviours
relevant to the EE construct are considered. Parents of children with internalizing problems, most notably depression, have been described as critical, rejecting, detached, blaming, punitive, unaffectionate, and unsupportive. A lack of respect, involvement, caring, and positive reinforcement has been further noted (Burbach & Borduin, 1986; Cole & Rehm, 1986; Cytryn & McKnew, 1980; Robertson & Simons, 1989). Parents of children with externalizing problems, usually antisocial behaviour or conduct disorder, have been described as critical, controlling, and threatening. There is a lack of positive affective expression, such as expressions of warmth and supportive comments (Gard & Berry, 1986; Webster-Stratton, 1985; Williams & Forehand, 1984). Taken together, these findings indicate that criticism and reduced positive affect, prominent components of the EE construct, figure in the interactions of both sets of mothers.

There was a significant difference in externalizing symptom ratings when high-EE subgroups characterized by critical, emotionally overinvolved, or both critical and emotionally overinvolved attitudes were compared. Children of parents in the critical/emotionally overinvolved group had a significantly higher number of externalizing problems than children in the emotionally overinvolved group; the mean score of children in the critical group fell in the middle. Studies have shown that children with externalizing problems tend to have a poor prognosis in comparison to children with
internalizing problems (Esser, Schmidt, & Woerner, 1990) and they tend to do worse on teacher ratings of problem behaviours and on measures of cognitive, personality, and social functioning (Achenbach, 1978; Cohen, Gotlieb, Kershner, & Wehrspann, 1985; Cohen, Kershner, & Wehrspann, 1985). Thus, the combination of criticism and emotional overinvolvement in parents' emotional attitudes may be especially harmful for children. This is not to suggest that parents' attitudes operate unidirectionally. Parent-child interactions are reciprocal in nature and criticism or excessive emotional involvement may develop as responses to specific child behaviours. Future research may be able to provide further clarity on the relation between expressed emotion and type of symptomatology by considering the interplay between specific components of expressed emotion and child behaviours in families of children distinctly classified as internalizers or externalizers.

**Expressed Emotion and Parents' Psychological Functioning**

Despite the fact that level of expressed emotion and ratings of mothers' psychological distress both predicted child problem behaviour ratings, the hypothesized association between these two variables was not substantiated. Mothers and fathers with elevated levels of symptoms of psychological distress did not express more negative emotional attitudes about their children. Furthermore, high-EE parents characterized by critical, emotionally overinvolved, or
critical/emotionally overinvolved attitudes did not differ in their symptom ratings, nor were there any associations between mothers' symptom ratings and individual scoring components of mothers' Five Minute Speech Samples.

Relatively little is known about factors that affect the expression of emotional attitudes (Falloon, 1988; Koenigsberg & Handley, 1986). One study showed that an elevated number of life events tended to precede episodes of schizophrenia in patients living in low-EE households (Leff & Vaughn, 1980). However, another study conducted on schizophrenic patients showed that the amount of social support available to the family was not related to the expression of emotional attitudes (Anderson, Hogarty, Bayer, & Needleman, 1984). The present findings similarly suggest that elevated levels of symptoms of psychological distress in parents do not interfere with coping ability to the extent that associated disturbances in emotional attitudes are indicated. It is important to remember that this study was not conducted on parents with diagnosed clinical disorders so the role of presumably more severe disturbance in relation to parents' emotional attitudes remains unclear. Nevertheless, according to studies reviewed earlier, heightened psychological distress in mothers, and not only diagnosed clinical disturbance, is associated with negative perceptions of child functioning and parenting difficulties, two aspects of behavior one would expect to be reflected in expressed emotional attitudes.
The lack of association between expressed emotion in parents and self ratings of psychological distress does support the validity of the EE construct as measured by the Five Minute Speech Sample. The expression of emotional attitudes does not appear to be simply a function of elevated distress and a corresponding negative perceptual set operating at the time of assessment. Rather, it may be measuring something unique about the parent-child relationship.

**Expressed Emotion and Family Functioning**

Level of expressed emotion was not related to parents' perceptions of family functioning. It is likely that differences between the assessment instruments were a contributing factor. With the Five Minute Speech Sample parents are asked to vocally express their thoughts and feelings about their child and the parent-child relationship. The task is open ended with few constraints and the dimensions of interest to the examiner are not clearly evident to respondents. There is less ambiguity associated with the Family Assessment Device, a self report questionnaire which asks direct questions about family functioning. A low correspondence between different methods of family assessment has been found in numerous studies, even when similar family properties were being assessed (Dickerson & Coyne, 1987; Oliveri & Reiss, 1984; Sigafoos, Reiss, Rich, & Douglas, 1985).
These findings appear contrary to expectations based on family systems thinking, according to which negative emotional attitudes expressed by parents about a child would suggest a more general disturbance in the family system. However, continuities between subsystem and family level functioning were evident when the individual scoring components of the Five Minute Speech Sample were examined. Mothers who expressed positive attitudes about their relationship with their child perceived their families as functioning better than mothers who expressed neutral or negative emotional attitudes. Therefore, when emotional attitudes specifically about the parent-child relationship were considered, systemic notions about the interrelatedness of family relationships were supported. Mothers with more positive perceptions of family functioning also were more likely to make positive initial statements and more positive remarks generally in their speech samples.

Understanding how overall patterns of family interaction are associated with interactions within the various subsystems has been identified as a major question for family systems research (Carlson & Grotevant, 1987; Minuchin, 1988). Because each level in the family system will have some elements that are unique and some that are shared with other levels of the family, not all subsystems are going to directly reflect the workings of the larger family system (Cromwell & Peterson, 1983; Coyne, 1987). When similarities across levels do exist,
the present findings suggest that they may not be readily
detected using broad indices of functioning. Specifically,
the overall rating of high- or low-EE appears too global to
yield meaningful associations with parents’ ratings of family
functioning. However, the Five Minute Speech Sample may
capture certain aspects of expressed emotion about the child
and the parent-child relationship that extend across the
larger family system.

The association between expressed emotion and family
functioning warrants further attention. It appears worthwhile
to consider the individual components of the expressed emotion
index, particularly the expression of positive emotional
attitudes. The current finding suggest that these attitudes
may reflect better overall family functioning, and a healthy
family environment strengthens children’s resistance to stress
(Garmezy, 1984). Future research should also use alternate
measures of family functioning, including observational
measures of family interaction.

**Theoretical and Clinical Implications**

A central issue concerns the applicability and usefulness
of the expressed emotion construct as measured by the Five
Minute Speech Sample for the general clinical population of
children. Level of expressed emotion significantly predicted
child problem behaviour ratings, suggesting that emotional
attitudes expressed by parents may be useful to assess and
target in the treatment of children and families referred for
clinical service. It may, however, be worthwhile to streamline or revise the scoring procedure to focus more selectively on pertinent aspects of expressed emotion. Only a few scoring variables from the FMSS were actually used in assigning high-EE ratings. Specifically, evidence of self-sacrificing/overprotection, emotional display, and excessive detail, all of which are used to determine the rating of emotional overinvolvement, was almost completely, if not entirely, lacking for the current sample. In contrast, Magana et al. (1986) reported that self-sacrificing/overprotection and emotional display were among the most useful FMSS components in detecting high-EE attitudes in caregivers of schizophrenic patients. Because the expressed emotion index was originally developed for use in families of schizophrenic patients, it makes sense that certain components may not be generalizeable to other disorders. In the present set of speech samples, ratings of high-EE on emotional overinvolvement were primarily made on the basis of statements of attitude, which, incidentally, were not associated with any ratings of child, parent, or family functioning. The emotional overinvolvement index also has been found to have reduced utility in families of elderly patients with dementia (Orford, O'Reilly, & Goonatilleke, 1987). Thus, it appears that the meaning and relevance of the emotional overinvolvement scale may vary across clinical samples. The present findings further suggest that the high-EE criticism
scale may be more relevant for children in the general clinical population. The components of the FMSS that are used in determining the criticism rating (i.e., number of critical comments, number of dissatisfaction remarks, quality of initial statement, quality of relationship) were all associated with aspects of child and/or family functioning.

Whether EE is a unitary construct or an umbrella for two different types of emotional attitudes (criticism, emotional overinvolvement), both of which are associated with poor outcome, is not entirely clear (Kulipers & Bebbington, 1988). Studies of families of schizophrenic patients have indicated that the two types of high-EE attitudes are related to differences in level of patient functioning, although the direction of effect has been shown to differ. Miklowitz et al. (1983) reported that emotional overinvolvement was associated with worse premorbid psychosocial functioning and a higher level of residual symptomatology after discharge. In contrast, Hahlweg et al. (1989) found that relatives rated as high-EE on the basis of emotional overinvolvement behaved similarly to low-EE family members; both showed more positive communication toward patients with recent onset schizophrenia than high-EE critical relatives. There were few differences among the high-EE subgroups in the present sample, possibly due to the sample size. Nevertheless, differences in the distributions of FMSS components comprising the criticism and emotional overinvolvement scales and differences in the degree
to which these components were related to other aspects of child and family functioning suggest that the two EE scales should be considered separately in families of clinically referred children.

Another measurement issue concerns the scoring of positive remarks. If five or more positive remarks (i.e., excessive praise) occur concurrently with either excessive detail or one or more statements of attitude, a high-EE rating on emotional overinvolvement is assigned. Only three families in the present sample received a high-EE rating based on these criteria. However, a high number of positive remarks was associated with fewer psychological problems in children and better overall family functioning. Parental warmth and nurturance are generally considered key ingredients in promoting psychological adjustment and a positive self image in children (Bishop & Ingersoll, 1989). In the field of expressed emotion research, a number of authors have similarly speculated about the protective role of positive emotional attitudes as reflected by positive and supportive statements by caregivers (Falloon, 1988; Hahlweg et al., 1989; Hooley, 1985). It has been suggested, for instance, that patients who fail to relapse despite living with highly critical relatives may be concurrently exposed to a high degree of caring and warmth (Hooley, 1985). Therefore, treating number of positive remarks as a separate, continuous scale may be useful in understanding how parents' emotional attitudes are related to
children's functioning. This component of the EE construct should be investigated more thoroughly in relation to other aspects of expressed emotion and child functioning in the broader clinical population. It is important to determine if positive remarks is best utilised as a component of emotional overinvolvement that carries with it a strictly negative connotation (i.e., excessive praise) or whether it has more predictive and clinical value as an indicator of adaptive functioning.

The borderline high-EE group also requires further research attention. In keeping with the dichotomous approach typically used in expressed emotion research, each family in the present sample ultimately received a rating of high- or low-EE. Borderline speech samples were assigned to the high-EE group based on clinical and empirical considerations. However, little information is available on borderline high-EE speech samples and it may be premature to group these families with either high- or low-EE families pending a more thorough investigation of the correlates of borderline high-EE attitudes for children comprising different clinical samples and age groups.

A final note concerns the implications of a high level of expressed emotion. A substantial number of nonclinical families (53%) were rated high in expressed emotion. Because there is no reported data on expressed emotion in nonclinical families, it cannot be ascertained whether this distribution
is representative of expectable population variance. However, similar findings on nonclinical families have been reported for other indices of family functioning. For example, Bowen (1978) concluded from his research and observations with impaired, normal, and well functioning families that patterns originally thought to distinguish families of schizophrenics were present in varying degrees in all families some of the time. Similarly, Oliveri and Reiss (1982) found the same variability in a problem solving situation among extremely distressed families as they did among families that were functioning relatively well, and some of the troubled families appeared identical to nonclinical families. Clearly, there is no simple definition of family normality or health (Moos, 1989; Oliveri & Reiss, 1982; Walsh, 1982) and like other indices of functioning, a high level of expressed emotion may characterise some so-called normal families. It is significant, however, that the nonclinical high-EE families consistently showed less disturbance than the clinical high-EE group on measures of child behaviour and parent and family functioning. Thus, a high level of expressed emotion in parents does not necessarily imply increased psychological disturbance in children. The current findings also raise the possibility that reduced levels of psychological distress in mothers and a relatively healthy family environment serve a protective role for children in high-EE homes. The protective influence of a supportive family environment for at-risk
populations of children has been noted by others (e.g., Billings & Moos, 1983; Garmezy, 1984). If the mediating effects of parental and family functioning can be demonstrated, it suggests that treatment interventions should focus not only on lowering the level of expressed emotion in parents but on strengthening attributes which provide a buffer against the potentially harmful effects of a high-EE home environment.

In closing, the present study adds to the growing literature on expressed emotion showing that the EE construct is not limited in scope to families of schizophrenic patients. The current findings should be replicated with a larger sample and the generalizability of the findings to single parent clinically referred families should be evaluated. The role of expressed emotion in relation to other family risk factors also requires further investigation using alternate measures of parent and family functioning and independent ratings of child disturbance. If research findings continue to demonstrate an association between expressed emotion and child and family functioning, further attempts should be made to specify the relevant components of the expressed emotion index. In addition, since the EE index was essentially developed on the basis of its predictive validity (Koenigsberg & Handley, 1986), a longitudinal investigation is required to address questions concerning expressed emotion and child outcome in the broader clinical population. Continued
research is of value when we consider that the Five Minute Speech Sample measures emotional attitudes that are typically expressed by parents during the clinical interview (e.g., attitudes about the child and the parent-child relationship). Understanding how aspects of expressed emotion relate to child and family functioning may alert clinicians to the risk associated with particular emotional attitudes and provide a focus for interventions aimed at improving the affective quality of parent-child interaction.
Appendix C

The Five Minute Speech Sample: Scale Descriptions and Scoring Criteria

The following summary of scoring categories and procedures is taken from the Manual for coding expressed emotion from the Five Minute Speech Sample (Magana-Amato, 1989).

(1) Criticism

Criticism is scored as the sum total of critical comments made about the patient and refers to statements showing unambiguous dislike, disapproval, or resentment of the patient's behaviour or personality. Criticism is scored on the basis of content and voice tone. For content to be scored as critical, critical phrases (e.g., "I don't like it", "It annoys me", "I disapprove of it", "I resented it") or negative, overembellished descriptions of the patient (e.g., He's just a lazy, spoiled, selfish person) must be present. Inflection, pitch, and rate of speech are assessed in rating a statement as critical on the basis of voice tone.

(2) Emotional Overinvolvement

Ratings of Emotional Overinvolvement (EOI) are based on reports of behaviour and demonstrated behaviour during the speech sample. Five subcategories are used to measure EOI:
(a) **Self-sacrificing/Overprotection** - reports of the respondent sacrificing him/herself in an extreme and unusual manner (e.g. "I take the bus to work even though it isn't easy, so that my son can have the car in case he needs it") or extremely overprotective behaviour (e.g. "I worry about Sue constantly")

(b) **Emotional Display** - e.g., crying during the interview

(c) **Excessive Detail** - respondent provides an inordinate amount of irrelevant information about the patient's past

(d) **Statements of Attitude** - statements in which the respondent reports that he/she loves the patient or is willing to do anything for him/her

(e) **Excessive Praise** - five or more Positive Remarks (e.g., "He's a wonderful person")

(3) **Quality of Initial Statement**

The Initial Statement is defined as the first complete thought or idea expressed about the patient. The importance of this statement lies in it reflecting the initial affective attitude reported about the patient.

The Initial Statement rating takes precedence over any other rating that might simultaneously apply to the initial statement. It is rated as positive, neutral, or negative on the basis of content and/or voice tone.

A **positive Initial Statement** describes a positive characteristic or behaviour (e.g., "Leslie is a good person")
or satisfies the criterion for a positive Relationship statement.

A neutral Initial Statement is one that does not provide enough information to be scored as either positive or negative (e.g., "We get along all right") or one that is purely factual in nature and does not describe how the respondent views or feels about the patient (e.g., "Tom is an early riser").

A negative Initial Statement is defined as either a Criticism, a negative Relationship statement (e.g., "Bill and I have just never gotten along") or a statement concerning a negative attribute about the patient (e.g., "Susan is a very lazy person").

(4) Quality of Relationship

The Quality of Relationship is rated for those remarks which refer to how the respondent and the patient get along together. Both content and voice tone are considered.

Positive Relationship statements include reports of a positive relationship (e.g., "We have a very good relationship", "We get along very well"), or expressions of interest in the patient (e.g., "We do things together such as going to the movies").

A neutral Relationship rating is given when there is unclear or weak evidence (e.g., "We get along O.K."), conditional statements (e.g., "We get along when he does his homework"), references to the past relationship only (e.g.,
"We used to get along well"), a combination of positive and negative in a statement (e.g., "She's fun to be with until she starts acting up") or no information about the relationship.

Negative Relationship statements include reports of an ongoing negative relationship (e.g., "We don't get along") or an inability to communicate (e.g., "We're at each other's throats all the time").

Criteria for assigning EE status from the FMSS

Any one or any combination of the following criteria are used to define a parent as high-EE Critical:

1. negative Initial Statement
2. negative Relationship rating
3. one or more Criticisms

Any one or any combination of the following overinvolved attributes are used to define a parent as high-EE in Emotional Overinvolvement:

1. Emotional Display during the interview
2. Self-sacrificing/Overprotective behaviour
3. any two of the following: Excessive Detail about the past, one or more Statements of Attitude, or Excessive Praise

Parents are classified as high-EE if they are rated high on Criticism or EOI. Families are rated as high-EE if one or both parents are so rated (Magana et al., 1986; Miklowitz et
al., 1989). A rating of low-EE is assigned if the criteria for high-EE are not met. A third classification, borderline high-EE is assigned to speech samples which include some evidence of high-EE but less than that required for a high-EE rating. Borderline criticism ratings were assigned when one or more Dissatisfaction statements were made in the absence of the more harsh codes required for a Critical rating. Borderline EOI ratings were assigned when one or more Statements of Attitude were made. Borderline high-EE speech samples may be classified as high-EE or low-EE depending on the nature of the research and sample (Magana-Amato, personal communication, February 15, 1990).
LISTED BELOW ARE SOME SYMPTOMS OF STRAIN THAT PEOPLE SOMETIMES HAVE. PLEASE READ EACH ONE CAREFULLY AND CHECK THE ANSWER WHICH BEST REFLECTS HOW MUCH THAT SYMPTOM HAS BOTHERED YOU DURING THE PAST THREE MONTHS.

<table>
<thead>
<tr>
<th></th>
<th>NOT AT ALL</th>
<th>A LITTLE</th>
<th>QUITE A BIT</th>
<th>EXTREMELY</th>
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<tbody>
<tr>
<td>1.</td>
<td>Suddenly scared for no reason</td>
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<tr>
<td>2.</td>
<td>Feeling fearful</td>
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<td>3.</td>
<td>Fainting, dizziness or weakness</td>
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<td>4.</td>
<td>Nervousness of shakiness inside</td>
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<td>5.</td>
<td>Heart pounding or racing</td>
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<td>6.</td>
<td>Trembling</td>
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<td>7.</td>
<td>Feeling tense or keyed up</td>
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<td>8.</td>
<td>Headaches</td>
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<td>9.</td>
<td>Spells of terror or panic</td>
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<td>10.</td>
<td>Feeling restless, can't sit still</td>
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<td>11.</td>
<td>Feeling low in energy-slowed down</td>
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<td>12.</td>
<td>Blaming yourself for things</td>
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<td>13.</td>
<td>Crying easily</td>
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<td>14.</td>
<td>Loss of sexual interest or pleasure</td>
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<td>15.</td>
<td>Poor appetite</td>
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<td>16.</td>
<td>Difficult falling asleep, staying asleep</td>
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<td>17.</td>
<td>Feeling hopeless about the future</td>
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<td>18.</td>
<td>Feeling blue</td>
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<td>19.</td>
<td>Feeling lonely</td>
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<td>20.</td>
<td>Feeling trapped or caught</td>
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<td>21.</td>
<td>Worrying too much about things</td>
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<td>22.</td>
<td>Feeling no interest in things</td>
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<td>23.</td>
<td>Thoughts of ending your life</td>
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<td>24.</td>
<td>Feeling everything is an effort</td>
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<tr>
<td>25.</td>
<td>Feelings of worthlessness</td>
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THE FAMILY ASSESSMENT DEVICE
Version 3

INSTRUCTIONS: This booklet contains a number of statements about families. Please read each statement carefully, and decide how well it describes your own family. You should answer according to how you see your family.

For each statement there are four (4) possible responses.

Strongly Agree (SA) Check SA if you feel that the statement describes your family very accurately.

Agree (A) Check A if you feel that the statement describes your family for the most part.

Disagree (D) Check D if you feel that the statement does not describe your family for the most part.

Strongly Disagree (SD) Check SD if you feel that the statement does not describe your family at all.

These four responses will appear below each statement like this.

41. We are not satisfied with anything short of perfection.

   ____ SA   ____ A   ____ D   ____ SD

The answer spaces for statement 41 would look like this. For each statement in the booklet, there is an answer space below. Do not pay attention to the blanks at the far right hand side of each answer space. They are for office use only.

Try not to spend too much time thinking about each statement, but respond as quickly and as honestly as you can. If you have trouble with one, answer with our first reaction. Please be sure to answer every statement and mark all your answers in the space provided below each statement.
1. Planning family activities is difficult because we misunderstand each other.
   ___ SA  ___ A  ___ D  ___ SD

2. We resolve most everyday problems around the house.
   ___ SA  ___ A  ___ D  ___ SD

3. When someone is upset the others know why.
   ___ SA  ___ A  ___ D  ___ SD

4. When you ask someone to do something, you have to check that they did it.
   ___ SA  ___ A  ___ D  ___ SD

5. If someone is in trouble, the others become too involved.
   ___ SA  ___ A  ___ D  ___ SD

6. In times of crisis we can turn to each other for support.
   ___ SA  ___ A  ___ D  ___ SD

7. We don't know what to do when an emergency comes up.
   ___ SA  ___ A  ___ D  ___ SD

8. We sometimes run out of things that we need.
   ___ SA  ___ A  ___ D  ___ SD

9. We are reluctant to show our affection for each other.
   ___ SA  ___ A  ___ D  ___ SD

10. We make sure members meet their family responsibilities.
    ___ SA  ___ A  ___ D  ___ SD

11. We cannot talk to each other about the sadness we feel.
    ___ SA  ___ A  ___ D  ___ SD

12. We usually act on our decisions regarding problems.
    ___ SA  ___ A  ___ D  ___ SD

13. You only get the interest of others when something is important to them.
    ___ SA  ___ A  ___ D  ___ SD
14. You can't tell how a person is feeling from what they are saying.
   ___ SA ___ A ___ D ___ SD 

15. Family tasks don't get spread around enough.
   ___ SA ___ A ___ D ___ SD 

16. Individuals are accepted for what they are.
   ___ SA ___ A ___ D ___ SD 

17. You can easily get away with breaking the rules.
   ___ SA ___ A ___ D ___ SD 

18. People come right out and say things instead of hinting at them.
   ___ SA ___ A ___ D ___ SD 

19. Some of us just don't respond emotionally.
   ___ SA ___ A ___ D ___ SD 

20. We know what to do in an emergency.
   ___ SA ___ A ___ D ___ SD 

21. We avoid discussing our fears and concerns.
   ___ SA ___ A ___ D ___ SD 

22. It is difficult to talk to each other about tender feelings.
   ___ SA ___ A ___ D ___ SD 

23. We have trouble meeting our bills.
   ___ SA ___ A ___ D ___ SD 

24. After our family tries to solve a problem, we usually discuss whether it worked or not.
   ___ SA ___ A ___ D ___ SD 

25. We are too self-centered.
   ___ SA ___ A ___ D ___ SD 

26. We can express feelings to each other.
   ___ SA ___ A ___ D ___ SD 

27. We have no clear expectations about toilet habits.

   SA    A   D    SD

28. We do not show our love for each other.

   SA    A   D    SD

29. We talk to people directly rather than through go betweens.

   SA    A   D    SD

30. Each of us has particular duties and responsibilities.

   SA    A   D    SD

31. There are lots of bad feelings in the family.

   SA    A   D    SD

32. We have rules about hitting people.

   SA    A   D    SD

33. We get involved with each other only when something interests us.

   SA    A   D    SD

34. There's little time to explore personal interests.

   SA    A   D    SD

35. We often don't say what we mean.

   SA    A   D    SD

36. We feel accepted for what we are.

   SA    A   D    SD

37. We show interest in each other when we can get something out of it personally.

   SA    A   D    SD

38. We resolve most emotional upsets that come up.

   SA    A   D    SD

39. Tenderness takes second place to other things in our family.

   SA    A   D    SD
40. We discuss who is to do household jobs.
   SA  A  D  SD

41. Making decisions is a problem for our family.
   SA  A  D  SD

42. Our family shows interest in each other only when they can get something out of it.
   SA  A  D  SD

43. We are frank with each other.
   SA  A  D  SD

44. We don't hold to any rules or standards.
   SA  A  D  SD

45. If people are asked to do something, they need reminding.
   SA  A  D  SD

46. We are able to make decisions about how to solve problems.
   SA  A  D  SD

47. If the rules are broken, we don't know what to expect.
   SA  A  D  SD

48. Anything goes in our family.
   SA  A  D  SD

49. We express tenderness.
   SA  A  D  SD

50. We confront problems involving feelings.
   SA  A  D  SD

51. We don't get along well together.
   SA  A  D  SD

52. We don't talk to each other when we are angry.
   SA  A  D  SD
55. We are generally dissatisfied with the family duties assigned to us.
   ___ SA  ___ A  ___ D  ___ SD

54. Even though we mean well, we intrude too much into each other's lives.
   ___ SA  ___ A  ___ D  ___ SD

55. There are rules about dangerous situations.
   ___ SA  ___ A  ___ D  ___ SD

56. We confide in each other.
   ___ SA  ___ A  ___ D  ___ SD

57. We cry openly.
   ___ SA  ___ A  ___ D  ___ SD

58. We don't have reasonable transportation.
   ___ SA  ___ A  ___ D  ___ SD

59. When we don't like what someone has done, we tell them.
   ___ SA  ___ A  ___ D  ___ SD

60. We try to think of different ways to solve problems.
   ___ SA  ___ A  ___ D  ___ SD
Dear

This letter is to invite your participation in a study of children and their families that is being carried out by the York Region Family and Children's Services. Because it is important to tailor services to the unique needs of families and children, they are carrying out a study of children and families who are requesting different types of mental health services, in particular families who have adopted a child and those who do not have any adopted children. At this time, we are asking families who have not adopted a child and who are being seen at (name of agency) if they would be willing to have their name and telephone number released to someone from the York Family and Children's Services Project who would telephone you to explain the study in greater detail. Currently, they are looking for two-parent families who have a child aged 7-16 years about whom they are concerned.

Participating in this study will involve you completing questionnaires concerning your background, your child's behavior, and your family. Completing these questionnaires will take 2-3 hours of your time. All information obtained for the study will be confidential. However, if you want some or all of the information to be shared with your clinician this can be arranged with your written permission.

Your decision to participate in the study is voluntary and will in no way affect the service your family is receiving at (name of agency) now or in the future. We hope you will participate. We feel that studies of this type will help in understanding families who receive service and will enable agencies like our own to provide better services to families and to the community.

As a small compensation for your time and effort, you will be given a gift certificate for a meal for a family of four.

If you are interested in hearing more about the study and agree to have your name released to the York Family and Children's Services Project, please complete and mail the enclosed form or telephone me directly at (agency telephone number and extension).

Sincerely,
CONSENT FORM

I, ___________________________ (aged _____ for children 12 years and older) consent to take part in a research project conducted by the York Region Family and Children's Services. The aim of the project is to examine the effect of different family forms on child and family functioning.

I understand that my participation will involve the following: completing questionnaires concerning child behaviour, family background, and family functioning and audio taping descriptions of one or two children in the family.

Participation will take approximately 2 1/2 hours. Only persons who are directly involved in this study will have access to information pertaining to me or my family. I will not be identifiable in any reports of this study, nor will this information be connected to me in any way that would identify me publicly. I also understand that my participation in this study is entirely voluntary and I may withdraw at any time.

Dated at ____________, this ____ day of ________, 1989.

Signature of Parent ___________________________

Signature of Child (if 12 years or older) __________________________

Witness __________________________

For further information on this study, please contact Debra Brick, at York Region Family and Children's Services at: 895-2318 (local), 731-3150 (Thornhill & Toronto) or 722-3474 (Sutton).
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Vaughn, C.E., Snyder, K.S., Jones, S., Freeman, W.B., &


Vita Auctoris

Jodi Kershner was born in Toronto, Ontario on May 25, 1957. She graduated from York University, Toronto, with an Honours Bachelor of Arts degree in psychology with First Class Honours in 1983. She obtained her Master of Arts degree in clinical psychology from the University of Windsor in 1985.

She is currently employed in clinical practice in Whitby, Ontario and is married to James MacPherson. They have one daughter, Paige Tyler.