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MATERNAL EXPRESSED EMOTION, CHILD BEHAVIOR  
PROBLEMS AND THE CHILD'S SENSE OF COHERENCE:  
TOWARDS A RESILIENCE MODEL

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**MATERNAL EXPRESSED EMOTION, CHILD BEHAVIOR PROBLEMS, AND THE  
CHILD'S SENSE OF COHERENCE: TOWARDS A RESILIENCE MODEL**

**By**

**Shizuka Shimabukuro**

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## **ABSTRACT**

### **MATERNAL EXPRESSED EMOTION, CHILD BEHAVIOR PROBLEMS, AND THE CHILD'S SENSE OF COHERENCE: TOWARDS A RESILIENCE MODEL**

By

Shizuka Shimabukuro

A total of 285 child-mother pairs were recruited from 5 schools in Naha City, Okinawa, Japan (ages 10-13). The goal of the study was to understand better how family environment factors and child resiliency factors jointly contribute to child behavior problems. Family environment factors included maternal depression (Center for Epidemiological Studies-Depression, CESD), positive (Involvement) and negative (Criticism) expressed emotion (EE) between mother and child (Expressed Emotion Adjective Checklist), and family relationship quality (Family Relationship Inventory). Child resiliency factors included Sense of Coherence (SOC) and Self-Esteem (SE). The Internalizing and Externalizing scales of the Youth Self-report (YSR) were used as outcome measures.

Child reports of each of the negative family environment factors were positively related to Internalizing and Externalizing problems, while each of the child resiliency factors was negatively related. This differs from reports from Western studies that maternal Criticism is specifically related to Externalizing behaviors. Higher levels of maternal Criticism and lower levels of Involvement, as reported by the child, were more closely related to girls' Internalizing and Externalizing problems than was true for boys, implying that girls were more sensitive or vulnerable to maternal emotionality than boys.

Mother reports of her Criticism and Involvement were less strongly related to child behavior problems, with significant correlations only with Internalizing behaviors.

Her reports of Criticism and Involvement were not significantly related to child resiliency factors.

A significant indirect path was identified from child reports of negative family environment factors to child behavior problems through child's SOC in an SEM. However, the corresponding indirect path from family factors to child behavior problems through SE was "inconsistent," enhancing rather than decreasing reported behavior problems. The hypothesis that SOC mediates the impact of stressful family influences was confirmed. The inconsistent effect of SE may reflect strong Japanese-Western differences regarding the construct of self-esteem. A more collectivist society, like Japan, would rely on "jibun" or the importance of self defined in the context of family and within cultural norms.

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# CHAPTER I

## INTRODUCTION

### **The Experience of Depression**

Common wisdom holds that childhood is the time when children expand their world into one full of joy, happiness, excitement, and curiosity. For some children, this idealistic expectation is simply unreasonable. Problems arising during childhood can have lifelong consequences, and childhood experiences and conditions have been associated with many adult disorders (Marsh & Dozois, 2003). Achenbach (1991), in the Child Behavior Checklist, defined “Internalizing” behavior problems as a combination of social withdrawal, somatization, and depression/anxiety. Further, “Externalizing” was defined as a combination aggression and delinquent behaviors. The early onset of such internalizing and externalizing behavior problems in childhood has been found to be a risk leading toward more serious maladaptive outcomes in the future (Cicchetti & Toth, 1998; Mun, Fitzgerald, Von Eye, Puttler, & Zucker, 2001). For example, depression can be an overwhelming experience for children and adults. Rollo May, one of the fathers of existential psychology, stated that “Depression is the inability to construct a future” (May, 1969, p. 243). While depression is bad enough for adults, it is especially poignant when the depressed person is a child.

I first met 9 year old Takashi (pseudonym), a Japanese boy living in the US, at the Japanese Saturday school in Battle Creek, Michigan. He was a student in my fourth-grade class. He had come to the United States three years before because of his father's work assignment in the Japanese automotive industry. In class, I asked the students to describe their social networks with themselves placed at the center of a big white sheet of paper. Instead, Takashi scribbled: "I am stupid," "I am slow," "Everybody wants me to die," "Nobody likes me," "I am ugly," "I am dumb," "I better die," "my mother doesn't like me," and "I am like an ugly monkey." He was screaming inside, but was externally silent about his psychological pain.

Although Takashi had a unique sense of humor and tried to entertain his peers with jokes, it was clear that he had difficulties in controlling his emotions and regulating his behaviors that were also creating problems with his peer relationships. In my role as his teacher, I was limited to occasional talks with Takashi; therefore, I felt that I could not ethically engage him in therapy. However, I never lost my feelings of sadness, confusion, and sympathy for him. I know he has gone back to Japan now, but I sometimes wonder how he is doing there. His self-description shows the complexity of children's emotional and social lives. The goal of this research is to examine the complex relationships among family environment, resiliency resources, and risk.

## **Overview of Internalizing and Externalizing Behavior Problems**

Depression and externalizing and internalizing behaviors. Middle childhood is the period of time when children begin showing behavior problems. Middle childhood problems are different from early childhood problems, when the risk of anxiety disorders is higher. They are also different from problems in late childhood and early adolescence, when there is a risk of frank depressive disorders (Kovac & Devlin, 1998). Despite these developmental time frames, recent studies have reported that depressive symptoms can be identified in children in middle childhood or even earlier childhood, around the age of 4 (Caspi, Moffitt, Morgan, Rutter, Taylor, Kim-Cohen et al., 2004).

**Prevalence of internalizing behavioral symptoms (depression).** According to the US Surgeon General's report (2009), 10% to 15% of children and adolescents in the US report some symptoms of depression. Approximately 5% of children between the ages of 9 and 17 have been diagnosed with depression at some time in their lives. Compared with the 1-year prevalence rate of 5.3% in US adults, the 1-year prevalence rate in children is estimated between 0.4 – 2.5 percent. Hankin, Abramson, and Siler (2001) found that 8.3% of the children in their study had depressive symptoms which had lasted for at least a year. An even higher incidence rate of major depressive disorder (MDD) has been reported for adolescents (15% to 20%) (Cicchetti & Toth, 1998). Taken

together, the implication of these results is that issues of childhood depression are elusive and complex.

**Early onset of internalizing behavior problems.** An early onset of internalizing behavior problems in childhood is predictive of various negative long-term developmental outcomes. After a diagnosis of MDD in childhood, there is a 40% probability of a recurrence in 2 years, rising to 70% in 5 years. The depressive episodes of about 60% to 70% of children diagnosed with MDD persist into adulthood. In general, MDD precedes alcohol or substance abuse (Sanford et al.,1995). Further, approximately 25% to 34% of children and adolescents who were diagnosed for depressive disorders have attempted suicide (Birmaher et al., 1996; Kovacs, 1996, 1997). The development of social-cognitive and interpersonal skills and maintenance of the attachment bond between parent and child are especially vulnerable to the negative effects of childhood and adolescent depression (Kovacs, 1997). Kovacs described the situation as "... [depressed children] are removed from the normal matrix of socialization" (1997, p. 289).

**Externalizing behaviors.** Externalizing behaviors are "the most common form of mental health problems in children" (Denham, Workman, Cole, Weissbrod, Kendziora, & Zahn-Waxler, 2000, p. 24) with a wide range of symptoms. Prevalence rates for externalizing disorders have varied from 2% to over 15% of the population. Externalizing

behaviors are generally categorized into two major types, inattention and hyperactivity on one hand and aggression and conduct problems on the other. Approximately 9% of boys and 2% of girls have symptoms of conduct disorder, and approximately 3 to 7% of children have attention-deficit hyperactivity disorder (ADHD) (American Psychiatric Association, 2005; Hinshaw, 1992).

The early onset of externalizing behavior problems, like aggression in childhood, is a precursor of antisocial behaviors (Moffitt, 1993) and antisocial personality disorder (Zucker, Ellis, Fitzgerald, & Bingham, 1996; Mun et al., 2001). Children with externalizing behaviors commonly have difficulties to regulating emotions and jeopardize the opportunities to build a successful interpersonal relationship (Denham et al., 2000). Therefore, it is important to identify the early experiences that increase the risk of developing internalizing and externalizing behavior problems in children.

**Internalizing and Externalizing Disorders in Children in Japan.** In Japan, as in the West, childhood internalizing disorders, specifically depression, were neglected for a long time because of theoretical assumptions that children could not experience depression. In more recent studies, an increasing number of reports about Japanese children suffering from various social problems, including social withdrawal, school refusal, bullying, and/or eating disorders, have appeared. In Japan, the prevalence rate of

Attention Deficit-Hyperactivity Disorder (ADHD) was reported to be about 7.7%, somewhat higher than the prevalence rate of 4 to 6% in the U.S (Satake, Yamashita, & Yoshida, 2004).

According to a large-scale study among 2,453 Japanese children and adolescents (6 to 15 years old), about 11% of Japanese elementary-school children scored as depressed, based on Birmaher's Depression Self-Rating Scale for Children (DSRS), a self-administered depression scale (Denda, Kato, Kitagawa, & Koyama, 2006). Within the larger sample of 6-15 year olds, approximately 15% of 10 and 11 year old children were at risk of depression (scores above the cut-off point of 15 on DSRS). Another Denda study (2007) was conducted with 3,331 Japanese children and adolescents (6 to 15 years old). The results classified 7.8% of elementary school-aged children and 22.8% of junior high school-aged children as depressed, again based on self-report of symptoms.

However, few of these children actually had been diagnosed or treated for depression (Denda, 2007). The symptoms characteristic of depression in Western cultures also were reported by those Japanese children and adolescents were extreme fatigue or loss of energy, loss of interest or pleasure, impaired concentration, insomnia, social withdrawal, and anorexia or weight loss (Denda, Sasaki, Asakura, Kitagawa, & Koyama, 2003).

### **Child Development and Family Factors in Behavioral Disorders**

The progress of children's behavior problems is related to both family environment, which supports the child's developmental needs, and developmental chronology (Bronfenbrenner, 1979). Healthy emotional, social, and self development in middle childhood depends heavily on emotionally positive interactions between caregiver (usually, the mother) and child (Cole, Michel, & Teti, 1994). Bronfenbrenner's Ecological Theory emphasizes the importance of the relationship between mother and child in a family as an influence on the ongoing process of child development. Within the context of family environment, the mother-child interaction with emotional exchange structures a child-specific dyadic context and is a fundamental dimension of the family environment. It has powerful effects on a child's cognitive and socioemotional development (Bronfenbrenner, 2005). The mother-child dyadic relationship provides the opportunity for the child to learn "interactive skills and a concept of interdependence, an important step in cognitive development" (p. 57). The patterns of the dyadic interaction in the family are applied to the other relationships outside the family context as well because child can use the emotional competence that was gained in the dyadic relationships in the family.

**Family environment and negative behavioral outcomes.** The relationship between family environment and child's negative behavioral outcomes has been

confirmed by many studies based on different theoretical approaches. Family environment studies have identified as important the parents' childrearing strategies and behaviors (Belsky, 1984), the child's attachment style (Ainsworth, 1967; Ainsworth & Bell, 1970; Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1960, 1975, 1981, 1982, 1988), coercive parent interaction patterns (Snyder, 1995), and parental acceptance-rejection (Rohner & Britner, 2002). The present research will examine mother-child communication patterns as they relate to child behavioral problems.

**Expressed Emotion and behavior problems.** Expressed Emotion (EE) is a construct that was defined by Brown and Rutter (1966) and operationalized in the Camberwell Family Interview (CFI, Vaughn & Leff, 1976) or the Five-Minute Speech Sampler (FMSS, Magna-Amato et al., 1986). Three EE components have been identified: Criticism, Hostility, and Emotional Over-involvement. The construct of EE is thought to reflect the emotional atmosphere of the family, specifically the mother and child relationship. Maternal expressions of extreme Criticism and/or Emotional Over-Involvement directed toward the child are a risk marker for the child's negative outcomes, for example, depression, anxiety, anorexia, obsessive compulsive, and conduct disorders, and aggressive behaviors (Huguelet, Favre, Binyet, Gonzales, & Zabala, 1995; Marom, Munitz, Jones, Weizman, & Hermesh, 2005; McCreadie, Robertson, Hall & Berry, 1993;

Nelson, Hammen, Brennan, & Ullman, 2003). The application of the EE construct has been expanded to different medical conditions, including diabetes, asthma, epilepsy, and obesity management. Emotionally negative attitudes (Criticism and/or Emotional Over-Involvement) from a key relative create an unbearably stressful family environment that may exacerbate the behavior and emotional problems of children, some of whom are already be vulnerable (Hooley & Gotli, 2000; Hooley & Parker, 2006).

**Critique of EE research with children.** Despite strong evidence of the correlation between a high level of EE and children's behavior disorders, there are some arguments against the simple conclusion that high-EE causes relapse, emotional disorders, or children's behavior problems. First, most of the studies in the EE literature have been limited to samples of clinically-referred children or adults with psychological disorders. Even though the importance of high levels of maternal EE in childhood disorders is acknowledged, few studies of EE have been done among school-aged children sampled from a school or community setting, and none of these studies have been conducted in Japan.

Second, most of the studies with children have been based on a pathological model focusing on children's vulnerability or predisposition to EE, rather than resiliency.

It is still unclear how an individual child's resiliency alters the relationship between the

construct of EE and child negative outcomes. Factors have been found to exist between perception of mother-child emotionality toward each other and child adjustment problems (e.g., Gomez, Gomez, DeMello, & Tallent, 2001; Toth, Cicchetti, & Kim, 2002; Kim & Cicchetti, 2004), but the possible mitigation by child's resiliency factors of negative family environment factors on child's psychological and behavioral problems has not been examined in the research literature.

### **Theoretical Framework**

This study was guided by three theories: Bronfenbrennor's Ecological theory, Family Systems theory, and Communication theory to understand the relationship between context and children's behavior problems. The process of child development occurs within the context of the system of relationships that form his or her environment. Family Systems theory focuses on the characteristics of the family as a context for development, but in many ways is consistent with Ecological theory (see Figure 1.1). Communication theory focuses on the patterns of communication in a family, some of which create a potential risk for children's psychological and behavioral behavior problems.

#### **Ecological Theory and Child Development**

Ecological theory views the child's context as a set of nested structures. Human

development is shaped by experiences in multiple settings involving multiple systems over the course of that person's life up (Bronfenbrenner, 1979, 2005). Children's characteristics are produced by multiple interactions with different parts of the environment, in Bronfenbrenner's terms the microsystem, mesosystem, exosystem, and macrosystem. The microsystem is the most immediate context in which the child is exposed to and becomes active with certain roles and with face-to-face interpersonal relationships. Home, classroom, and peer group are the typical examples of a microsystem. Each child experiences different patterns of activities with certain roles through mutual interpersonal relations in various settings or microsystems. The child's own unique physical and mental characteristics affect the development in a way that child's behaviors become the part of the process of interaction. Thus, characteristics of child's behaviors are produced in the interactions in a setting as a whole, rather simply being "the sum of its parts" (Bronfenbrenner, 1979, p. 109). Each microsystem may be affected by events or persons in the other larger systems, but the fundamental experiences for a child are in her/his microsystems. This research focuses on the microsystem of the child's ecological system.

### **Family Systems Theory: Child Development in the Family System**

Family Systems theory helps understand the child's developmental psychopathology in ways that the child lives in a dynamics of the family (microsystem) (Patrick & Cicchetti, 2004). Family Systems theory seeks to describe individual development by focusing on how the individual's unique role in the family creates patterns and characteristics among relationships with individuals within and between subsystems in the family (siblings, parents, couple, parent-child). These subsystems are seen as functioning as a whole to make a "family." Family systems theory emphasizes relationship structures, interpersonal boundaries, power distributions, and communication patterns (Minuchin, 1985).

A child's adjustment and possible maladaptive behaviors cannot be understood without looking at meanings of behaviors within the context of interactions where the child responds (Cicchetti & Howes, 1991; Daies & Forman, 2002). Family systems theory views a child's behaviors in an open system, meaning that each family member, including the child, functions as an ongoing transactional interaction (Cicchetti & Tucker, 1994; Minuchin & Fishman, 1981) between "an active changing organism in a dynamic changing context" (Patrick & Cicchetti, 2004, p. 478). It is critical to pay attention to the transactional characteristics of interaction created by both child's and mother's

perceptions and sequencing behaviors as influences on the child's internalizing or/and externalizing behavior difficulties.

Because child development is a process characterized by a series of changes in cognitive, linguistic, social, emotional, and physical experiences within the environment, the child's development in the family system is also characterized by "hierarchical transformation from transactional feedback loops involving the biopsychosocial characteristics of family members, structural processes in the family" (Patrick & Cicchetti, 2004, p. 479). The meanings of a child's behavior problems may be a reflection of the dimensions of interplay in the unique family system. This study examines the mother's and the child's perceptions of their emotional interactions.

### **Communication Theory: Emotional Interaction in a Family as an Influence on Child Behaviors**

Communication theory describes the impact of unhealthy communication patterns between individuals within the microsystems on child's emotional and behavioral adjustment. Communication patterns and the emotional attitude of an important family member toward a target family member contribute importantly to the individual's psychological health. For example, unbearable negative communication patterns between mother and child cause psychological confusion and stressors in a family. Such an

environment elicits or reinforces problematic behaviors in the target child. The communication is a reciprocal interaction and also a child-specific, non-shared environmental factor contributing to the experiences of that specific child (Caspi et al., 2004).

Communication theory was developed based on observations of family interactions by a group of family therapists of patients with schizophrenia (Bateson, Haley, Weakland, 1956). They introduced the concept of the *double bind*, describing a pathological family communication pattern of patients with schizophrenia in a family context. The double bind message includes two conflicting messages that create psychological confusion, rather just a simple contradiction (Nichols & Schwartz, 1998). The patient's schizophrenic behaviors are seen as a part of the whole family's attempt to adjust or maintain homeostasis in order for the family to function and preserve its equilibrium. The bizarre behaviors of patients with schizophrenia are seen as a product of confusing communication patterns.

As a consequence of these confusing patterns of communication, the child grows up unskilled in the ability to determine what people really mean and unskilled in the ability to relate with others (Nichols & Schwartz, 1998). When children have such a dynamic relationship in the family, they are less likely to receive positive supports and

encouragement from their parents, hindering the child's self-esteem, self-confidence, and psychological coherence or the ability of comprehend, manage, and make meaning life events. When these communications are unclear or carry conflicting messages confusion and stress occur in children. A child's sense of coherence is shaped by the powerful force of repeated interactions with a person in an important relationship (Antonovsky, 1976; Cole, Martin, Powers, & Truglio, 1996; Conley, Haines, Hilt, & Metalsky, 2001).

### **Need for the Research**

More children are being diagnosed with depression because of the realization that children show depression in ways that differ from adults. Children with the early onset of internalizing disorders tend to be impaired in important areas of functioning, (Kovac & Devlin, 1998) and these disorders have devastating impacts on the lives of the child and his/her family. Children who develop internalizing disorders in childhood are more likely to develop other problems in adolescence and adulthood. The problem is magnified because many children who have internalizing disorders are untreated in community samples (Kovac & Devlin, 1998). Internalizing disorders damage a child's life because they impede normal development and create problems that do not dissipate with time. The family's response to the internalizing and externalizing problems may be dysfunctional, affecting everyone in the family as the family organizes around the

problems. Thus, the consequences of such disorders in childhood to the child and her/his family cannot be minimized.

Even though the high rate of depression in children in Japan is known, and there are clear indications that intervention and prevention programs for both children and families are needed, no study has been done to examine the relationship between children's internalizing and externalizing problem behaviors and familial environment and children's resilient capacities.

Moreover, most of the research on the relationship between a relative's expressed emotion (EE) and mental illness or mood disorders has been done among adults, primarily in Western countries. This study is a first step in filling the gap in our understanding of maternal EE and childhood internalizing and externalizing behavior problems in the Japanese culture and understanding the reciprocal relationships between mother and child behaviors.

Finally, the results of this study will help inform the various behaviorally-focused interventions by providing a better understanding of the role of parent-child interactions in children's behavior problems. Although it is important to improve the mother's parenting skills, the emotional and cognitive components of the negative parent-child interactions and familial environment need to be changed as well, addressing the

bidirectional dynamic between mother and child interactions (Coville, Miklowitz, Taylor, & Low, 2008). Thus, the study will examine the parent-child dynamics that create and maintain a negative family emotional environment, and their interaction with child's resilience in the context of internalizing and externalizing behavior problems.

In summary, the purpose of this study is to examine the relationships among family environment including mother- child perception of EE, children's resiliency factors, and children's psychological and behavioral problems among Japanese school-aged children sampled from Japanese public schools.

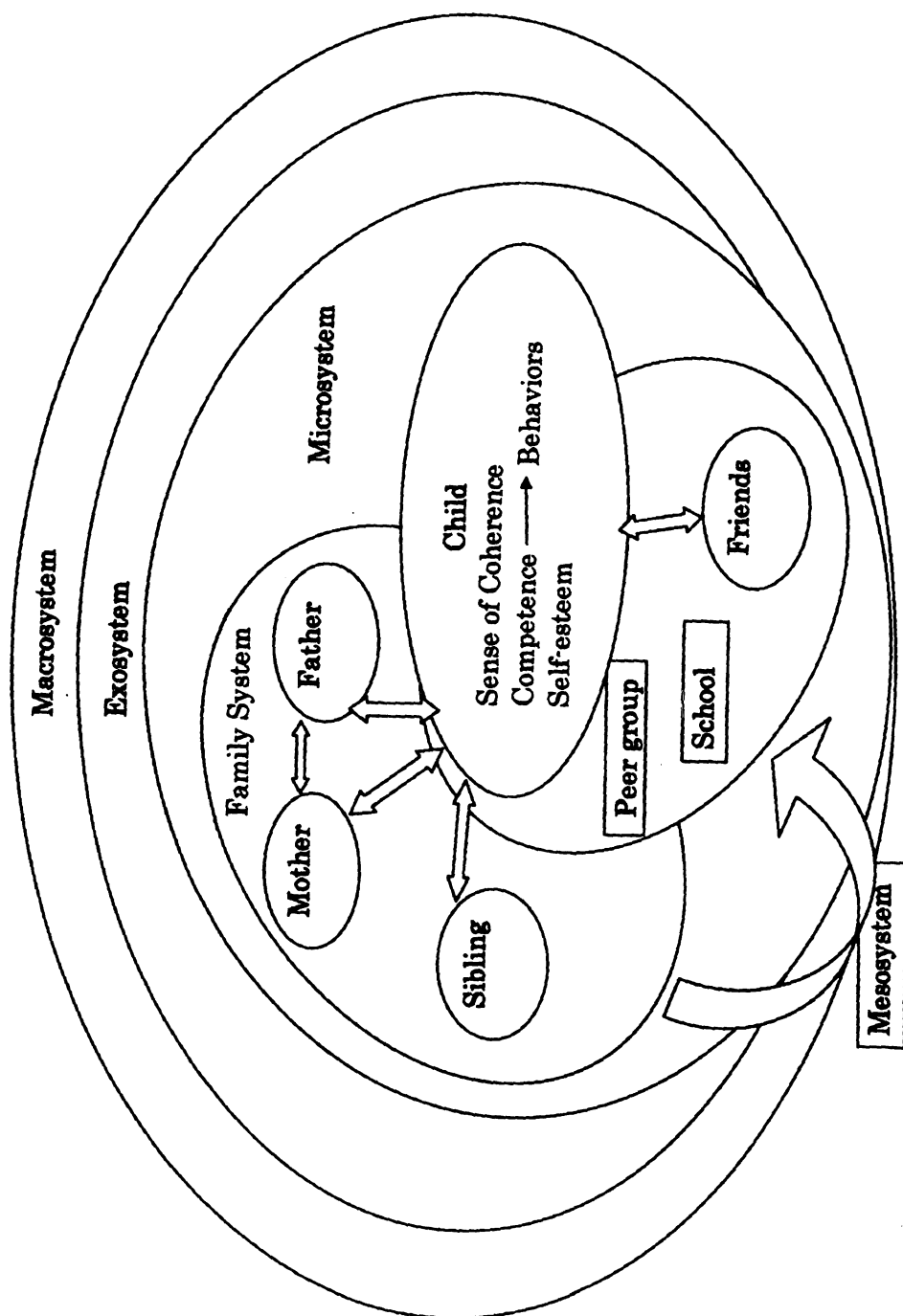


Figure 1.1. Conceptual map for study

## **CHAPTER II**

### **LITERATURE REVIEW**

#### **Development in Middle Childhood**

Middle childhood, defined as ages 6 to 12 (Richardson, 2005; Santrock, 2000; Zembar & Blume, 2008), is an important time in child development. Children in middle childhood develop academic and social skills not found in younger children. In terms of Erikson's developmental stage theory (1963), the child must resolve the conflict between industry (competence) and inferiority (incompetence, failure) in middle childhood. Resolving this developmental conflict includes building a strong sense of self-competence with positive self-esteem, self-efficacy, and self-concept, as well as developing an internal locus of control. This sense of self-competence is the foundation for the development of a sense of coherence as an adolescent and adult (Antonovsky, 1987).

Achieving industry or self-competence includes the ability to persist in mastering a skill or completing a project over increasingly extended periods of time. Elementary school-aged children focus on the acquisition of skills and competence in different areas of development, including acquiring basic academic knowledge and skills (reading and mathematics) and basic interpersonal skills (cooperation, following group norms and

rules). As these skills and competencies are achieved, they allow the children to decrease their degree of dependency on parents. Children are encouraged and expected to behave with greater autonomy (Richardson, 2005).

Although children in middle childhood are reaching out to peers and other adults, the role of the family in providing support and encouragement is predictive of a successful resolution of this developmental phase. Research has shown that the family emotional environment has an impact on the child's development of a sense of industry. Parents continue to function as the child's primary resources for emotional security and as providers of social support during middle childhood (Cicchetti, 1996; Crittenden & Ainsworth, 1989; Richardson, 2005). When the emotional environment is not supportive, the risk of the child displaying dysfunctional and negative behavior outcomes, including suicide attempts, is increased (Asarnow, 1992; Asarnow, Carlson, & Guthrie, 1987; Sroufe, 1997). In a family characterized by frequent mutual negative emotional interactions between child and parent or between parents, joint family activities are restricted. The child's opportunity to learn appropriate relationship management through observation or experience cannot occur (Bronfenbrenner, 2005). In such an environment, opportunities to develop emotional and social competencies are shut off for the child.

### **Family Environment and Childhood Risk**

The elementary school-age child is tasked with finding ways of coping with different situations and adjusting to different contexts. By the time s/he has entered school, the child has developed a relationship with her/his primary caretaker(s) that serves, to an extent, as a model for other relationships (Ainsworth, 1967; Ainsworth & Bell, 1970; Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1960; 1975, 1981, 1982, 1988). Based on these primary dyadic relationships, the child can acquire self-competence and sense of coherence—skills, emotional knowledge, values, and meaning—that make her/him resilient in the face of stressors. When such a relationship is dysfunctional, the child may develop emotional symptoms and/or behavior problems.

### **Introduction to Expressed Emotion**

#### **Expressed Emotion and Adult Mental Illness**

**History of research on Expressed Emotion.** Research on Expressed Emotion (EE) as a predictor of relapse and rehospitalization in schizophrenia has a long history in adult psychiatry (Brown & Rutter, 1966). In the literature, “Expressed Emotion” or “EE” refers to expressions of criticism, hostility, and emotional over-involvement on the part of family members toward a targeted member, a child or spouse. EE captures an important dimension of the relationships between the targeted family member s and his/her relatives (Hooley & Teasdale, 1989). In general, positive expressions of emotion have been

assumed to be an asset for the targeted person, while negative expressions of emotion create a risk for the targeted person. However, when there is extreme emotional over-involvement, even if there are positive expressions of emotion, the targeted person is placed at further risk. The concept of EE was developed by Brown and Rutter (1966) based on their clinical observations that the families of patients with schizophrenia. These families often described the patient in ways that were quite negative. The more negative the description of the patient by family members, the more likely the patient was to relapse and be rehospitalized. They hypothesized that family member of the patient put psychological pressure on the family member with schizophrenia and that this stress precipitated the relapse (Leff & Vaughn, 1985).

In the Brown and Rutter (1966) study, the husband had been diagnosed with schizophrenia. The interviewer met the wife and husband separately, and in a second interview, they were seen together. Later, 30 couples who had been interviewed initially were seen a second time to check the reliability and validity of the measures. Each of the interviews lasted 3-4 hr. In addition to the self-reports of feelings in the semi-structured interview, actual expressions of positive and negative feelings including tone of voice (e.g., sarcasm, gesture, and facial expression) were accounted for in the assessment of the

family member's emotional attitudes directed toward the family member with schizophrenia.

Studies have examined the associations between EE by important family members and the risk of relapse in different disorders. The application of the EE construct has been expanded to different psychological and physical disorders, including depression, diabetes, asthma, epilepsy, and obesity management. Other studies have tested theoretical speculations about the meaning of the EE construct and the degree to which high EE predicts relapse over a period of years (Marom et al., 2005; Huguelet et al., 1995; McCreadie et al., 1993).

### **Defining Expressed Emotion**

**Categories of EE.** Three categories of negative EE have been identified (Vaughn & Leff, 1976): Criticism of the targeted person, Hostility directed toward the targeted person, and Emotional Over-Involvement (EOI) with the targeted person. Each of these elements potentially plays a different role in increasing the risk of relapse or the onset of the disorder. However, typically, only Criticism and EOI are used in EE research because Hostility and Criticism are strongly correlated (Vaughn & Leff, 1976)

These dimensions were operationalized by developing the Camberwell Family Interview (CFI). The CFI is an extensive, standardized, structured interview with

important family members, typically, the patient's spouse or parent. Criticism reflects relatives' expressions of unfavorable, dissatisfying, and regretful emotions, or desire for things to be different in regard to the patient or the patient's illness. However, overtly critical expressions are not the only ways the CFI scoring defines a statement as Criticism. Even though they do not explicitly blame the patient, the following statements are the examples of comments of mothers towards children with mental illness that would be scored as Criticism: "I'd rather he didn't lie to us" or "I wish that he could hold down a job—any job would do" (Leff & Vaughn, 1985, p. 38).

Hostility includes expressions of dislike or rejection of a patient, and is characterized with comments that attack the patient as a person rather than his/her behaviors because of his/her mental disorder. The following statement is an example of comments coded as Hostile: "He's not any benefit to himself or any benefit to society or any benefit to the family situation" (Leff & Vaughn, 1985, p. 41).

Lastly, Emotional Over-Involvement or EOI includes expressing a great many worries about the patient in an extremely enmeshed or symbiosis-like relationship. Mothers show self-sacrificing behaviors and over-protection of the child. They present exaggerated emotional responses, such as extremely intense anxiety directly related to the patient's welfare, and often sacrifice having a life of their own in order to devote their

lives to caring for the patient. The behaviors of EOI were found to be characteristic of families of patients with depression, anxiety, and other psychiatric illnesses. The following statements would be coded as EOI: “I felt terrible—I felt my whole world was shattered.... I’ve spent many a time crying, wondering what went wrong almost every day” (Leff & Vaughn, 1985, p. 45).

All of these concepts must be understood within their cultural context. For example, criticism must be understood from the standpoint of the cultural norm and values related to criticism. In Japanese culture, criticism may be part of a group-oriented model of self improvement. Likewise, evaluations about whether a person is emotionally over-involved or enmeshed depends on cultural normative standards about the appropriate levels of involvement. In the following review, research highlighting the links between criticism and EOI will be presented, followed by details about Japanese cultural norms related to parenting.

### **Brief Review of Adult Studies of EE**

Consistently, research has shown that higher level of maternal or spousal EE is a predictor of relapse or poor outcome among adult patients with a wide range of mental and physical disorders, including schizophrenia (Marom et al, 2005; Huguelet et al., 1995; McCreadie et al., 1993), unipolar depression (Hooley, Orley, & Teasdale, 1986;

Hooley & Teasdale, 1989; Vaughn & Leff, 1976; Hooley & Licht, 1997; Kamal, 1995), bipolar disorder (Miklowitz, Goldstein, Nuechterlein, Snyder, & Mintz, 1988; Miklowitz, Goldstein, Richards, Simoneau, & Succath, 2003; Vaughn & Leff, 1976;), borderline personality disorder (Hoffman et al., 2005; Coville et al., 2008), obsessive compulsive disorder (Chambless, Bryan, Aiken, Stelketee, & Hooley, 2001), anxiety disorders (Chambless et al., 2001), and eating disorders (Butzlaff & Hooley, 1998; Leff & Vaughn, 1985; Hedlund, Fichter, Quadflieg, & Brandi, 2003).

Cross-sectional studies have found the relationship between specific type of disorder and EE. For example, individuals diagnosed with depression are more sensitive to Criticism than individuals with schizophrenia (Hooley et al., 1986; Hooley & Gotlib, 2000; Hayhurst, Cooper, Paykel, Vearnals, & Ramana, 1997), individuals diagnosed with obsessive-compulsive disorder or agoraphobia were more likely to relapse when they lived in family with high level of Hostility (Chambless & Stekete, 1999; Chambless, Floyd, Rodebaugh, & Stelketee, 2006), and the relatives of individuals diagnosed with anxiety disorders were found to be more emotionally over-protective (EOI) about patients' difficulties. Furthermore, longitudinal studies have reported there are relationships between the number and/or lengths of hospitalization and the important relative's higher level of EE (Criticism or EOI) (Marom et al., 2005; Huguelet et al., 1995;

McCreadie et al., 1993; Schulze, Hornung, Stricker, & Buchkremer, 1997). A longitudinal study has shown that the relative's EE status (high or low) is stable over 5 years in the majority of relatives (63% of the relatives of 32 schizophrenic patients) (McCreadie et al., 1993), reflecting a more fixed attitude toward the patient (Huguelet et al., 1995).

In short, high levels of EE, especially high levels of Criticism, are a prognostic indicator of the course of disorders among adults across a broad spectrum of psychological disorders and chronic physical health problems. Criticism/Hostility is more strongly related and EOI is less strongly related to relapse rates, poorer outcomes of intervention programs for treating disorders, and the course of development of disorders. That is, the predictive power of EE levels in family members of persons with a variety of psychological and medical has been studied both cross-sectionally and longitudinally with consistent results.

The EE construct may be a proxy for relatives' attributional style and their beliefs about how voluntary the symptoms of the disorder are (Brewin, MacCarthy, Duda, & Vaughn, 1991; Hooley, 1998). Relatives tend to attribute their own personal problems or difficulties to themselves, and assume this is true for others. Relatives with high EE are less flexible and have a low tolerance for family members' behaviors or difficulties

(Barrowclough & Hooley, 2003; Hooley & Campbell, 2002; Hooley & Hiller, 2000).

Even though there are inconsistent results between studies with clinically-referred and community samples, many studies have reported enough evidence to suggest that a high level of relatives' EOI is related to relapse in anxiety disorders. Longitudinal studies demonstrated that either high EE or high level of Criticism by parents or spouse was significantly related to the readmissions and a longer hospitalization, compared with low EE or a low level of Criticism.

### **Children and Maternal EE**

#### **Maternal Criticism and Externalizing Behavior Problems**

Studies of maternal EE have explored children's behavior problems. A significant relationship between high maternal Criticism and externalizing problems in children has been found by many studies across countries and cultures (Stubbe, Zahner, Goldstein, & Leckman, 1993; Peris & Baker, 2000). One study compared mothers' level of Criticism among three groups of children ages 6-11: 30 children referred for conduct disorder, 30 children for emotional disorders, and 30 children in a control group (Vostanis, Nicholls, & Harrington, 1994). Mothers of children referred for conduct disorder or emotional disorders were rated as having significantly higher EE, compared with mothers of non-referred children. Among the three groups, a high level of maternal Criticism

discriminated the group of children referred for conduct disorder from children with emotional disorders and the control group. The level of mother's Warmth was also significantly different in the three groups. Mothers of children with conduct disorder or psychiatric disorders showed the least Warmth, and mothers of children in the control group showed the most (Vostanis et al.).

Stubbe and her colleagues (1993) conducted a study among 108 children (6-11) and their mothers. The children's diagnoses varied: 72.4% had no diagnosis, 14.8% had been diagnosed with a disruptive behavior disorder (ADD, ODD, or CD), and 9.2% carried an anxiety-depressive disorder (e.g., overanxious disorder, obsessive compulsive disorder, Major Depression Disorder). Among 108 mothers, 31 (23.3%) mothers were evaluated as high EE, with 41% of these 31 mothers characterized as high EE Criticism and 52% as high Emotional Over-Involvement. However, only 24% of their children carried a formal diagnosis (Stubbe et al.). However, more than half of children (56.1%) with high EE mothers (based on high levels of Criticism and/or EOI) showed one or more diagnosable conditions, compared with only 18.9% of children with low EE mothers. When only those mothers with high levels of Criticism were considered, approximately 75% of their children met criteria for one or more disorders (based on DSM-III-R). In contrast, 70% of children who lived with mothers who showed high levels EOI were

diagnosed with anxiety-depressive conditions exclusively and had no co-morbid externalizing behaviors.

Furthermore, a longitudinal study confirmed the significant relationship between mother's high Criticism and young children's later externalizing behavior problems. A longitudinal study with children and mothers ( $N = 91$ ) examined the power of maternal EE assessed when their children were in preschool to predict children's disruptive behaviors in 1st grade ( $n = 48$ ) and DSM-IV diagnoses in the 3<sup>rd</sup> grade ( $n = 69$ ) (Peris & Baker, 2000). The original sample was skewed in that children with parents who specifically reported externalizing or internalizing symptoms were overrepresented.

The disruptive behaviors were measured by the mothers' report on the Child Behavior Checklist (CBCL) and the 1<sup>st</sup> grade teacher's report on the Teacher Report Form of the CBCL (TRF). Mothers' high levels Criticism, but not her level of EOI, at preschool was related significantly to children's externalizing problem behaviors in the 1<sup>st</sup> grade. A majority (72%) of preschool children with externalizing behavior problems had mothers classified as high Criticism 2 years earlier. However, a child's internalizing problems were not related to the mother's EE status.

In the 3<sup>rd</sup> grade, 69 of the original sample of 91 children were assessed for DSM-IV disorders. Of the 69, 35 met criteria for one or more diagnoses, reflecting the skew in

the recruiting procedure. Of the children whose mothers were rated as high EE at preschool, 64.3% met DSM-IV criteria for Attention Deficit/Hyperactivity Disorder (AD/HD). Maternal stress and children's behavior problems at preschool independently explained 17.7% and 16% of the variance, respectively, for the externalizing behavior problems at 3rd grade. Maternal EE rating at the time when children were in preschool explained an additional 7.7% of the variance.

#### **Specific EE Components (Criticism and Emotional Over-Involvement) as Predictors of Internalizing and Externalizing Behaviors**

There are many studies strongly indicating the relationship between high levels of EE Criticism and externalizing problems in children and adolescents, as well as several studies demonstrating the relationship between high EE Criticism and internalizing problems (Asarnow, Tompson, Woo, & Cantwell, 2001; Hirshfield et al., 1997; McCarty, Lau, Valeri, & Weisz, 2004; McCarty & Weisz, 2002; Stubbe et al., 1993; Vostanis et al., 1994). High EOI has been reported to be specific to anxiety disorders in Western and Japanese studies (Chambless & Steketee, 1999; Stubbe et al., 1993; Yoshida, 2001; Hirshfield, Biederman, Brody, Faraone, & Rosenbaum, 1997). Only one EE study conducted among Japanese adolescents reported a significant relationship between high maternal EOI and eating disorders in adolescents (Yoshida, 2001). The results suggest

that the specific maternal attitude represented by a higher level of Criticism or higher level of EOI may be more stressful to children who are particularly vulnerable to a specific disorder, anxiety disorders vs. Oppositional Defiant Disorder for example (Asarnow, Godstein, Tompson, Guthrie, 1993).

**Criticism as a predictor of internalizing and externalizing disorders.** McCarty et al. (2004) conducted a study among 252 children and adolescents (7-17) referred to a clinic. They examined (a) the relationship between maternal EE status and general behavioral characteristics of mothers directed towards their children, and (b) the specific relationship between EE components, Criticism and EOI, and children's diagnoses. Within the sample of children, many were diagnosed with more than one disorder. Behavior disorders were most commonly diagnosed in this sample (disruptive behavior disorders, 52.1%; AD/HD, 37.0%), although over a third of the sample were diagnosed with depressive disorders (33.3%) and/or anxiety disorders (37.6%). Mothers with high EE were more likely to make antagonistic and negative comments, and express disgust toward their children, compared to mothers with low or marginal levels of EE. In addition, low EE mothers interacted with their children with less harshness than high EE mothers.

Similar results were found in an earlier study (McCarty & Weisz, 2002). Mothers who were very critical of their children tended to perceive their children as having more externalizing behaviors or as being more problematic. However, these very critical mothers did not perceive their children as having internalizing behavior problems. The mother's focus on her child's externalizing behaviors (aggression, high-risk or delinquent behaviors) would be reflected in her more extreme ratings of externalizing behaviors at the cost of observing the internalizing behaviors (withdrawal, somatization) that her child also might be displaying.

**EOI and child disorders.** There is contradictory evidence as to whether EOI is specific to particular behavior problems in children. Some studies found the relationship between relatives' high EOI and internalizing behavior problems, especially anxiety disorders (Hirshfield et al., 1997; Stubbe et al., 1993; Chambless & Steketee, 1999; Yoshida, 2001), but other studies failed to find the relationship (McCarty & Weisz, 2002; McCarty et al., 2004). In two different studies by McCarty and her colleagues, mothers' high level of EOI was related neither to the children's internalizing nor externalizing behaviors. These findings contradict those of Stubbe et al. (1993). In Stubbe et al.'s sample, 70% of children who lived with mothers showing high levels of EOI were diagnosed with anxiety-depressive conditions exclusively and had no co-morbid

externalizing behaviors. The difference in results may lie in the samples: the children in the two McCarty studies were all clinically referred, whereas only 28% of the Stubbe et al. sample had been referred to a clinic. In addition, McCarty et al. (2004) suggest two reasons: low construct validity of diagnoses with children and adolescents who are clinically referred and the difficulty in detecting maternal behaviors corresponding to EOI. Similar concerns can be raised about issues of diagnosis and definitions of criticism and emotional over-involvement in the Japanese culture.

**Linking maternal criticism and child problems.** There are several possible explanations for the relationship between maternal EE and childhood emotional and behavior problems. “The combination of particular child vulnerabilities and EE attitudes, however, may lead to poor outcomes” (Asarnow, Tompson, Hamilton, Goldstein, & Guthrie, 1994, p. 130) reflects the stress-diathesis model. That is, negative maternal attitudes expressed as high EE create stresses for children who are especially vulnerable to some childhood disorders, such as mood, eating, and anxiety disorders (Asarnow et al., 2001; Butzlaff & Hoooley, 1998; Coiro & Gottesman, 1996; Hoooley & Gotlib, 2000; Hirshfeld et al., 1997; Nelson et al., 2003). For example, Hirshfeld et al. reported that the behavioral inhibition of children suspected to be at risk because their biological family members were outpatients with anxiety or depressive disorders was strongly related to

maternal Criticism. The development of socio-emotional competence may be negatively influenced through such intense EE interactions (Seifer, Baldwin, & Baldwin, 1992).

A second explanation is that Criticism in an interactional pattern occurring on a daily basis can be interpreted as a form of social threat. Family member's critical remarks and psychological, cognitive, and physical symptoms displayed by people who are vulnerable to depression are linked through the nervous system. Criticism is especially difficult to handle for people who are vulnerable to depression (Hooley & Gotlib, 2000; Hooley, Gruber, Scott, Hiller, & Yurgelun-Todd, 2005). A psychosocial event and maternal criticism are so stressful or overwhelming to the target person that he or she reacts with biobehavioral symptoms (Hooley et al., 2005). Neurological evidence of the impact of criticism was found in a study by Hooley et al. (2005). Adult patients with unipolar depression were asked to listen to two different audiotapes. One tape was the critical remarks by the patient's own mother and the other was her remarks praising the patient. The outcome variable was the change in the activity of the dorsolateral prefrontal cortex (DLPFC), a brain region known to be central to the integration of cognitive and emotional information. The level of activation in DLPFC of patients who had a history of major depressive episodes significantly *decreased* after they listened to their mothers' criticism. The activation level in DLPFC stayed the same as they listened to their

mothers' praise. The control groups showed the same activation levels for both criticism and praise (Hooley et al.). This study provides a neural model for relapse in depression.

**Maternal criticism and emotional over-involvement linked to emotional or behavioral disorders.** A third possible explanation for the relationship between maternal EE and emotional or behavioral disorders comes from the Double Bind theory. In this conceptualization, the depressed child is trapped between the mother's high level of Criticism and her EOI with the child. Based on the Double Bind theory, when their mother expresses both high levels of Criticism and EOI, the child is unable to respond to the criticism and the EOI at the same time, creating a kind of paralysis . Mothers with high EOI or both high EOI and Criticism make more disturbing statements (Strachan, Goldstein, & Miklowitz, 1986) or more confusing, ambiguous, and unclear statements (Hubschmid & Zemp, 1989). The child is told s/he is doing everything wrong and, at the same time, told how much s/he is loved and cherished by the mother (Nichols & Schwartz, 1998). This kind of environment leads to psychological confusion.

Transactional theory: Reciprocal negative exchanges. A fourth explanation comes from Transactional theory (Sameroff & Chandler, 1975). The mother is influenced by her child's difficult behaviors and becomes very negative toward the child. In response to the child's behavior, the mother becomes irritable and is increasingly critical of the child.

Reciprocally, when the child is criticized by the mother, s/he reacts negatively to the parent (McCarty et al., 2004), further fueling the cycle. In this environment, the child is likely to show increasing levels of both internalizing (depression, withdrawal, somatization, anxiety) and externalizing (aggression and delinquency).

### **Contribution of Maternal Depression to Children's Behavior Outcomes: Possible**

#### **Mediating Effect of EE**

Research evidence makes it clear that maternal depression is one of the most important predictors of negative developmental outcomes and dysfunction for children (Feng et al., 2009; Buehler & Welsh, 2009; Hirshfeld et al., 1997; McKee et al. 2008).

When the mother is depressed, all aspects of parenting are limited—supervision, teaching, communication, monitoring, etc. (e.g., DeGarmo, Patterson, & Forgatch, 2004).

Compared to children of mothers with no history of depression, children of mothers who are clinically depressed or who have a history of depression are at high risk for having internalizing and externalizing behavior disorders (Davies, Dumpenci, & Windle, 1999; Schwartz, Dorer, Beardslee, Lavori, & Keller, 1990). One of the potent processes affecting these children is that a depressed parent is less likely to provide supportive communication (responsiveness and connectedness to the child) and behavioral control (regulation of the child's behavior through firm and consistent

discipline). Interaction between mother and child becomes negative, characterized as less praise, less effective supervision, less consistent discipline, but more conflict, reflecting criticism, rejection or withdrawal, and/or disengagement.

The research literature also demonstrates that children of mothers with depression also are more likely to be vulnerable to emotional or behavioral disorders. In terms of the Diathesis-Stress model, there are several potential sources of stress when living with a mother with depression. There is evidence that a mother with depression has less control of her negativity toward her child. Cognitively, she tends to perceive her child as having more externalizing behaviors than another observer would find (McCarty et al., 2004). Depressed mothers are more likely to “perceive causes of their children’s negative behavior as stable, personal/idiosyncratic and controllable by the child and simultaneously showed a greater tendency to perceive themselves as a cause of their children’s negative behavior” (McCarty et al. ,2004, p. 90). This formulation has been shared by other researchers (Bolton et al., 2003; Fergusson, Lynskey, & Horwood, 1992; Hamish, Dodge, & Valente, 1995). A negative view of her child is expressed in critical and hostile remarks and behavior. At the same time, the depressed mother is more likely to blame herself for problems she sees in the child. To compensate, she may become emotionally over-involved with the child, becoming intrusive and overly protective.

Also when a mother is depressed, she lacks the energy to provide proper care, discipline, support, and supervision of her child. Multiple effects of this lack of energy are evident in the child developing disturbances of secure attachment (Ainsworth et al., 1989), becoming more likely to adopt a coercive style in interacting with the mother (Patterson, 1982), moving through the neighborhood and community without supervision, and engaging in inappropriate and antisocial behaviors (DeGarmo & Forgatch, 2005; Patterson, Reid, & Dishion, 1992). In this situation, the child also fails to develop a sense of self-competence and uses a negative cognitive style to process life events.

From a behavioral perspective, this pattern of simultaneously blaming their child and perceiving themselves as the cause of the problems is consistent with the pattern seen in mothers of adult patients with other disorders (e.g., schizophrenia) (Barrowclough & Hooley, 2003). This “child-blaming” (Bolton et al., p. 242) is related to harsher parental disciplinary responses as well (Joiner & Wagner, 1996; Smith-Slep & O’Leary, 1998), something that would be expected to increase the child’s negative behaviors.

Three EE studies included mother’s depression as a variable in examining the linkages among depression, EE, and children’s behavior problems. Bolton et al.’s study (2003) examined the relationship among a mother’s depression, her EE, and attributional style and her child’s behavior problems with 61 mothers and their children. Mothers who

scored higher on Beck Depression Inventory showed higher levels of EE (either Criticism or EOI), but lower warmth. Mothers with high EE and low EE showed significant differences in the pattern of their attribution of their children's behavior problems. Depending on the specific EE element, attribution varied among mothers with high EE. Mothers with high Criticism were more likely to believe that child could (and should) control his or her behavior and attributed the child's behavior problems to child him/herself. On the other hand, mothers with high EOI tended to perceive their children's problems as their fault, blaming themselves and saying that they failed to control children's negative behaviors. Maternal depression was a significant predictor of high maternal EE. Further, maternal EE mediated between mother's depression and mother's rating of externalizing problems for children.

Another study (Nelson et al., 2003) focused on the association between mother's depression or EE and the behavior problems of 800 15-year-old adolescents. Mother's high EE Criticism partially mediated between mother's depression and children's behaviors and functional impairment. Mother's depression and maternal Criticism were also independent predictors of children's behaviors and functional impairment. EOI was not a predictor of either the adolescents' behaviors or functional impairment.

In a third study, the relationships among maternal Criticism, maternal depression, and externalizing behavior problems in 194 early adolescents aged 11-12 were examined (Frye & Garber, 2005). The new finding in this study was the “child-effect model” (p. 1): adolescent externalizing behaviors in 6<sup>th</sup> grade significantly predicted maternal Criticism in 8<sup>th</sup> grade. EOI in the 8<sup>th</sup> grade was not predicted significantly by the 6<sup>th</sup> grade externalizing behaviors.

In summary, mothers with high levels of depressive symptoms give more critical and hostile comments (reflecting to a high level of EE Criticism) and less warmth to their children because they perceive the difficulties as in children, i.e., the child’s internal or personal problems. Mothers with depression and high levels of EOI blame themselves for the child’s problems. Both groups of mothers tend to rate children’s behaviors more negatively, but both mother’s depression and high EE levels also are independently predictive of children’s behavior outcomes. Three factors, mother’s depression, her EE, and her causal attribution combine to influence her child’s behavior.

However, how the mother’s depression and EE are related or how these two factors interact together as negative contributors has not been clarified adequately. There have been debates about the relationship between the construct of EE and maternal depression, and EE constructs have been seen as a proxy for the symptoms of maternal

depression. In one study, maternal depression predicted all the child's problems, including internalizing and externalizing problems and functional impairment (Nelson et al., 2003). However, the evidence for such a strong relationship between EE and parental depression has been contradicted by the results of a study by McCleary and Sanford (2002) who found that depression and maternal EE Criticism independently predicted children's externalizing behavior problems and functional impairment.

Two models have been proposed to explain the relationships among maternal depression, EE, and children's behavior problems; one is additive, the other mediational. The additive model proposes that children of mothers who had/have past or current depression and high EE are three times more likely to have emotional behavior problems than children of mothers who only had/have past or current depression with low or medium levels of EE (Schwartz et al., 1990). Consistent with this additive model is the finding that EE criticism and maternal depression independently contributed to children's externalizing behaviors (McCleary & Sanford, 2002). On the other hand, the mediational model argues that maternal EE is a mediator for the relationship between maternal depression and child behavior problems (Nelson et al., 2003).

One study has been conducted to examine the influence of EE on children's behavior problems by sampling monozygotic twins (age 5) to eliminate biological

differences as a confounding variable (Caspi et al., 2004). The result showed that there is a longitudinal, systematic effect of different maternal EE on the behavior problems of monozygotic twins. The twins displayed different behavior problems that reflected the different characteristics of maternal EE directed toward each twin. Also, differences in behaviors in twin siblings at age 5 were stable at least to age 7.

Although monozygotic twin siblings carried the same genetic makeup and grew up in the same family environment (Bronfenbrenner, 1979), each twin was differently influenced by maternal emotional attitudes (Caspi et al., 2004). This suggests that the maternal EE creates only a part of the overall family environment, but has an independent effect on children's behavior problems (Hirshfeld et al., 1997). Maternal EE is a child-specific aspect of mothers' emotional attitude toward the target individual child and independently affects the presence, course and outcome of children's behavior problems (Bolton et al., 2003).

### **EE Research with Japanese Samples**

#### **Review of Japanese EE Studies**

**Research with adult Japanese samples.** In Japan, as in the rest of the world, the majority of EE studies have been focused on the relationship between the relatives' EE status and the patient's risk of relapse. Studies have used the CFI or the FMSS translated

into Japanese with family members of patients with schizophrenia (Inoue, Tanaka, Shimodera, & Mino, 1997; Mino, Inoue, Tanaka, & Tsuda, 1997; Mino et al., 2001; Mino et al., 1998; Nomura et al., 2005; Shimodera, Inoue, Mino, & Fujita, 2002; Tanaka, Mino, & Inoue, 1995), mood disorders (Mino, Inoue, Shimodera, & Tanaka, 2000; Mino et al., 2001; Uehara, Yokoyama, Goto, & Ihada, 1996; Tanaka et al., 1995; Mino et al., 1997), depressive symptoms (Mino et al., 1998), social functioning (Inoue et al., 1997) and, uniquely, the deterioration in symptoms of dementia (Nomura et al., 2005). Results of these Japanese studies with the CFI or FMSS have paralleled those of Western studies.

The four published papers examining family members' EE status and adult patients with schizophrenia are a series based on the same 52 adult patients with schizophrenia and their relatives. The relatives included parents (father and/or mother), spouses (wives or husbands), and other important household members. Findings were consistent with Western EE studies. The key relatives' EE status is strongly related to the risk of relapse in adult patients. The first EE study in Japan demonstrated that the 9-month relapse rate was significantly higher in patients who were from high EE families than those from low EE families (Tanaka et al., 1995).

Using data from the same sample, Mino et al. (1998) examined the changes in symptom levels and relatives' EE status at a 9-month follow-up after discharge from the

hospital. Specifically, they examined the association between relatives' EE status and changes in the "negative symptoms" levels (emotional withdrawal, motor retardation, blunted affect) and depressive symptoms. Regardless of whether the patient had relapsed, a significant relationship was found between relatives' EE status and the patients' emotional withdrawal and depressive symptoms. Patients who went back to high-EE relatives became more socially withdrawn and isolated than patients who lived with low-EE relatives. Further, the level of deterioration in social functioning (e.g., socially-expected activities and free-time activities) was significantly higher when relatives were in the high EE group (Inoue et al., 1997).

Followed by Tanaka's study, Mino et al. (1997) conducted a 2-year follow-up study to examine the relationship between EE and the risk of patients' relapse over 2 years. Similar to Western studies, 71% of patients who lived with family members with high EE status relapsed, but only 37% of patients who lived with family members with low EE status relapsed. Thus, the risk of relapse over 2 years is doubled when patients live with high EE relatives. Some potential confounding factors, such as duration of the illness and level of medication compliance, were controlled.

There are two studies examining the association between EE and the course of 32 patients with mood disorders (Mino et al., 2001) and 40 patients with major depressive

disorder (MDD) (Uehara et al., 1996). Across two studies, key relatives' high level of EE was significantly related to a high relapse rate in patients. Mino et al. found a remarkably low level of Criticism in the families with mood disorders, compared to families of patients with schizophrenia. Uehara et al. suggested that a previous history of depressive episodes added another risk factor for relapse. Importantly, the frequency of Criticism was significantly lower in Japanese families as compared with families of patients with mood disorders in Western countries. Mino et al. concluded that a lower cut-off point was needed to evaluate high- or low-EE in Japanese samples, reflecting the cultural differences.

**Research with Japanese adolescents.** There is only one study with Japanese adolescents and their mothers (Yoshida, 2001). The study examined the characteristics of the families of 25 adolescents with eating disorders using the CFI. The mean age of the adolescents was 18.6 years. Of the 25, 16 were diagnosed with anorexia nervosa and 9 were diagnosed with bulimia nervosa. Results showed that 44% of the mothers had high levels of EOI. Mothers were more likely to sacrifice themselves in attempts to protect their child. When compared with families of patients with schizophrenia and mood disorders, mothers of adolescents with eating disorders showed significantly higher levels of EOI. When the frequency of Criticism was compared across the three groups, mothers

of adolescents with eating disorders had much lower levels of Criticism than did relatives of patients with schizophrenia.

### **Resiliency and the Present Study**

It is clear that high EE, especially Criticism, in key relatives presents an increased risk of both the onset of psychological and behavioral disorders (Doane, West, Goldstein, Rodnick, & Jones, 1981; Schwartz et al., 1990) and relapse after stabilization (Brown & Rutter, 1966). However, it is important to note that not every adolescent at risk of schizophrenia because of family biological factors and critical parents actually becomes schizophrenic, nor do all children whose parents have a history of depression or other mood disorders actually develop such disorders. Such resilience in the face of serious challenges is a matter of great interest. One possible explanation for the resilience these children and adolescents show may lie within the child.

There is a complex dynamic of interaction between environment and the individual child which leads to different developmental courses and outcomes (Bronfenbrenner, 1979). Children who experience similar adversities in life show different developmental outcomes (multifinality), but on the other hand, children who live in extremely different environmental conditions develop the same or similar outcome (equifinality). The resilience model focuses more on the positive side of development and

helps to understand how some children living in stressful environment maintain their functioning and master their developmental tasks.

Resilience can be understood as either an outcome characterized by particular patterns of functional behavior despite risk or a dynamic process of adaptation to a risk setting. In an adverse setting, multiple risk factors and protective factors interact with one another (Olsson, Bond, Burns, Vella-Brodrick, & Sawyer, 2003). Resilience as an outcome is exemplified by good mental health, maintained functional capacity, and social competence. On the other hand, resilience as a process focuses the mechanisms or processes of the path led toward the certain outcome or of acts that modify the impact of a risk setting. That is, resilience is the developmental process by which young people successfully adapt. The mechanism of resilience occurs in a process of interactions of risk and protective mechanism in a risk setting (Olsson et al.). In this model, resilience is a cognitive-emotional resource. These resources have been hypothesized to include self-esteem and sense of coherence.

### **Mechanisms of the Joint Contribution of Environmental Factors and Child**

#### **Resiliency to Child Behavior Outcomes: Deficit Models vs. Resilience Models**

**Diathesis-Stress model and child behaviors.** The Diathesis-Stress model considers the potential contribution of the interaction between individual vulnerability



(including heredity, cognitive, and psychosocial vulnerabilities) and environment to the development of problems, and "it provides an important heuristic for the formulation of research questions, while at the same time providing a conceptual structure within which the meaning of research findings can be evaluated" (Richters & Weintraub, 1990, p. 70). For example, depression in children is seen as the result of the combination of stresses and vulnerabilities. Their interactions trigger children's internalizing or externalizing behaviors. There is a genetic predisposition to depression which will be expressed only if the environment is sufficiently stressful.

The Diathesis-Stress model has been also used to explain the relationship between maternal EE and children's behavior problems (internalizing and externalizing behavior problems) (Hooiey & Gotlib, 2007; Miklowitz, Goldstein, Falloon, & Doane, 1984). Subjected to frequent maternal criticism and expressions of hostility, children who are vulnerable to emotional disorders and/or behavioral disorders are more likely to perceive those mother's negative emotions as stress. Overwhelmed by maternal EE, they develop symptoms of mood disorders and anxiety ("acting in"), and/or behavior problems ("acting out"). Because of the nature and importance of the relationship with the mother and because of various vulnerabilities, the child is neither free nor able successfully to challenge the messages the mother is sending. Thus, children who have a pattern of



negative information processing (cognitively negative attribution) as a result of high levels of maternal EE and who live in a stressful environment are more likely to develop depressive disorders and/or externalizing behavior problems (e.g., Kwon & Laurenceau, 2002; Turner & Cole, 1993; Hankin, Abramson, & Silar, 2001).

However, the Stress-Diathesis model does not give us the final word about the development of psychological disorders and behavior problems because it does not adequately explain the exceptions to the development of maladjustment in children (Richters & Weintraub, 1990). Knowing that a mother is depressed does not automatically mean that her son or daughter fails to develop a positive sense of competence or engages in extreme internalizing or externalizing behaviors. Therefore, this research is guided by a resiliency model that can be used to explain both unhealthy and healthy outcomes.

**Resilience model and child behaviors.** In the 1970s, a different way of thinking about child development in unfavorable circumstances was gradually achieved through studies of people with disorders like schizophrenia. Researchers started to focus on people with schizophrenic disorder who functioned well in social settings. They were competent in meeting their responsibilities at work, in social relations, and in marriage (Luther, Cicchetti, & Becker, 2000). Corresponding to this new trend of investigation of

positive outcomes of adult patients with schizophrenia, children of mothers with psychological disorders were also studied. Many children maintain their functioning despite their high-risk status, and researchers increasingly examined individual variations in response to adversity.

Resilience refers to manifested competence in the context of significant challenges to adaptation or development (Masten & Coatsworth, 1998). Resilience is defined as “the process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances” (Masten, Best & Garmezy, 1991). Previous studies investigated such resilience in children who were under multiple adverse conditions, such as socioeconomic disadvantage (Garmezy, 1995; Rutter, 1979; Werner & Smith, 1992), parental mental illness (Masten & Coatsworth, 1998), maltreatment (Cicchetti & Rogosch, 1997; Cicchetti, Rogosch, Lynch, & Holt, 1993), chronic illness (Masten, 1994), and catastrophic life events (O’Cougherty-Wright, Masten, Northwood, & Hubbard, 1997).

Compared to the Diathesis-Stress model (Meehl, 1962; Rosenthal, 1963), the resilience model helps to understand individual variations in response to risk factors (Jenkins, 2008; Rutter, 1990; 1993): “a dynamic process encompassing positive adaptation within the context of significant adversity” (Luthar et al., 2000, p. 543). The

main characteristics of the resilient child in middle childhood are positive interpersonal relationship in a peer group, self-management of behavior, and academic performance. It has been widely reported that relationships with caring, socially-responsible adults and higher levels of intellectual functioning in the child are important elements leading a child to be resilient. Better intellectual abilities play a role in allowing the child to process adverse events in more positive ways to allow for the use of a variety of coping strategies (hopefulness vs. hopelessness, solvable problem vs. insolvable) (Masten, 1994).

### **Internal Resiliency Resources in Children**

**Self-competence as a mediator between maternal negative feedback (EE) and childhood adjustment.** Self-competence affects not only a child's construction of self-concept and sense of coherence, but also plays a role to link the environment (context) and the processes of development of children and adolescents. Negative self-conceptualization is a risk for depressive symptoms because those who see themselves incompetent are more likely to view their world negatively (Jacquez, Cole, & Searle, 2004; Cole, Martine, Peeke, Seroczynski, & Fier, 1999). On the other hand, when children acquire a strong sense of self-competence, they are more likely to process difficult situations successfully. Achieving an internalized sense of self-competence is

limited by excessive parental<sup>1</sup> negative feedback, particularly negative maternal expressed emotion (Brown & Rutter, 1966; Vaughn & Leff, 1976), because children take information about themselves from the environment, “particularly feedback from significant others, as they construct beliefs about their competencies” (Jacquez et al., 2004, p. 355).

The mother’s perception of her child’s competence, communicated verbally and non-verbally to her child, is strongly related to the child’s experience of self-competence (Cole, Martin, & Powers, 1997; Cole, Jacquez, & Maschman, 2001). In middle childhood, children are influenced heavily by their mothers’ feedback. The feedback conveys to the child what the mother believes the child can accomplish in overcoming day-to-day challenges, which in turn is related to negative representational models of the self (Cicchetti, 1996; Rohner & Britner, 2002).

**Development and “Sense of Coherence” as a resilience resource.** The concept of “Sense of Coherence” was developed within the Salutogenic Model that focuses on the

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<sup>1</sup>While the father’s role in developing the child’s self-competence is acknowledged widely, the information on parent-child interactions in the research literature is overwhelmingly based on mother-child data.

coping styles of persons who remain healthy in a stressful environment, as opposed to focusing on persons who respond to stress with increased risk of sickness or disease (Antonovsky, 1987). The term “salutogenesis,” emphasizes behaviors or factors that are health-promoting rather than focusing on the pathogenic origins of disease or poor coping behaviors (Wolff & Ratner, 1999). According to Antonovsky, a person’s sense of coherence is a global coping or resilience resource (Johnson, 2004). Children who develop a strong sense of self-competence in childhood lay the foundation for an adolescent and adult “sense of coherence” (e.g., Glanz, Maskarinec, & Carlin, 2005; Johnson, 2004; Wolff & Ratner, 1999). Coherence (or sense of control of one’s own life) is the ability to perceive stressors as manageable, meaningful, and comprehensible, instead of being overwhelmed and hopeless in the face of such events.

Comprehensibility is described as the person’s cognitive ability to cope with a stressor. That is, to see the stressor as a problem that can be solved. Manageability is defined the individual’s willingness to use instrumental coping skills to deal with the stress. When the stressor occurs and the person perceives it a comprehensible or solvable, s/he acts to resolve the stressor. Meaningfulness means that the person has motivational energy when facing stress instead of fleeing the situation or becoming paralyzed. Thus, a person with a strong sense of coherence does not avoid thinking about the stressor, might

engage his/her social network for support or change his/her diet to a healthier one, and is willing to address the stressor because s/he believes that a positive outcome is possible (Antonovsky, 1987).

The sense of coherence develops in the context the child's experiences of her/his family (Wolff & Ratner, 1999) and in the wider contexts of school, peer relationships, etc. A strong sense of coherence in an adult is positively related to the experiences in childhood and adolescence that are shaped by "structured role relationships within the family and the emergent personality disposition" (Sagy & Antonovsky, 2000, p. 164). Thus, early experiences set the stage for a strong or weak sense of coherence that is well established before young adulthood (Glanz et al., 2005). Children exposed to unresolved and uncontrollable traumatic situations (e.g., severe physical abuse, sexual abuse, bombings, war) would be predicted to have a very weak sense of coherence or a high degree of learned helplessness (Maier & Seligman, 1976). In contrast, children who are encouraged and assisted in solving problems or dealing with difficult or traumatic situations would be predicted to have a strong sense of coherence.

Active engagement and participation in decision making and emotional closeness to family members are crucial for child to develop a strong sense of coherence (Johnson, 2004, p. 421). The result is the development of a basic trust in life and in oneself during

middle childhood. Child-rearing patterns, the family's ways of socializing the child, influence the development of sense of coherence in a way that leads to the development of meaningfulness (Wolff & Ratner, 1999). For example, when a child engages in activities with the family, the nature of their responses to the child creates a set of experiences that give the child a sense of the "possible."

Severe punishment or criticism of the child for his/her behavior in these activities decreases meaningfulness, and the child comes to see her/himself as incompetent. Conversely, with positive interactions in the family environment, the child can demonstrate self-resourcefulness and knowledge in other contexts, and expects to have positive relationships with others. Sense of Coherence theory is consistent with Bronfenbrenner's (1979) view that child development occurs through multiple and continuing interactions with environments.

There are many ways to describe the attributes of successful children. They are willing to try new things because of a sense of self-efficacy ("I can do it"); they cooperate in play with other children ("I am responsible for my behavior") because of an internal locus of control and because of a positive self-concept ("I am likeable, others accept me"); and they see problems as solvable, accept failure as temporary, and continue to attempt to master a task (developing sense of coherence). Thus, it may be hypothesized

that the positive family environment helps children develop a strong sense of coherence.

In turn, the sense of coherence will affect the child's general health and behaviors (including internalizing and externalizing behaviors).

Children who fail to resolve this stage of development have intense feelings of inferiority and incompetence in both academic achievement and in developing positive peer relationships (Nelson et al., 2003). Regardless of their prior development, it is important for children to be supported and encouraged by others during this time (Zembar & Blume, 2009). A positive relationship with the child's primary caregiver (typically, the mother) is an important source of support for the child. When the relationship is limited by continuing conflict or physical/psychological neglect and/or abuse, the development of the child's sense of coherence is stunted (e.g., DeGarmo & Forgatch, 2005; Forgatch & DeGarmo, 1999; Forgatch, Patterson, DeGarmo, & Beldavs, 2009).

**EE and resiliency.** Many studies of Expressed Emotion have examined the relationship between maternal emotional attitudes and children's internalizing and externalizing behavior outcomes without considering child's resiliency factors. So, even though there is a relationship between maternal EE and children's negative behavior problems, it does not mean that "the variable has an effect in the absence of other

variables, even though it sounds as if that is what it means” (Rutter, 1990, p. 184). Rutter said that “the study of protective processes could throw light on what is involved” (p. 184).

A model of resilience can guide research that examines complex interactions (processes) among protective factors and risk factors. Such research would include different dimensions of contexts, as well as the course of positive or negative outcomes. A model of resilience moves away from a simple model of maternal Criticism and EOI as the cause of children’s negative outcomes. For example, continuing negative experiences in a social context impede positive development of internal resilience in children and adolescents, such as self-competence and a growing sense of coherence. Social context is defined as “a set of interpersonal conditions, relevant to a particular behavior or disorder and external to, but shaped and interpreted by, the individual child” (Boyce et al., 1998, p. 146). Even one context (e.g., family) consists of multiple dimensions (Boyce et al.), and each of these dimensions interacts with one another in meaningful ways (Bronfenbrenner, 1979).

### **Mother-Child Relationships in Japan**

The present research addressed the relationships among maternal depression, maternal EE, child resilience factors, and behavioral problems for children in Japan. It is

necessary to consider the differences between Japanese and American families in terms of child rearing strategies, behavioral expectations, and normative parent and child behaviors. These cultural differences could very well affect the choice of instruments used or the interpretation of the results of the study.

**Mother-child relationships in the macrosystem.** The meanings of the interactions in the dyadic relationship between mother and child are constructed by the culture, subculture, or other macrosystem structures in which the family and the dyadic relationship are embedded (Bronfenbrenner, 2005).

The macrosystem consists of the overarching pattern of micro-, meso-, and exosystems characteristic of a given culture, subculture, or other extended social structure, with particular reference to the developmentally instigative belief systems, resources, hazards, lifestyles, opportunity structures, life course options, and patterns of social interchange that are embedded in such overarching systems. (Bronfenbrenner, 2005, p. 101).

**Conceptions of child development in Japan.** Researchers have studied Japanese mother-child relationships to understand the socioemotional development of Japanese children (Shwalb, Shwalb, & Shoji, 1996). The formal study of mother-child relationships in Japan began in the 17<sup>th</sup> century, but much of the contemporary research

in Japan has focused on comparisons with data from Western studies. For example, American researchers reported that Japanese mothers were “physically closer and more soothing toward their babies” (Shwalb et al., p. 171) when compared to American mothers. Caudill and Weinstein (cited in Shwalb et al., p. 171.) interpreted those child rearing behaviors to mean that “Japanese mothers ‘produced’ less active infants.” Chao (1994) has argued that, in the early stages of child development, the mother in East Asia “provides an extremely nurturing environment for the child by being physically available and by promptly attending to the child’s every need. When children reach school age, the mother provides the support and drive for them to achieve in school and to ultimately meet the societal and familial expectations for success” (p. 1112).

Establishing the mother-child relationship in Japan is influenced by Confucian principles to a large extent (Chao, 1994, Kojima, 1986; Shwalb et al., 1994). The basic idea is that a person is defined by his/her relationships with others. Ideal relationships are structured to define the role of each person in the relationship (child-mother, child-father, husband-wife) and the need for harmonious relationships is emphasized. In a relationship, each person must strive to maintain harmony, based on her/his role in the relationship and level of responsibility for the relationship.

Confucian concepts are the basis for the ways in which a mother interacts with her child. Japanese mothers' attitudes, especially for educating or parenting a child, are also influenced by the popularly-accepted Japanese theory of the child. There is a general belief that all children are born with great potential and abilities. Further, children are, in fact, quite similar to one another at birth in terms of their innate characteristics and intellectual abilities (Takata, 1987). These potential abilities cannot be actualized without proper support and guidance in the child's early years, provided mainly by the mother. Any individual differences that come to exist in children are attributed to external factors, such as the environment, but also including the mother's efforts with her child. Even though there is a tendency to look for the external factors to account for individual differences in children, there is a general belief among Japanese that the child is an "autonomous learning organism" (Kojima, 1986, p. 322).

Two things are emphasized in child rearing as children move beyond infancy: to value living in harmonious human relationships and to contribute to society through the exercise of honesty, hard work, and patience. With the idea of child as an "autonomous learning organism," mothers are encouraged not to be controlling of the learner's (child's) behavior, but to allow the child to learn to regulate behavior by himself or herself. Japanese mothers' socializations with their children are aimed to cultivate a child

who is “*sunao*,” understood to mean “authentic in intent and cooperative in spirit” (Holloway, 1988; Shimahara, 1986). Such a child has mastered social skills, including emotional maturity, obedience, and social courtesy. In contrast, American mothers expect their children to be verbally assertive, independent, and uniquely individual (Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997; Markus, & Kitayama, 1991; Takata, 1995).

Japanese mothers also put great importance on the harmonious relationship between mother and child. Japanese mothers are informed by their culture to avoid excessive praise of their children because of a concern that their children would become arrogant and disobedient, resisting discipline from their parents, a violation of harmonious human relationship (Kojima, 1986). On the other hand, Japanese mothers may be intensely involved with their children, and may derive a significant amount of life satisfaction from their maternal role. These cultural difference may influence the accuracy of EE instruments to capture Criticism or EOI

The emphasis on equipotentiality (all children have the same innate abilities and capacities) and harmonious relationships in roles (obedience, social courtesy, maturity in behavior) leads to an emphasis on effort by both Japanese mothers and children. Working hard in school is seen as the primary factor determining academic performance, with less emphasis on the child’s ability (Holloway, 1988). The scholastic achievements of

Japanese children are frequently attributed to this strong cultural emphasis on commitment to work hard and perseverance at tasks.

### **Differing perceptions of “healthy” child development in the US and Japan.**

To expand relationships with others is one of the important developmental tasks for all children in middle childhood. However, there is a gulf between the US and Japan as to what are healthy behaviors in middle childhood. American parents believe that child's social initiative, assertiveness, and emotional expressiveness are the part of the signs of maturation. It is desirable for American children to individuate and assert themselves as they grow (Rothbaum, Pott, Azuma, Miyake, & Weisz, 2000). The conflicts between mother and child are natural and to be expected in the process of emotional development in the US. In contrast, Japanese parents believe that proper socioemotional development in children should be accompanied by an increase in the ability to accommodate others and to obey them. For a Japanese mother, a child who is assertive is sometimes interpreted as being immature (Rothbaum et al.; Lebra, 1994).

The differences in the strategies that American and Japanese parents use to shape a child's behaviors also reflect the differences in beliefs of what healthy child development looks like. The strategies of American parenting include more direct control attempts, characterized by more commands, attempts at coercion, punishments and

rewards, and other ways of displaying the parent's authority. This corresponds to the respect for the development of each child's assertiveness and autonomy. American mothers model in their own behavior and explicitly emphasize to their children that it is important to have their own minds and articulate their positive and negative emotions directly. On the other hand, Japanese parents attempt to avoid direct confrontations and contests of will. The strategies Japanese parents are likely to use are indirect expressions of disapproval, such as refusing to speak to the child, being apparently indifferent to her/him, or shunning the child (Azuma, 1996, Jonson, 1993). Japanese parents use "indirect and psychological methods to control their children, reasoning, guilt and anxiety induction, shaming, modeling, and appealing to the child's feelings and desires" (Rothbaum et al., 2000). These communications would not necessarily be picked up as EE by Western standards.

American mothers model in their own behavior and explicitly emphasize to their children that it is important to have their own minds and articulate their positive and negative emotions directly. Japanese mothers encourage their children to have empathy and receptivity to others, almost to read the other's mind. The emotional verbal exchanges that occur between Japanese parents and children are likely to be quite indirect and may be difficult for the child (or a non-Asian observer) to interpret or understand the

parents' intentions (Azuma, 1994; Minami & McCabe, 1995). Instruments based on Western beliefs about parenting and proper child behavior may not fit Japanese families.

**Construction of the self and self-esteem of children.** The different ways of a "self" is constructed in the US and Japan have been noted in the literature (Taniguchi, 2005). The notion of self is constructed within the Japanese cultural system values, emphasizing the importance of "maintaining, affirming, and becoming part of significant social relationships" (Kitayama et al., 1997). The development of self proceeds, based on which aspects of the self the cultural system is organized to foster and promote. The cultural characteristics, such as individualism vs. collectivism, shape the beliefs and values of how people improve and develop the self. People in different cultures take different ways to maintain and enhance an overall evaluation of the self. The self in Japan is understood to be a part of the family members in addition to individual. That is, the self ("*jibun*") does not exist without the group/family to which that the person belongs. In the US, the self is perceived to exist by itself (Rosenberger, 1992, Taniguchi). Thus, "self" has very different meanings in the US and Japan, an individual (US) versus an individual in the context of family and community (Japan).

The construction of the self between the US and Japan is different, almost directly the opposite. European Americans focus on positive self-relevant information, "self-

enhancement,” that values positive characteristics and abilities for personal success. On the other hand, in a collectivist culture like Japan, people use “self-criticism,” to understand, or at least explain, personal successes in terms of effort or luck and to account for failure in terms of a lack of ability or talent (Kitayama et al., 1997; Holloway, 1988). In traditional Japanese culture, people are sensitive to negative self-relevant information. These cultural differences may be relevant to the impact of maternal criticism on self-esteem

Based on the Japanese beliefs about children, the Japanese emphasize effort (Holloway, 1988; Holloway, Kashiwagi, Hess, & Azuma, 1986) over ability. The word “competence” is not defined solely as unusual talent or genius, but also as the capacity for hard work and persistence (Holloway). Japanese mothers emphasize commitment and perseverance more than American mothers because Japanese mothers believe that the notion of effort includes a positive orientation toward the intrinsic benefits of such persistence (Holloway). Those ideas tend naturally to structure the interaction pattern between mother and child as a transactional system where mother and child pursue a goal together and both are more critical of the self. (Kojima, 1986)

Thus, compared to children in the US, Japanese children emphasize their weaknesses and make more negative internal attributions than children in the US.

However, this self-criticism is not necessarily an indication of low self-esteem or something to be avoided or overcome; rather, it has positive social and psychological consequences (Kitayama & Masuda, 1995; Markus & Kitayama, 1991). The mother's values, beliefs, and expectations for the child provide a framework for the mother-child relationship, leading the child to become a functional member of a collective society. Thus, measures of self-esteem that work well in Western cultures may not be as valid in Eastern cultures.

Japanese mothers tend to emphasize on the child's effort as a key factor for achievement or success, rather than lack of ability (Hayami, 1981). Because of this, they also tend to focus more on unrealized abilities. This focus may result in more critical comments toward the child, rather than praising him/her for accomplishments. Hayami (1984) found a strong relationship between amount of the effort by the child and her/his feelings of pride in a successful performance. However, the question of how much the child's self-criticism and mother's verbal and nonverbal communications emphasizing effort and perseverance influence child behavior problems remains unclear at this point.

In summary, the role of Criticism and the meaning of emotional involvement in terms of child self-esteem will reflect the culture. There may be a unique combination of Criticism and Emotional Over-involvement in Japanese families that will not be assessed

in the present study. It is beyond the scope of this research to identify the cultural nuances of these communication patterns. Therefore, for the purposes of this study, an adjective checklist assessing the Criticism component of EE can be used. However, there are no culturally relevant assessments of EOI.

### **Research Questions and Hypotheses**

**Specific Aim 1:** Examine the relationships among maternal depression,

maternal Criticism and Involvement, family relationships,

children's internal resiliency factors (self-esteem and sense of

coherence), and children's internalizing and externalizing

behavioral problems

**H<sub>1.1</sub>:** There will be a significant relationship between a negative family

environment and child behavior problems.

**H<sub>1.2</sub>:** There will be significant negative relationships between child

resiliency resources (SE and SOC) and child behavior problems.

**H<sub>1.3</sub>:** There will be a significant relationship between a negative family

environment and child resiliency resources.

**Specific Aim 2:** Examine whether EE components, either high levels of Criticism or Involvement (, are associated differentially with the Internalizing or Externalizing behavior problems.

**H<sub>2.1</sub>:** There are positive relationships between a high level of Criticism and a low level of Involvement and child Internalizing and Externalizing Scores.

**H<sub>2.2a</sub>:** There will be significant differences in the child perception of her/his mother's Criticism and Involvement between children in normal-risk and high-risk behavior problem groups.

**H<sub>2.2b</sub>:** There will be significant differences in the mother's perceptions of her own Criticism and Involvement directed toward her child between children who are in normal-risk and high-risk behavior problem groups.

**H<sub>2.2c(1)</sub>:** Mother and child perceptions of mother's Criticism specifically predict child Externalizing behavior problems.

**H<sub>2.2c(2)</sub>:** Mother and child perceptions of mother's Involvement specifically predict child's Internalizing behavior problems.

**H<sub>2.3a</sub>:** Mother and child perception of mother's Criticism specifically predict Externalizing behavior problems in a high-risk Externalizing group.

**H<sub>2.3b</sub>:** Mother and child perceptions of mother's Involvement specifically predict Internalizing behavior problems in a high-risk Internalizing group.

**Specific Aim 3:** Examine the moderation effect and mediation effect of children's Sense of Coherence (SOC) and Self-Esteem (SE) in the relationship between maternal Criticism and Involvement and child behavior problems

**H<sub>3.1</sub>:** Child Sense of Coherence (SOC) and Self-Esteem (SE) moderate the relationship between family environment factors and Internalizing and Externalizing behavior problems.

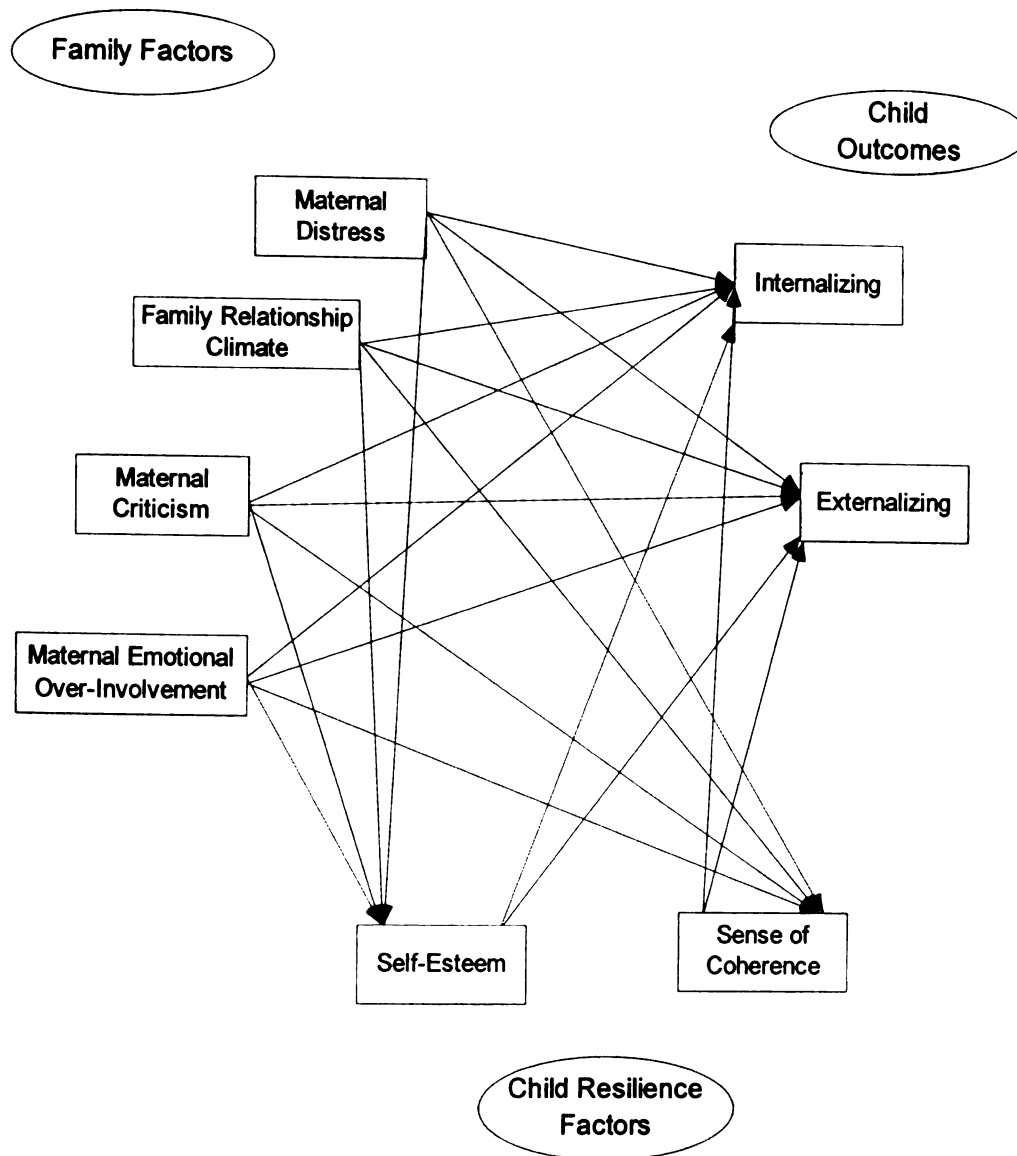
**H<sub>3.2</sub>:** Gender moderates the relationship between child perceptions of mother's Involvement and Criticism and Internalizing and Externalizing behavior problems.

**H<sub>3.3a</sub>:** Child Sense of Coherence (SOC) and Self-Esteem (SE) mediate the relationship between child report of mother's Involvement and Internalizing or Externalizing problems.

**H<sub>3.3b</sub>:** Child Sense of Coherence (SOC) and Self-Esteem (SE) mediate the relationship between child report of mother's Criticism toward the child and Internalizing or Externalizing problems

**Specific Aim 4:** To test the model fit with the data with Structural Equation Modeling.

**H<sub>4.1</sub>:** An adequate model can be developed that describes the relationships  
among family environment, child resiliency, and behavior  
problems (Figure 2.1).



*Figure 2.1.* Proposed structural equation model for study.

## CHAPTER III

### METHODS

This study used a cross-sectional survey design with a sample of 5<sup>th</sup> and 6<sup>th</sup>-grade children and their mothers in Okinawa Japan. The study investigated the relationships among family relationship factors, child's resilience factors, and child's psychological and/or behavioral problems. Children were recruited from 5 public elementary schools in Okinawa. The survey for children was conducted in classroom settings with the principal's permission and the cooperation of the teachers in the 5<sup>th</sup> and 6<sup>th</sup> grade classrooms.

#### **Participants**

**Children.** There were 285 participants in this study (136 boys and 149 girls). Fifth and 6th grade Japanese children and their mothers were recruited from 5 elementary schools in Naha City, Okinawa, Japan. The researcher obtained positive permission from the child's mother for herself and/or her child to participate in the study. The researcher also obtained an assent from the child before administering the child questionnaire.

**Mothers.** Among 469 returned questionnaires, 80 mothers who consented to fill out the questionnaires for themselves did not consent to their child's participation, and

110 mothers who consented to their child's participation to the study did not consent to their own participation. The mother's average age was 41.7 years old.

**Rates of return.** Table 3.1 summarizes the rates of return for the questionnaire packets sent home to the mother, the rate of positive consent for participation in the survey for children and mothers (based on the number of packets returned to school), and the actual participation rates of children and mothers (based on the consent rate). The final number of mothers and children dyads participating in this study was 285, and all analyses are based on this dyadic sample.

### **Demographic Characteristics**

The demographic characteristics of the participants are presented in Table 3.2. The majority of children in the 5<sup>th</sup> grade were 11 years of age; the majority of those in the 6<sup>th</sup> grade were 12. The family characteristics are presented in Table 3.3. According to national Japanese census data, the average number of children in a family is 1.34. However, the number of children in the participating Okinawan families was larger, with 57% of families having 3 or more children in the home. The majority of children (84.9%) lived with both parents (including those living with both parents in extended families). In keeping with traditional Japanese culture, 25.7% of these two-parent families lived with grandparents in a three-generation household. A majority of mothers and virtually all

fathers were employed outside the home (Table 3.4). The fathers were more likely to have higher status employment, to have full-time employment, and less likely to be “contract” (non-permanent) employees than the mothers.

### **Procedure-Children’s Data**

**Recruitment.** Once the participating schools had been identified, sealed and code-numbered envelopes were sent home via the 5<sup>th</sup> and 6<sup>th</sup> graders to be delivered to their mothers (or primary female caretaker). The envelope included (1) a description of the proposed study, (2) a consent form including three requests for consent, and (3) a copy of the mother’s questionnaire (Appendix A). The first consent request was for the mother to allow the child to complete a packet of questionnaires at school. The second consent request was for the mother to indicate her willingness to complete a questionnaire packet of her own. The third consent request was for the mother to be approached by the investigator to be interviewed. A second envelope, addressed to the investigator and with the same number as the original envelope, was included to return the mother’s questionnaire with the signed consent form.

The data from a child and mother in the same family were assigned the same number with letters C and M added, respectively. This precaution was taken for protection of the privacy of the participants and to be able to combine the two records for

the data analysis. Each 5<sup>th</sup> and 6<sup>th</sup> grade homeroom had a sealed box with a slot in it to allow the children to return the envelopes. Numbering the return envelope allowed the investigator to determine the gross return rate (percentage of all envelopes returned, Table 3.1). The consent form permitted a count of the number of mothers giving positive permission for their child's participation and for their own willingness to fill out a questionnaire themselves and/or be interviewed.

**Data collection.** Two weeks were allowed for mother's questionnaires to be returned to the box placed in the classroom, and teachers were asked to encourage that their students return the envelopes even if the mother was denying consent for participation in any phase of the study. After two weeks, the envelopes were collected by the investigator, and a list was constructed of the children with permission to participate. Questionnaires with numbers that matched the numbers on the consent form were prepared and administered in a classroom in the school building at the end of the school day. Children without positive parental consent were dismissed. At the time of administration, the investigator gave a brief presentation and asked the children to assent to participation (Appendix B). Children who did not assent were dismissed at that point. Questionnaires were distributed after collecting the assent forms from children. Forty-five minutes was allotted for the child to complete the questionnaire.

## **Instruments-Children**

The measurements used in this study for children were the Youth Self Report (YSR), the child and adolescent version of the Achenbach Child Behavior Checklist (CBCL) forms, the two-dimensional (Self-Liking and Self-Competence) Self-Esteem Scale (SE), the Sense of Coherence Scale (SOC), the Expressed Emotion Adjective Checklist (EEAC), and the Family Relationship Inventory (FRI) (Appendix C).

**Youth Self Report (YSR).** The Japanese version of the Youth Self Report (YSR) was used for this study (Achenbach, 1991, 2000; Itani et al., 2001). The Japanese YSR consists of 112 items. The 112 items are answered on a 3-point Likert scale ranging from 0 (*Not True*), 1 (*Somewhat or Sometimes True*), and 2 (*Very True or Often True*). To create the Japanese YSR from the English YSR, English native speakers proficient in Japanese translated each item. After the English version of YSR was translated into Japanese, it was back-translated into English by Japanese-English translators for quality assurance (Itani et al.; Tejima et al., 1994; Tejima et al., 1995; Tejima et al., 1996). Norms for Japanese children 11-17 are well established, as are satisfactory indicators of reliability and validity of the Japanese version (Itani et al.).

Japanese children (11-17) report fewer Internalizing and Externalizing behaviors, in general (Itani et al., 2001) than US and other Western samples. Therefore, the cut-off

points to differentiate normal, borderline clinical, and clinical groups for the Japanese version of the YSR are set differently from the American standardized cut-off points. In US samples (Achenbach, 1991), the cut-off point for the “normal” or nonclinical group is a *T*-score of less than 67 (94<sup>th</sup> %-ile), 67-70 (95 – 98<sup>th</sup> %-ile) for the borderline clinical group, and over 70 (over 98<sup>th</sup> %-ile) for the clinical group. In Japanese samples, a *T*-score over 59 (84<sup>th</sup> %-ile in US samples) is used as the cut-off point for discriminating between normal-risk and borderline clinical groups, and over 63 (90% in US samples) is used as the cut-off point for the clinical group for Internalizing and Externalizing scales (Itani et al.; Tejima et al., 1994; Tejima et al., 1995; Tejima et al., 1996). This study used the cut-off points that Itani and her colleagues identified in their study. Children with Internalizing or Externalizing scores above 59 were considered to be in high-risk Internalizing or Externalizing behavior problem groups.

In the Itani et al. (2001) study, Cronbach alpha values for 7 of the 8 YSR scales (except Thought Problems) were found to have acceptable internal consistency (Cronbach  $\alpha$ —Internalizing scales: Social Withdrawal,  $\alpha = .74$ ; Somatic Complaints,  $\alpha = .67$ ; and Anxiety/Depression,  $\alpha = .83$ ; Externalizing scales: Delinquent Behavior,  $\alpha = .67$ ; and Aggressive Behavior,  $\alpha = .89$ ; Scales not used on Internalizing or Externalizing scales: Social Problems,  $\alpha = .74$ , Attention Problems,  $\alpha = .78$ ; Thought

Problems,  $\alpha = .60$ ). The eight constructs of the CBCL were validated for a Japanese sample in Itani's study (2001). Only the scores for the composite Internalizing and Externalizing scales were used in the present study.

**Self-Liking/Self-Competence Scale-Revised Version (SE).** The SE is a 16-item self-report scale assessing two distinct aspects of self-esteem: self-liking and self-competence (Tafarodi & Swann, 1995a, 1995b). This study used Tafarodi's self-esteem scale translated into Japanese. The English and Japanese SEs include two subscales, 8 items assessing self-competence and 8 items assessing self-liking. Self-competence refers to the perceived positivity or negativity toward one's self as an inner resource of power and efficacy. Self-liking refers to a perceived evaluative experience of one's self as a social object, recognizing a good or bad person in one's self and an overall sense of self-worth as an individual with social significance. Examples of items on the Self-Competence scale are "I am highly effective at the things I do" and "I wish I were more skillful in my activities (reverse scored)." Examples of items on the Self-Liking scale are "It is sometimes unpleasant for me to think about myself (reverse scored)" and "I never doubt my personal worth" (Tafarodi & Swann, 1995a). The two subscales use a 5-point Likert scale ranging from 1 (*absolutely applies to me*) to 5 (*doesn't apply to me at all*). Higher scores on the SE are taken to mean that the child has higher self-esteem.

According to Brown's study (2008), the Cronbach alpha was .89 for all 16 items. The internal reliabilities of the Self-competence and the Self-liking scales were reported as .80 and .82, respectively (Brown). Cronbach alpha was .82 for the 16 items for the present study.

**Sense of Coherence (SOC).** The Sense of Coherence scale was developed by Antonovsky (1987), and this study used the Japanese-translated SOC scale (Yamazaki, 1999). The Sense of Coherence scale consists of three constructs: Comprehensibility, Manageability, and Meaningfulness. SOC is conceptualized as "a personality-related variable that provides a 'psychological stress-resistance resource'" (Hass & Graydon, 2009, p. 458). SOC is a developmental construct that reaches maturity at age 30. However, the development of the SOC is influenced by quality of experiences from childhood and adolescence (Antonovsky; Torsheim, Aaroe, & Wold, 2001; Hass & Graydon, 2009; Togari & Yamazaki, 2005; Yamazaki).

The SOC has been related to a healthy adaptation to stress in school age-groups (Hass & Graydon, 2009; Lundberg, 1997; Torsheim, Aaroe, & Wold, 2001). In Torsheim et al.'s study, the level of SOC explained 39% of the variance in subjective health complaints among 11-year old children, and it is seen as a resilience factor in school-aged

children. Lundberg hypothesized that a high level of SOC modulates the negative influences of stress factors from a conflicted environment in the family or at school.

The SOC scale has 13-items and utilizes a 5-point Likert scale ranging from 1 to 5. Responses for most questions vary from 1 (*Very Often*) to 7 (*Never*). The responses for a few questions are 1 (*Like it a lot*) to 5 (*Don't like it all*). Scores at the lower end of the scale represent more negative responses. Example questions are "How often do you have the feeling that you don't really care about what goes on around you?" (Meaningfulness), "How often does it happen that you don't quite understand your own feelings and ideas?" (Comprehensibility), and "How often has it happened that people whom you counted on disappointed you?" (Manageability). Cronbach alpha was .85 in the study among American early adolescents ages 11, 13, and 15 years (Torsheim, Aaroe, & Wold, 2001). Cronbach alpha for the Japanese SOC scale was found to be over .80 (Togari & Yamazaki, 2005). This same study also provided construct validity support. In the present study, the internal reliabilities of the meaningfulness (5 items), comprehensiveness (5 items), and manageability (3 items) scales were .65, .70 and .50, respectively. Because of these relatively low reliability measures only the total score was used (Cronbach  $\alpha$  = .81 using all 13 items).

**Expressed Emotion Adjective Checklist (EEAC).** The EEAC (Friedman &

Goldstein, 1993) is a self-report checklist that was developed as a brief measure of EE.

Each section consists of 10 positive and 10 negative adjectives chosen to assess the two dimensions of the Expressed Emotion: Criticism and Emotional Over-Involvement (EOI).

The first set of 20 items assesses the levels of maternal Criticism and EOI over the last 3 months. In the second 20 items, the child rates his/her own behaviors toward his/her mother (10 positive and 10 negative EE adjectives) over the same time period.

Each adjective is rated on 8-point Likert scale ranging from 1 (*never*) to 8 (*always*). Examples of the positive adjectives are *accepting*, *considerate*, *friendly*, and *loving*. Examples of the negative adjectives are *angry*, *mean*, *rude*, and *hostile*. The total scores for negative and positive adjectives conceptually represent the level of Criticism and EOI. Because the EEAC was not available in Japanese, each English adjective in EEAC was translated into Japanese by the investigator. ext, a panel of three English-speaking Japanese graduate students living in the US reviewed the translation, comparing the English word to the Japanese translation. A second panel of three different English-speaking Japanese graduate students living in the US back-translated the Japanese items into English to confirm the accuracy of the translation.

Hooley (2007) has criticized the EEAC as providing a poor match to the CFI results, and the results of the present study bear this out (see Chapter IV). It would appear

that the items intended to measure EOI are actually a measure of the emotional involvement in the relationship between parent and child. Therefore, from this point forward, *Involvement* will be used in place of *EOI*.

In the present study, Cronbach alpha was .90 for the 10 child perception of mother Criticism items and .83 for the 10 child perception of mother's Involvement items. In the second 20 items, the child rated his/her own behaviors toward his/her mother (10 positive and 10 negative EE adjectives) over the same time period. Cronbach alpha was .91 for the 10 items assessing the child's perception of his/her own Criticism of the mother and .84 for the 10 items assessing the child's perception of his/her own Involvement in the present study.

**Family Relationship Index (FRI).** The Family Relationship Index (FRI) is a short version of Family Environment Scale (FES; Moos, 1974; Moos & Moos, 1981) with a 12-item, true-false, self-rating scale. The FRI focuses on three dimensions to assess global family functioning: Cohesion, Expressiveness, and Conflict. Originally, those three dimensions were included in the 10-dimension FES. The Cohesion items capture the level of commitment, help, and support among family members. The Expressiveness items assess the level of open communication characterized as acting openly and expressing feelings directly. The Conflict items measure the level of openness

to express anger, aggression, and conflict among family members. Example questions for Cohesion, Expressiveness, and Conflict are “Family members really help and support one another,” “Family members often keep their feelings to themselves,” and “We fight a lot in our family,” respectively. The total score on the three subscales was used in the present study, with Conflict items reverse scored. A Cronbach alpha of .62 was found for the FRI items, a value that would be considered marginally acceptable.

The Japanese version of the FRI has been used for investigating the characteristics of families and family functioning of Japanese breast cancer patients (Ozono et al., 2001; Fujio, 2003). Among adult Japanese breast cancer patients and their families, Fujio (2003) found evidence both for the reliability and validity of the FRI.

#### **Procedure-Mother’s Data**

**Questionnaires.** The questionnaire packet was delivered to the mother by her child. The questionnaire packet included a set of instructions, the mother’s questionnaire (coded to match the child’s identifying number), and a consent form. After the mother signed the consent form to agree to her participation, she completed the mother’s questionnaire. When completed, the mother enclosed the questionnaire and the consent form in the sealed envelope. The questionnaires were returned to the school by the child and placed in the box in the classroom.

### **Instruments-Mothers**

The instruments used in this study were the Center for Epidemiologic Study Depression Scale (CESD), Expressed Emotion Adjective Checklist (EEAC), and Family Relationship Index (FRI) (Appendix C). The descriptions of the Family Relationship Index and the Expressed Emotion Adjective Checklist were presented in the children's Instruments section. Internal reliabilities for these two instruments are as follows: FRI, Cronbach  $\alpha = .52$  for mothers; EEAC: mother's perception of her Criticism of child, Cronbach  $\alpha = .84$ ; mother's perception of her Involvement toward child, Cronbach  $\alpha = .83$ ; mother's perception of child's Criticism of her, Cronbach  $\alpha = .88$ ; mother's perception of child's Involvement toward her, Cronbach  $\alpha = .82$

**The Center for Epidemiologic Studies Depression Scale (CES-D).** The CESD scale includes 20 items with 4 subscales: depressed mood, positive affect, somatic activity, and interpersonal relations (Radloff, 1977). To emphasize the current state of mind, the questions include "How often in the past few weeks did you..." The CESD is a self-rating Likert scale with answers ranging from 1 (*Never*) to 5 (*Very Often; 5 -7 days in a week*). The example questions are "I felt that I was just as good as other people (reverse scored)" and "I felt lonely." Only the total CESD score was used in the present study. The final CESD score ranges from 0 to 60, with a higher score indicating greater

impairment. People with a total score of 16 or higher are typically identified as a depressive 'case.'

The CESD has been widely used in various Asian countries, including Japan. Researchers have critiqued the CESD from a construct validity point of view, pointing out that the East Asian beliefs and practices around the experience and expression of positive emotions may falsely inflate the depression scores on a variety of self-report depression screening instruments (Cho & Kim, 1998; Iwata & Buka, 2002; Iwata & Roberts, 1996; Iwata, Saito, & Roberts, 1994; Iwata et al., 1998; Noh, Kasper, & Chen, 1998). Asian adults suppress the expression of positive affect, even though the responses to negative symptom items are comparable between groups (Iwata et al., 1998). The internal consistency of the scale significantly improved when the original positive affect items were revised to negatively-worded items (Iwata, Saito, & Roberts, 1994; Iwata, Roberts, & Kawakami, 1995).

Iwata and colleagues developed and tested the CESD-R (Korean) version that reverses the wording of the four positive affect items, and found that these modifications improve the accuracy of these instruments with East Asian populations. Cronbach alpha after the revision was .92 (Iwata et al., 1998). The Japanese translation of the CESD-R was used in this present study. Cronbach alpha was .94 for the CESD in the present study.

## **Analyses**

### **Sample Size**

The sample size was 285 child-mother pairs. Of 483 possible pairs, 198 questionnaires were missing either the child's report (88) or the mother's report (110). In addition, 9 of the 285 children did not complete the YSR, reducing the sample size to 276 for any analysis involving Internalizing or Externalizing scores.

### **Analysis for Specific Aim 1 (Hypotheses 1.1, 1.2, and 1.3)**

Zero-order correlations were used to test relationships between familial factors (mother's CESD-R and FRI scores), mother's and child's perception of EE (Criticism and Involvement), child's resilience factors (child's scores on the SOC and SE), and child YSR Internalizing and Externalizing behavioral problem scores.

### **Analysis for Specific Aim 2 (Hypotheses 2.1., 2.2, and 2.3)**

Zero-order correlations were used to examine the relationships between child and mother reports of Criticism and Involvement toward the child ( $H_{2.1}$ ). In addition, the same relationships were examined by child gender and by mothers of boys vs. mothers of girls.

Groups were formed to examine relationships between high and low EE scores and YSR normal-risk and high-risk scores under Hypotheses 2.2a and 2.2b. YSR high-

risk groups had Externalizing or Internalizing scores above 59. To identify high and low EE levels, the upper and lower 25th percentiles of the scores in each EEAC subscale, Criticism and Involvement, were used to identify high level and low level groups.

First,  $\chi^2$ -square tests were used to examine group differences between the two levels of Criticism and the two levels of Involvement (EEAC) and the child's risk level of both Internalizing and Externalizing problems. Then, Multivariate Analyses of Variance (MANOVAs) were used to examine whether there were significant differences in the child's perception of her/his mother's Criticism and Involvement between children in normal-risk and high-risk Internalizing and Externalizing groups. Hypothesis 2.2a examined the relationship between child's perception of mother's Criticism and Involvement and Internalizing and Externalizing behavior problems. Hypothesis 2.2b examined the relationship between mother's perception of her own Criticism and Involvement and the child's risk level of Internalizing and Externalizing behavior .

A multiple regression analysis was used for Hypothesis 2.2c. In the first step, child perception of mother's Criticism and Involvement and mother perception of her own Criticism and Involvement were entered as predictors of Internalizing or Externalizing scores. In the second step, the Externalizing or Internalizing score was entered as a control for the correlation between Internalizing and Externalizing. The

child's Internalizing behavior problems (i.e., Social Withdrawal, Somatization, Anxiety/Depression) co-occurred with Externalizing behavior problems (i.e., Aggression, Delinquency).

### **Analysis for Specific Aim 3 (Hypotheses 3.1, 3.2, and 3.3)**

**Moderation effects.** Hierarchical regression procedures were used to test Hypotheses 3.1a and 3.1b. The goal was to determine if there were moderating effects of the child's self resources (SOC and SE) on the relationship between family environment variables (mother and child report of Criticism and Involvement, CESD-R, mother and child FRI scores) taken one at a time and Internalizing and/or Externalizing behaviors. This analysis followed three steps: (1), each variable was entered as a predictor of the child's level of YSR Internalizing or Externalizing, (2) child's SOC and SE scores were entered, and (3) the interaction terms (e.g., CESD-R by SOC) were entered. The same procedure was used to test the moderating effect of child gender on the relationship between the mother's variables and YSR Internalizing and Externalizing scores.

**Mediation effects.** Multiple regression analysis was used to test Hypotheses 3.2, i.e., whether the child's SOC and SE mediated the relationship between the mother's variables and YSR Internalizing and Externalizing scores. Steps were as follows: (1) a

significant zero-order correlation was confirmed between each predictor variable (mother and child report of Criticism and Involvement, CESD-R, mother and child FRI scores) and each outcome variable (Internalizing or Externalizing scores). (2) A significant zero-order correlation was confirmed between each predictor variable and each of the putative mediating variables (SOC or SE). For this step, the putative mediating variable became an outcome variable. (3) The predictor variable and mediator variable were entered simultaneously as predictor variables. The initial correlation between the predictor variable and outcome variable must be significantly decreased for a mediation effect to be established. With complete mediation, the relationship between the predictor variable and the outcome variable will become zero (Baron & Kenny, 1986).

Sobel's test was used to confirm whether the indirect (mediation) effect on the dependent variable through the mediator variable was significant. Sobel's test calculates the product of the direct path from the predictor variable on dependent variable through the mediating variable using the formula, square root of  $b^2sa^2 + a^2sb^2 + sa^2sb^2$ , where  $a$  and  $b$  are unstandardized regression coefficients and  $sa$  and  $sb$  are their standard errors (Baron & Kenny, 1998).

#### **Structural Equation Modeling (SEM) (Hypothesis 4.1)**

SEM was used to test Hypothesis 4.0, examining the fit of the overall path model.

The sample size for SEM analysis was 265 child-mother pairs' data.

**Missing data treatment for SEM analysis.** Because the software used for the SEM analyses requires that there be no missing data, missing data were treated as follows. Missing data in YSR outcome variables were considered as missing completely at random (MCAR) because the amount of missing data was trivial, less than 1% (9) of the data. The researchers made memos anonymously when children did not complete the YSR questions in the last section of the questionnaire booklet. The reasons these 9 children could not complete the YSR section were either running out of time, accidentally skipped the page, or leaving earlier for a private reason. Thus, the researcher made the judgment that there was no particular pattern of missing data dependent on the values or the observed data (Rubin, 1976). Thus, listwise deletion was utilized for treating missing data. The literatures suggest that "when the data are MCAR there is little difference in the estimation bias for listwise deletion, pairwise deletion and maximum likelihood" (Carter, 2006).

*Table 3. 1*

*Return Rates for the Questionnaire Packets and Consent Rates for Children's and*

*Mothers' Participation (dyad pairs, n = 285)*

Packets Distributed	5th Grade	6th Grade	Total	Return Rate (%)	<i>n</i>
	527	518	1045	58.1%	607
Consent to Survey	Consent Rate (% of forms returned)		<i>n</i>		
Children	77.3%		469		
Mothers	62.6%		380		
Consent to Interview					
Mothers	16.3%		99		

Table 3.2

*Demographic Information for Children*

	Girls	Boys	Total	%-age
	<i>n</i> = 149	<i>n</i> = 136	in	in
	(52.3%)	(47.7%)	Category	Sample
Age (% in Category)				
10	21 (52.5%)	19 (47.5%)	40 (100%)	14.3%
11	76 (54.3%)	64 (45.7%)	140 (100%)	50.0%
12	52 (54.2%)	44 (45.8%)	96 (100%)	34.3%
13	0 (0%)	4 (100%)	4 (100%)	1.4%
Grade (% in Category)				
5th Grade	77 (52.0%)	71 (48.0%)	148 (100%)	51.9%
6th Grade	72 (52.6%)	65 (47.4%)	137 (100%)	48.1%

Note: Only 280 mothers reported their child's age

Table 3.3

*Number of Children and Family Structure for Participants (Mother's Report).*

	Girls <i>n</i> = 149	Boys <i>n</i> = 136	Total in	%-age in
<b>Number of Children</b>				
1	16 (53.3%)	14 (46.7%)	30 (100%)	10.6%
2	43 (46.7%)	49 (53.3%)	92 (100%)	32.8%
3	62 (55.9%)	49 (44.1%)	111 (100%)	39.2%
4 or more	28 (56.0%)	22 (44.0%)	50 (100%)	17.8%
<b>Family Structure</b>				
Two Parents	89 (53.6%)	77 (46.4%)	166 (100%)	59.2%
Single Mother	15 (39.5%)	23 (60.5%)	38 (100%)	13.6%
Two Parents in Extended Family	41 (56.9%)	31 (43.1%)	72 (100%)	25.7%
Single Mother in Extended Family	2 (50.0%)	2 (50.0%)	4 (100%)	1.4%

Note: Only 283 mothers reported the number of children in the home; 280 reported family structure.

Table 3.4

*Parent's Employment (Mother's Report)*

	Girls	Boys	Total	%-age
	<i>n</i> = 147	<i>n</i> = 134	in	In
Mothers ( <i>n</i> = 281)	(52.3%)	(47.7%)	Category	Sample
Not employed outside home	43(54.4%)	36(45.6%)	79(100%)	28.1%
Employed outside home	104(51.5%)	98(48.5%)	202(100%)	71.9%
	Girls	Boys	Total	%-age
	<i>n</i> = 132	<i>n</i> = 116	in	In Full
Fathers ( <i>n</i> = 247)	( %)	( %)	Category	Sample
Not employed outside home	0(0.0%)	3(100%)	3(100%)	1.2%
Employed outside home	131(53.7%)	113(46.3%)	244(100%)	98.8%

Note: There were 34 single-mother households; thus, the number of fathers identified is 247.

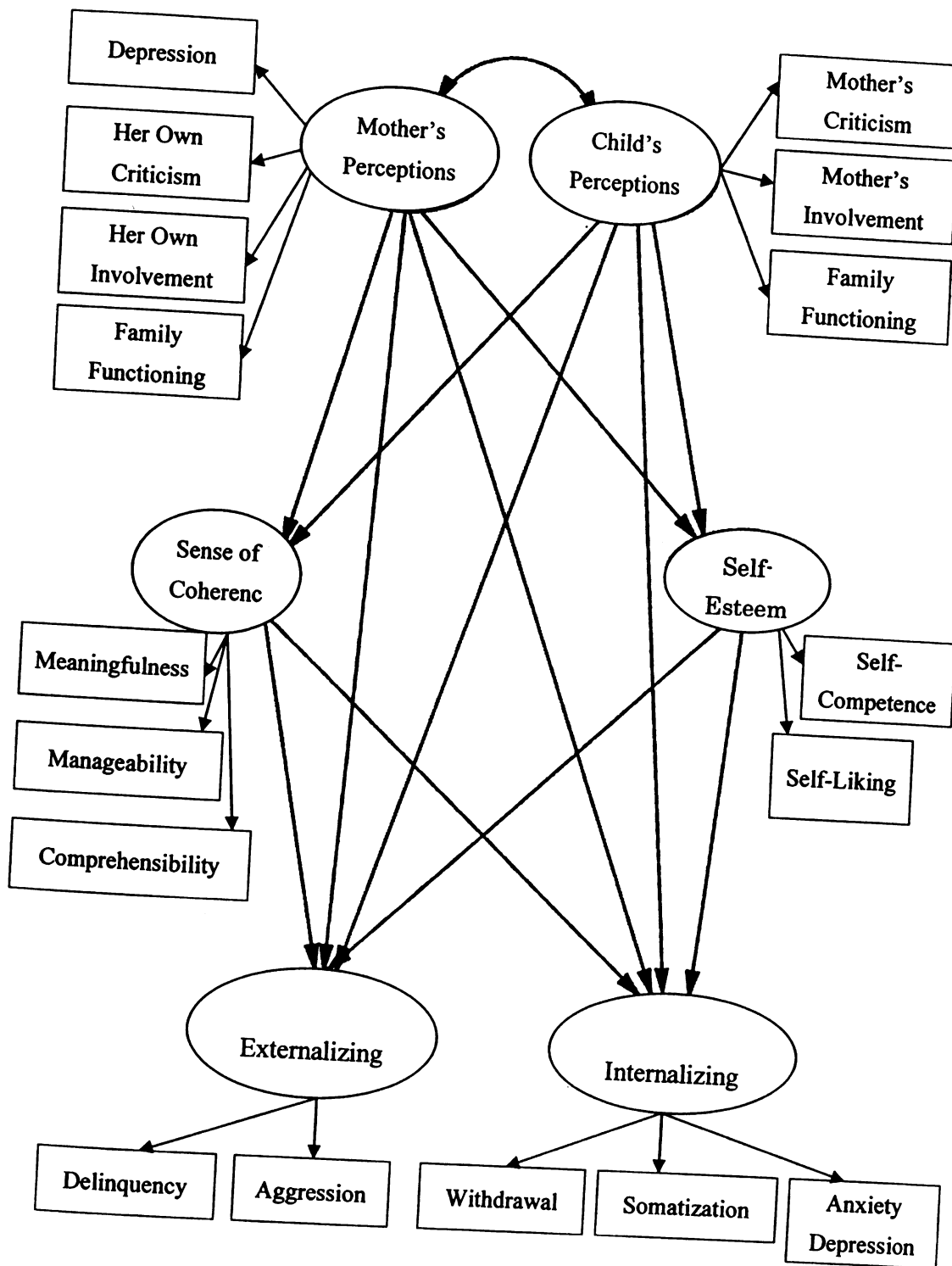


Fig. 3.1. SEM Analysis to Test the Mediating Effect of Child Coping Resources.

## Chapter IV

### RESULTS

#### Preliminary Analyses

##### Description of the Variables

**Child variables.** Okinawan Japanese 5<sup>th</sup> and 6<sup>th</sup> grade elementary students (girls,  $n = 140$ ; boys,  $n = 136$ ) were participants, along with their mothers. Table 4.1 summarizes the results for each variable by gender and for the full sample of 276 children. Dependent variables for children included total scores for Sense of Coherence (SOC), Self-Esteem (SE), Family Relationship Inventory (FRI), and their subscales. In addition, the child's report of positive and negative emotional expressions to and from the mother served as dependent variables. The outcome variables for this study were Youth Self-Report (YSR) Internalizing and Externalizing scores.

**Maternal variables.** Maternal variables are summarized in Table 4.2. Dependent variables included the mother's FRI, the Center for Epidemiological Studies' Depression Scale (CES-D), and her report of positive and negative emotional expressions to and from her child (Expressed Emotion Adjective Checklist, EEAC).

##### Correlations between Variables

**Child variables.** Correlations among child variables are presented in Table 4.3 for the sample of 276 children, and in Table 4.4 by gender. An alpha level of .005 was selected to partially control for the large size of the sample. However, for child variables, virtually all correlations were significant ( $p < .001$ ). Therefore, Cohen's (1988, 1992) large effect criterion of  $r \geq .500$  was used to identify important relationships between pairs of variables. .

**Mother variables.** Correlations among mother variables and between mother variables and the child outcome measures are presented in Table 4.5 for the entire sample and, by gender, in Table 4.6. Cohen's (1988, 1992) large effect criterion of  $r \geq .500$  also was used to identify important relationships between pairs of variables.

### **High-Risk and Normal-Risk YSR Groups**

The YSR norms developed for Japanese samples were used to establish cut-off points for children's behavior problem scores. Two groups were established: a normal-risk group ( $T\text{-score} < 59$ ) and a high-risk group ( $T\text{-score} \geq 59$ ). The prevalence rates of Internalizing and Externalizing behaviors in the normal-risk and high-risk group are presented in Table 4.7. Of the 55 children who scored in at least one of the high-risk groups, 19 (34.5% of children in either high-risk group, 7.1% of the full sample) scored in both high-risk groups.

$\chi^2$ -tests were used to test the independence of high- and normal-risk Internalizing and Externalizing groups by gender and by child age s. There was no significant group difference by gender between the high- and normal-risk groups (Internalizing,  $\chi^2(1) = 0.0$ ,  $p = .992$ ; Externalizing,  $\chi^2(1) = 1.36$ ,  $p = .244$ ). Further, there was no significant group difference in the risk level of Internalizing or Externalizing behaviors by the age of the child (10 and 11 year old children vs. 12 and 13 year old children), Internalizing,  $\chi^2(1) = .18$ ,  $p = .667$ ; Externalizing,  $\chi^2(1) = .42$ ,  $p = .517$ .

A MANOVA comparing *T*-scores for Internalizing and Externalizing scores by age group and gender also was not significant, age, Wilks'  $\lambda = .991$ ,  $F(2, 266) = 1.164$ ,  $p = .314$ ,  $\eta^2 = .009$ , power = .254; gender, Wilks'  $\lambda = .996$ ,  $F(2, 266) = .560$ ,  $p = .572$ ,  $\eta^2 = .004$ , power = .142), and none of the univariate ANOVAs was significant.

### **Relationships between Demographic and Independent Variables**

**Child variables.** A MANOVA with gender, age, family constellation, and number of children as predictor variables and the child variables as dependent variables was carried out. A significant effect was found only with gender, Wilks'  $\lambda = .919$ ,  $F(1, 271) = 3.047$ ,  $p < .005$ ,  $\eta^2 = .081$ , power = .937. Significant differences by gender were found for self-esteem only (Table 4.1), with girls scoring significantly lower than boys,  $F(1, 271) = 601.424$ ,  $p < .005$ ,  $\eta^2 = .033$ , power = .824. The interaction between gender

and family structure was significant for the child report of mother's Involvement,  $F(2, 271) = 3.524, p < .05, \eta^2 = .028$ , power = .653 (Figure 4.5), and Criticism,  $F(2, 271) = 4.273, p < .05, \eta^2 = .033$ , power = .742 (Figure 4.6).

The interaction between gender and family structure was significant for the child report of Involvement directed toward his or her mother,  $F(2, 271) = 4.049, p < .05, \eta^2 = .032$ , power = .718 (Figure 4.7). This interaction is presented graphically in Figures 4.1-4.3. Boys reported more maternal Involvement and girls report less when living with a single mother (Figure 4.1). Boys living with both parents in an extended family reported more Criticism from their mothers than when they were living with two parents without an extended family or with a single mother (Figure 4.2). Girls reported the most criticism when living with a single mother. Boys living in a two parent family without an extended family reported less Involvement toward the mother (Figure 4.3), but girls reported the least positive expressions toward their mothers when living with a single mother (Figure 4.3).

**Mother variables.** A MANOVA with child gender, child age, family constellation, and number of children as predictor variables and the mother variables as dependent variables was carried out. There was no significant main effect. However, there was a significant interaction of gender and family structure, Wilks'  $\lambda = .917, F(12,$

271) = 1.788,  $p < .05$ ,  $\eta^2 = .044$ , power = .898 (Table 4.2). The interaction between gender and family structure was significant for the mother's FRI score,  $F(2, 271) = 4.887$ ,  $p < .01$ ,  $\eta^2 = .038$ , power = .801. Mothers of girls in single parent families reported that the family relationship (FRI) was most negative (Figure 4.4), and, in contrast, mothers of boys reported the most positive family relationship in single families. These findings emphasize the different status and roles of boys and girls in single-parent families.

Although there was no main effect for gender, univariate ANOVAs indicated that the child's perception of the mother's criticism differed significantly by gender, with girls reporting significantly more perceived maternal criticism than boys,  $F(1, 271) = 3.992$ ,  $p < .05$ ,  $\eta^2 = .016$ , power = .512. Also in univariate ANOVAs, the child's perception of maternal criticism differed by family type, with children in two-parent families living with extended family reporting significantly more perceived maternal criticism,  $F(2, 271) = 3.927$ ,  $p < .05$ ,  $\eta^2 = .031$ , power = .703. Mother's reported criticism directed toward her child also differed significantly by family structure. Both single mothers and mothers living in extended two-parent families reported that they were more critical of their child than mothers living in two-parent families,  $F(2, 271) = 4.993$ ,  $p < .01$ ,  $\eta^2 = .039$ , power = .810.

### **Hypothesis 1. Relationships between Measured Variables**

**Specific Aim 1:** Examine the relationships among maternal depression, maternal Criticism and Involvement, family relationships, children's internal resiliency factors (self-esteem and sense of coherence), and children's internalizing and externalizing behavioral problems.

**H<sub>1.1</sub>:** There will be a significant relationship between a negative family environment and child behavior problems.

**Family environment and YSR score.** The elements of the family environment were assessed for both the child and his or her mother. The child's behavior problems were assessed by the level of the Internalizing and Externalizing YSR scores. The child's report included the FRI score and the child reports of criticism and the positive expressions between her/himself and the mother (Expressed Emotion Adjective Checklist, EEAC). Scores on the EEAC Criticism scale were predicted to be positively correlated with scores on the YSR scales; conversely, scores on the EEAC Involvement scale and FRI were predicted to be negatively correlated with the YSR scores. The mother's data included maternal depression (Center for Epidemiological Studies, Depression Scale, CES-D), FRI, and her report of Criticism and Involvement between herself and her child (EEAC). Scores on the CES-D and EEAC Criticism were predicted

to be positively correlated with scores on the YSR scales; conversely, scores on the EEAC Involvement and the FRI were predicted to be negatively correlated with the YSR scores.

**Child report.** Hypothesis 1.1 was confirmed regarding the child. The child's report of the positive family relationship and positive expressions between her/himself and mother were significantly and negatively correlated with both the YSR Internalizing and Externalizing scores (Table 4.4). The reports of Criticism between the child and the mother were each significantly and positively correlated with YSR Internalizing and Externalizing scores. Thus, when child perceived the family relationship more positively, the level of his/her internalizing and externalizing behaviors was lower than when his/her perception was negative.

**Mother report.** Hypothesis 1.1 was partially confirmed for the mother's reports. Mother's reports of Criticism between herself and her child were significantly positively correlated with the child's Internalizing scores (Table 4.5). The YSR Externalizing score was positively correlated with her report of her child's Criticism of herself. However, the mother's report of her depression, the family relationships, the mother's positive expressions toward her child, and her child's positive expressions toward her were not significantly correlated with the YSR scores. In fact, the strength of the relationships

between all the mother's variables and child outcomes were significantly weaker than those found for the relationships between the child variables and the Internalizing and Externalizing scores (Fisher's z-test, all  $z_s > 1.96$ .  $p < .05$ ).

**H<sub>1.2</sub>:** There will be significant negative relationships between child resiliency resources (SE and SOC) and child behavior problems.

**Child resiliency factor and YSR score.** Sense of Coherence (SOC) and Self-Esteem (SE) scores were both significantly and negatively correlated with both Internalizing and Externalizing scores on the YSR (Table 4.3). However, the SOC score was significantly more strongly correlated with both Internalizing and Externalizing scores than the child's SE score (Fisher's z-test, both  $z_s > 1.96$ .  $p < .05$ ). In fact, when SOC and SE were entered as predictor variables in a stepwise multiple regression, only SOC entered as a predictor for both Internalizing and Externalizing.

**H<sub>1.3</sub>:** There will be a significant relationship between a negative family environment and child resiliency resources.

**Family environment and resiliency resources.** The same mother and child variables used in Hypothesis 1.1 to describe the family environment were correlated with

the child resiliency measures (SOC and SE). The results are parallel to those of

Hypothesis 1.1.

**Child report.** Significant positive correlations were found between each of the positive family environment measures (FRI, EEAC Involvement between the child and her/his mother) and the SOC and SE scores. The more positive the family environment reported by the child, the stronger the resiliency resources. The child report of his/her own Criticism toward mother and of mother's Criticism of him/her were both significantly negatively correlated with SOC and SE scores.

**Mother report.** There was no significant correlation between any of the mother's scores (FRI, CES-D, EEAC Criticism and Involvement between mother and child) and the child's SOC (all absolute values of  $r_s < .110$ ,  $p_s > .065$ ). In contrast, all correlations between the child's self esteem and the mother's scores were significant (all absolute values of  $r_s > .117$ ,  $p_s < .05$ ), with the exception of mother report of her positive expressions toward the child ( $r = .101$ ,  $p = .093$ ). As was true for Hypothesis 1.1, the correlations between the mother's variables and child resiliency were significantly smaller than those between the child's variables and his/her resiliency resources (Fisher's  $z$ -test, all  $z_s > 1.96$ .  $p < .05$ ).

## **Hypothesis 2. Maternal Criticism and Involvement**

### **in Relation to Behavior Problems**

**Specific Aim 2:** To examine whether EE components, either high levels of Criticism or Emotional Over-Involvement (Involvement), are associated differentially with the Internalizing or Externalizing behavior problems.

**H<sub>2.1</sub>.** There are positive relationships between a high level of Criticism and a low level of Involvement and child Internalizing and Externalizing Scores.

### **Relationships between Involvement and Internalizing and Externalizing Scores**

**Child reports.** Child reports of mothers' positive emotional expressions (Involvement) were significantly and negatively related to both Internalizing and Externalizing scores (Table 4.3). Similarly, child reports of their own Involvement directed toward their mothers were significantly and negatively related to their reports of their own Internalizing and Externalizing behavior problems.

Hypothesis 2.1 was not confirmed for Involvement, based on child report. In fact, the reverse was true. Children who reported that their mothers expressed less positively

or that they were less positively emotionally connected to their mothers tended to have more Internalizing and Externalizing behavior problems.

**Mother reports.** Hypothesis 2.1 was also not confirmed for Involvement based on the mother's report (Table 4.5). Mother reports of Involvement directed toward her child were significantly and negatively related to child Internalizing score, i.e., children whose mothers reported they were less positively connected to their children tended to have more Internalizing behavior problems. Mother report of Involvement was not significantly correlated with the child Externalizing score. How much the mother reporting her child expressing positive emotions toward herself did not relate to either Internalizing or Externalizing scores.

#### **Correlations between Child Report of Involvement and YSR Behavior Scores by Gender**

**Boys' reports.** Table 4.4 presents the correlations between child report of Involvement and child YSR behavior scores separately by gender. Boys' reports of mother's Involvement were significantly and negatively related to boys' Internalizing behaviors, but not to Externalizing behaviors. Boys' own Involvement directed toward their mothers was not significantly related to either Internalizing or Externalizing behavior problems.

**Girls' reports.** Among girls, there was a significant and negative correlation between girls' reports of their mothers' positive expressions and both Internalizing and Externalizing behavior problems. Further, girls' own Involvement directed toward their mothers was significantly and negatively related to both Internalizing and Externalizing behavior scores. Thus, Positive emotional connection between mother and child were negatively related to child Internalizing behavior problems of Japanese children, both boys and girls. However, Involvement was significantly related to Externalizing scores only in girls.

#### **Correlations between Mother Report of Involvement and YSR Behavior Scores by Gender**

**Mothers of boys.** When the child was a boy, mother report of her Involvement with her son was significantly and negatively related to child Internalizing and Externalizing behaviors. Mother reports of child Involvement with them herself were not significantly related to either YSR behavior problem scores. The result was consistent with the child's report in that the emotionally positive attitude (Involvement) from the mother was significantly related to child behavior problems, rather than the child's Involvement with the mother.

**Mothers of girls.** When child was a girl, there was no significant relationship between mother's report of her own or her daughter's Involvement and either Internalizing nor Externalizing scores (Table 4.6).

### **Relationships between Criticism and Internalizing and Externalizing Scores**

**Child reports.** Child reports of mother Criticism were significantly and positively related to both Internalizing and Externalizing scores (Table 4.3). Similarly, child reports of their own Criticism directed toward mother were also significantly and positively related to their reports of their own Internalizing and Externalizing behavior problems.

Hypothesis 2.1 was confirmed for Criticism. Children who reported that their mothers showed more Criticism and/or that they showed more Criticism toward their mothers tended to have more Internalizing and Externalizing behavior problems.

**Mother reports.** Mother reports of the child's Criticism directed toward her were significantly and positively related to child's both Internalizing and Externalizing YSR scores (Table 4.5). Mother report of her own Criticism directed toward her child was significantly and positively related to the child's Internalizing behaviors, but not to Externalizing behaviors. Hypothesis 2.1 was partially confirmed for the Criticism based on mother's report as well.

### **Correlations between Child Report of Involvement and YSR Behavior Scores by Gender**

**Boys' reports.** There were significant and positive relationships between boys' reports of their mothers' Criticism and both Internalizing and Externalizing behavioral problems in boys (Table 4.4). Similarly, boys' reports of their own Criticism directed toward their mothers were significantly and positively correlated with boys' Internalizing and Externalizing behavior scores.

**Girls' reports.** The relationships between girls' reports of Criticism were parallel to those of boys.

### **Correlations between Mother Report of Criticism and YSR Behavior Scores by Gender**

**Mothers of boys.** When a child was a boy, both the mother's own Criticism toward her child and her child's Criticism toward her were significantly and positively related to child's Internalizing behavior score, but not to the Externalizing behavior score (Table 4.6).

**Mothers of girls.** When the child was a girl, mother reports of her own Criticism directed toward the child were significantly and positively related to her daughter's Internalizing behavior scores. Mother reports of her daughter's Criticism toward her was

significantly and positively related to her daughter's Internalizing and Externalizing YSR scores, in contrast to the result found with mothers of boys.

### **Gender Differences in Strength of Correlations**

Fisher's  $z$ -test was used to compare the correlations between child variables by gender. Data from girls was significantly more strongly correlated for 9 pairs of variables: Sense of Coherence (SOC)-mother Involvement toward child (positive correlation, +), SOC-child Involvement toward mother (+), Family Relationship Inventory (FRI)-mother Involvement toward child (+), FRI-child Involvement toward mother(+), mother Involvement toward child-mother Criticism of child (negative correlation, -), mother Involvement toward child-Externalizing (-), mother Criticism toward child-Externalizing (+), mother Criticism toward child-Internalizing (+), and child Involvement toward mother-Externalizing (-). None of the pairs of correlations showed a stronger relationship for boys.

### **Differences by Normal-risk and High-risk Groups**

**H<sub>2.2a</sub>:** There will be significant differences in the child perception of her/his mother's Criticism and Involvement between children in normal-risk and high-risk behavior problem groups.

**Group formation.** This analysis compared two groups of children, normal-risk versus high-risk Internalizing and Externalizing groups, in terms of the child's perceptions of her/his mother's Criticism and Involvement. Criticism and Involvement scores were categorized into 4 groups, divided by quartiles. A high level of Criticism or Involvement was defined as a score in the upper quartile of the respective scale in the Expressed Emotion Adjective Checklist (EEAC). Conversely, a low level of Criticism or Involvement was defined as a score in the lowest quartile of the respective EEAC scale. Because a  $\chi^2$ -test was planned, only the highest and lowest quartiles for Criticism or Involvement, rather than all 4 quartiles, were selected to limit the degrees of freedom and to emphasize group differences. Criticism and Involvement were analyzed separately because each captures an essential dimension of the emotional attitudes that are hypothesized to be specifically related to a certain disorders or behavior problems (Hooley & Teasdale, 1989). Child's YSR Internalizing and Externalizing scores were classified into two groups (normal-risk and high-risk groups) based on Japanese YSR cut-off points of *T*-scores greater than 59 (Table 4.7). It should be noted that 19 children were in both high-risk groups, making it more likely that if an indicator of group independence for, say, Internalizing were significant, the indicator for the corresponding behavior scale, Externalizing, would be significant as well.

**Criticism and risk.**  $\chi^2$ -tests indicated that the normal- and high-risk groups for both Internalizing and Externalizing behavior problems were different in their perceptions of their mothers' Criticism directed toward themselves, Internalizing,  $\chi^2(1) = 22.51, p < .001$ ; Externalizing,  $\chi^2(1) = 29.64, p < .001$ . Children in both the high-risk groups perceived more Criticism from their mothers than children in the normal-risk groups (Table 4.8).

**Involvement and risk.**  $\chi^2$ -tests indicated that there was a significant difference between the normal-risk and high-risk groups in both Internalizing and Externalizing scores in their perceptions of their mothers' Involvement with them, Internalizing,  $\chi^2(1) = 25.216, p < .001$ ; Externalizing,  $\chi^2(1) = 16.051, p < .001$ . In contrast to the effect of Criticism, children in both high-risk groups perceived less Involvement from their mothers (Table 4.8).

**MANOVA.** Data from the full sample of children were included in a MANOVA comparing Criticism and Involvement scores by the groups of children in normal-risk and high-risk groups for Internalizing and Externalizing behavior problems. The MANOVA confirmed the significant differences seen in the more limited sample of high- and normal-risk groups and very high and very low Criticism and Involvement groups. There were significant differences between normal-risk and high-risk groups in child's

perceptions of her/his mother's Criticism directed toward her/him, Internalizing, Wilks'  $\lambda$  = .954,  $F(2, 269) = 6.531$ ,  $p < .005$ ,  $\eta^2 = .046$ , power = .906; Externalizing, Wilks'  $\lambda$  = .935,  $F(2, 269) = 9.390$ ,  $p < .001$ ,  $\eta^2 = .065$ , power = .978. Univariate ANOVAs indicated that the child's perceptions of mother's Criticism were significantly different between the normal-risk and high-risk groups for both Internalizing and Externalizing behavior problems, Internalizing,  $F(1, 269) = 8.665$ ,  $p < .005$ ,  $\eta^2 = .031$ , power = .835; Externalizing,  $F(1, 269) = 18.760$ ,  $p < .001$ ,  $\eta^2 = .065$ , power = .991. Children in the high-risk group reported more Criticism.

Furthermore, child's perceptions of mother's Involvement directed toward child were significantly different between the normal-risk and high-risk groups, Internalizing,  $F(1, 269) = 11.123$ ,  $p < .001$ ,  $\eta^2 = .039$ , power = .914; Externalizing,  $F(1, 269) = 4.033$ ,  $p < .05$ ,  $\eta^2 = .015$ , power = .516. Children in the high-risk group reported less Involvement.

**H<sub>2.2b</sub>:** There will be significant differences in the mother's perceptions of her own Criticism and Involvement directed toward her child between children who are in normal-risk and high-risk behavior problem groups.

### **Criticism and Involvement in High- and Low-Risk Groups**

**Group formation.** This analysis is parallel to that with the child perception of his/her mother's Criticism and Involvement. The highest and lowest quartiles of mother's report of her own Criticism or Involvement toward her child each were used to establish two groups of children. The two groups of YSR high-risk or normal-risk children were then used to compare mother reports of Criticism and Involvement.

**Criticism and risk.** The differences in mother's perceptions of her own Criticism and Involvement directed toward her child between the normal-risk and high-risk groups of children are presented in Table 4.9. The children with high levels of Internalizing had mothers who reported more criticism of the child than the normal-risk group, but the two groups were not different when high levels of Externalizing were considered, Internalizing,  $\chi^2 (1) = 7.32, p < .01$ ; Externalizing,  $\chi^2 (1) = 1.14, p = .286$  (both with Yates Continuity Correction). The result for Internalizing and Criticism is consistent with the result seen with the child's report of her/his mother's level of Criticism; however, there was no significant group difference associated with different levels of Criticism and Externalizing behaviors.

**Involvement and risk.** There was no significant difference in the distribution of high and low Involvement groups by normal-risk and high risk Internalizing groups;

however, there was a significant difference between high and low Involvement groups for normal-risk and high-risk Externalizing groups, Internalizing,  $\chi^2 (1) = 2.95, p = .086$ ; Externalizing,  $\chi^2 (1) = 3.92, p < .05$  (both with Yates Continuity Correction). As was true for the child report of mother's Involvement, mother's report of greater Involvement was associated with lower risk of high scores on the YSR Externalizing scale.

**MANOVA.** Data from the full sample of children were included in a MANOVA comparing mother's Criticism and Involvement Scores by the groups of children in normal-risk and high-risk groups for Internalizing and Externalizing behavior problems. The MANOVA results were consistent with the results of the  $\chi^2$ -tests. The MANOVA yielded no significant overall difference for YSR risk groups in terms of either Criticism and Involvement, Internalizing, Wilks'  $\lambda = .982, F(2, 269) = 2.414, p = .091, \eta^2 = .018$ , power = .484; Externalizing, Wilks'  $\lambda = .995, F(2, 269) = .740, p = .478, \eta^2 = .005$ , power = .175. Univariate ANOVAs indicated that the mother's report of her Criticism toward her child was significantly different between the normal-risk and high-risk groups for Internalizing, but not Externalizing, behavior problems, Internalizing,  $F(1, 269) = 4.814, p < .05, \eta^2 = .018$ , power = .589; Externalizing,  $F(1, 269) = .043, p = .835, \eta^2 < .001$ , power = .055. Children in the high-risk group reported more Criticism.

The mother's report of her Involvement directed toward her child was not significantly different between the normal-risk and high-risk groups, Internalizing,  $F(1, 269) = .621, p = .431, \eta^2 = .002, \text{power} = .123$ ; Externalizing,  $F(1, 269) = 1.374, p = .242, \eta^2 = .005, \text{power} = .215$ .

### **Criticism and Involvement as Specific Predictors**

Two multiple regression analyses were conducted to examine the relationships between mother and child perceptions of her Criticism or Involvement and the child's Internalizing and Externalizing behavior problems. Four predictors, mother reports of her own Criticism and Involvement directed toward her child and child reports of his/her mother's Criticism and Involvement directed toward him/her, and gender were entered first in the regression equation. Because Internalizing and Externalizing behavior problems co-occurred in children, one (Internalizing or Externalizing) of the two behavior problem variables was also entered to control the effect when the other behavior variable was predicted.

**H<sub>2.2c(1)</sub>** Mother and child perceptions of mother's Criticism specifically predict child Externalizing behavior problems.

**Predicting Externalizing.** When only the four parent/child

Criticism/Involvement variables were included to predict Externalizing scores, a significant  $R^2$  was obtained, with only the child report of mother's Criticism yielding a significant  $\beta$ -value (see Table 4.10 for coefficient values),  $R^2 = .216$ ,  $F(4, 268) = 18.414$ ,  $p < .001$ . When the score for YSR Internalizing was entered in the regression equation, the  $R^2$  increased to .421 ( $R^2_{change} = .205$ ,  $F_{change}(1, 267) = 94.751$ ,  $p < .001$ ). Significant  $\beta$ -values were obtained for the YSR Internalizing score and the child perception of her/his mother's Criticism (Table 4.10). Therefore, only the child perception of mother's Criticism was a significant predictor (positive) of child Externalizing behavior problems, whether or not the Internalizing score was included in the regression equation.

**H<sub>2.2c(2)</sub>** Mother and child perceptions of mother's Involvement specifically predict child's Internalizing behavior problems.

**Predicting Internalizing.** When only the four parent/child Criticism/Involvement variables were included to predict Internalizing scores, a significant  $R^2$  was obtained, with child reports of mother's Criticism and Involvement yielding significant  $\beta$ -values (see Table 4.11 for coefficient values),  $R^2 = .199$ ,  $F(4, 268) = 16.642$ ,  $p < .001$ . When the score for YSR Externalizing was entered in the regression equation, the  $R^2$  increased to .409 ( $R^2_{change} = .210$ ,  $F_{change}(1, 267) = 94.751$ ,  $p < .001$ ). However, only the child

perception of her/his mother's Involvement and the YSR Externalizing score were related significantly to Internalizing behavior problems (Table 4.11). Therefore, only child perception of mother's Involvement was a significant predictor (negative) of child's Internalizing behaviors when the Externalizing score was included in the regression equation.

**Summary.** Thus, the hypothesis regarding Criticism as a factor in predicting Externalizing behavior problems was confirmed. Higher levels of Externalizing behavior were predicted by child reports of mother's Criticism, even controlling for the Internalizing score. The hypothesis regarding Involvement as a factor in predicting Internalizing behaviors was not confirmed. Higher levels of Internalizing behavior problems were predicted only by lower levels of child perception of Involvement from her/his mother. Mother's perception of her Involvement was not a significant predictor. Gender did not predict either behavior problem.

### **Predicting Internalizing and Externalizing in High-risk Samples**

**H<sub>2.3a</sub>.** Mother and child perception of mother's Criticism specifically predict Externalizing behavior problems in a high-risk Externalizing group.

**Predicting Externality.** When only the four parent/child Criticism/Involvement variables were included to predict Externalizing scores of children in the high-risk Externalizing group (boys,  $n = 14$ ; girls,  $n = 23$ ), a significant  $R^2$  was not obtained with any of the variables, only the four parent/child Criticism/Involvement variables,  $R^2 = .202$ ,  $F(4, 32) = 2.020$ ,  $p = .115$ ; including Internalizing,  $R^2 = .202$ ,  $F_{Change}(1, 31) = 114$ ,  $p = .240$ . Table 4.12 presents the for coefficient values.

**H<sub>2.3b</sub>.** Mother and child perceptions of mother's Involvement specifically predict Internalizing behavior problems in a high-risk Internalizing group.

A group of children were identified whose Internalizing scores placed them in a high risk category (boys,  $n = 21$ ; girls,  $n = 24$ ). The multiple regression procedure used for the full sample was repeated to examine the relationships between mother and child perceptions of Criticism and Involvement and the child's Internalizing and Externalizing behavior problems. Four predictors, mother reports of her own Criticism and Involvement directed toward her child and child reports of his/her mother's Criticism and Involvement directed toward him/her were entered first in the regression equation. Because Internalizing and Externalizing behavior problems co-occurred in children, one

(Internalizing or Externalizing) of the two behavior problem variables was also entered to control the effect when the other behavior variable was predicted.

**Predicting Internalizing.** When only the four parent/child Criticism/Involvement variables were included to predict Internalizing scores, a significant  $R^2$  was obtained, with mother reports of own Involvement and child reports of mother's Criticism yielding significant  $\beta$ -values, (see Table 4.13 for coefficient values),  $R^2 = .414$ ,  $F(4, 40) = 7.056$ ,  $p < .001$ . When the score for YSR Externalizing was entered in the regression equation, the  $R^2$  increased to .470 ( $R^2_{\text{change}} = .056$ ,  $F_{\text{change}}(1, 39) = 4.109$ ,  $p < .001$ ). However, when Externalizing was included, mother perception of her own Involvement and child perception of mother's Criticism still were significantly related to child Internalizing behavior problems. YSR Externalizing score was also related to Internalizing behavior problems (Table 4.13). Therefore, the hypothesis of a positive relationship between mother's perception of her Involvement and child's Internalizing behavior problems was not confirmed. How mothers perceived their own Involvement toward their child was a significant predictor (negative) of child's Internalizing behavior problems, even though mother's perceptions were not related to Internalizing behavior problems in the full sample population (Hypothesis 2.2c[1], above). Child perceptions of Criticism from their

mothers were also significant predictors (positive) of Internalizing behavior problems for children in the high-risk group, when the Externalizing score was controlled.

**Summary.** Thus, the hypothesis regarding Involvement as a factor in predicting Internalizing behavior problems was partially disconfirmed with respect to mother's report of her own Involvement. In fact, the results were the reverse of what was predicted. In contrast to the results testing Hypothesis 2.2c (2), mother's perception of her own Involvement was a predictor (negative) of Internalizing behavior problems. Child report of Criticism from mother and Externalizing behavior problems were also significant positive predictors of Internalizing behavior problems. The hypothesis regarding Criticism as a factor in predicting Externalizing behavior problems of the children in the Externalizing high-risk group was not confirmed. There was no evidence to support a relationship between children's Externalizing behavior problems and mother or child report of mother's Criticism.

### **Hypothesis 3. Mediating and Moderating Effects of Resiliency Factors**

**Specific Aim 3:** Examine the moderation effect and mediation effect of children's Sense of Coherence (SOC) and Self-Esteem (SE) in the relationship between maternal Criticism and Involvement and child behavior problems

### **Moderating Effects of Resiliency Factors**

**H<sub>3,1</sub>:** Child Sense of Coherence (SOC) and Self-Esteem (SE) moderate the relationship between family environment factors and Internalizing and Externalizing behavior problems.

**Full sample.** Regression analyses were conducted to examine the relationship between each of the family environment variables, child's SOC or SE, and child's Internalizing and Externalizing behavior problems. Family environment variables were child reports of mother's Criticism and Involvement (EEAC), child report of the family relationship (FRI), and maternal depression (CES-D). The analysis procedure was conducted as follows. As the first step, one of the continuous predictor variables and one of the moderator variables (SOC or SE) were centered to eliminate multicollinearity effects between the predictor and moderator. As the second step, the predictor variable (family environment) and the purported moderator variable (SOC or SE) were entered simultaneously to predict Internalizing or Externalizing scores. As the third step, the interaction term was entered (e.g., FRI x SOC).

No significant moderation effects were found; that is, none of the interaction terms was significant in the regression equation. Child SOC and SE were significantly and negatively correlated with both Internalizing and

Externalizing scores, beyond the contribution of the main effects of the family-related predictors. Either the predictors were significantly associated with the child's Internalizing or Externalizing symptoms, independent of the moderator variable, or the family factors lost the power of prediction because of a stronger association between Internalizing or Externalizing and the moderating variables, child's SOC and SE. That is, entering the child's resilience variables did not change the relationship between family factors and Japanese child's behavior problems.

**High-risk samples.** The same analyses were conducted among the group of 55 children in the combined high-risk Internalizing/Externalizing group.

There was no significant moderation effect for child SOC and SE.

### **Moderating Effects of Gender**

**H<sub>3,2</sub>:** Gender moderates the relationship between child perceptions of mother's Involvement and Criticism and Internalizing and Externalizing behavior problems.

**Gender and Involvement.** The same regression analyses were conducted to examine the moderation effect of child's gender. There was no moderation effect of gender on the relationship between child reports of

mother's Involvement and Internalizing behavior problems. For Externalizing, the interaction term, child's report of his or her mother's Involvement by gender, was significant for child Externalizing behaviors,  $\beta = -.179$ ,  $R^2 = .014$ ,  $p < .05$  (Figure 4.5). Further, child perceptions of his or her mother's Involvement significantly and negatively predicted child Externalizing behaviors,  $\beta = -.297$ ,  $R^2 = .088$ ,  $p < .001$ . However, there was no main effect for gender,  $\beta = .066$ ,  $R^2 = .000$ ,  $p = .255$ . The result indicated that girls were more affected by mother's Involvement than boys.

**Gender and Criticism.** Gender also moderated the relationship between child's perception of his or her mother's Criticism and both Internalizing and Externalizing behaviors. The interaction term, mother's Criticism by gender, was significant for both Internalizing and Externalizing: Internalizing,  $\beta = .339$ ,  $R^2 = .018$ ,  $p = .014$  (Figure 4.6); Externalizing,  $\beta = .389$ ,  $R^2 = .024$ ,  $p < .005$  (Figure 4.7). Child perception of mother's Criticism significantly and positively predicted child's Internalizing behaviors,  $\beta = .407$ ,  $R^2 = .166$ ,  $p < .001$ , and Externalizing behaviors,  $\beta = .433$ ,  $R^2 = .187$ ,  $p < .001$ . There was no main effect for gender in predicting either Internalizing,  $\beta = .020$ ,  $R^2 = .000$ ,  $p = .724$ , or Externalizing,  $\beta = .056$ ,  $R^2 = .003$ ,  $p = .307$ , behaviors. Girls were more vulnerable to mother's Criticism than boys.

### **Mediating Effects of SE and SOC**

The analyses examined whether each of the child's resiliency factors, SOC and SE, mediated the relationship between each family environment factor and Internalizing and Externalizing behaviors. The procedures recommended by Kenny and colleagues (Baron & Kenny, 1986; Frazier, Tix, Barron, 2004) were followed. Only the significant mediation effects mediating the relationship of family environment variables and child Internalizing and Externalizing behaviors are presented in this section. The Tables 4.14 - 4.22 and Figures 4.8 - 4.12 correspond to the descriptions of the result in this section.

Sobel's test was used to evaluate the effect of the mediator variable. Sobel's test is calculated as the product of the direct path from the independent variable on dependent variable through the mediating variable with the formula,  $z = \frac{b}{\sqrt{b^2 sa^2 + a^2 sb^2}}$ , where  $a$  and  $b$  are unstandardized regression coefficients of the path from the independent to mediating variable and the path from mediating variable to the dependent variable respectively. The  $sa$  and  $sb$  are the standard errors of the each path (Baron & Kenny, 1986; Patrick & Bolger, 2002). The  $z$  score must exceed the critical value of 1.96 required for  $p < .05$ .

## **Mediating Effects of Resiliency Factors on Mother's Involvement and Behavior**

### **Problems**

**H<sub>3.3a</sub>.** Child Sense of Coherence (SOC) and Self-Esteem (SE) mediate the relationship between child report of mother's Involvement and Internalizing or Externalizing problems.

**Mediation of SOC on Involvement and Internalizing.** Mediation effects of each of the child's resiliency factors (SOC and SE) for the path from child's report of mother's Involvement to Internalizing were examined. First, the child's report of mother's Involvement toward the child (the predictor) was regressed onto the child's Internalizing behavior score (outcome variable) (Step 1). Next, SOC (the hypothesized mediator) was regressed on the mother's Involvement directed toward child (Step 2). Third, child Internalizing behavior score was regressed on both SOC and the mother's Involvement directed toward child. The regression coefficient between mother's Involvement and Internalizing behavior scores was reduced from  $-.364$  to  $-.143$  after child's SOC was entered, but the path was still significant (Figure 4.8, Table 4.14). The SOC was found to be a partial mediator in the relationship. Sobel's test confirmed that the degree of reduction from  $-.364$  to  $-.143$  was significant ( $z = -6.04, p < .01$ ).

**Mediation of SOC on Involvement and Externalizing.** The same procedure was used to examine the mediation effect of child SOC between the child report of mother's Involvement and Externalizing. The direct effect from mother's Involvement directed toward child and child's Externalizing behavior scores dropped from  $-.297$  to  $-.099$  (*n.s.*). The SOC completely mediated the relationship. Sobel's test confirmed that the drop from  $-.297$  to  $-.099$  was significant ( $z = 4.35, p < .001$ ). (Table 4.15; Figure 4.8).

**Mediation of SE on Involvement and Internalizing and Externalizing.**

Similarly, Self-Esteem (SE) partially mediated the path from child report of mother's Involvement and child's Internalizing and Externalizing behavior problems. The mediation effects are presented in in Figure 4.9 and Tables 4.16 and 4.17. Sobel's test confirmed the indirect effect of SE mediating child report of mother's Involvement and child's Internalizing ( $z = -2.97, p < .001$ ) and Externalizing ( $z = -2.73, p < .001$ ) behavior problems.

**Mediating Effects of Resiliency on Mother's Criticism and Behavior Problems**

**H<sub>3.3.b</sub>.** Child Sense of Coherence (SOC) and Self-Esteem (SE) mediate the relationship between child report of mother's Criticism toward the child and Internalizing or Externalizing problems.

**Mediation of SOC on Criticism and Behavior Problems.** Mediation effects of each of the child's resiliency factors (SOC and SE) for the path from child's report of mother's Criticism to behavior problems were examined. The regression coefficient between mother's Criticism directed toward child and child's Internalizing behavior scores dropped from .407 to .188 (Table 4.18 and Figure 4.10). Sobel's test confirmed that the degree of reduction from .407 to .188 was significant ( $z = 6.17, p < .001$ ).

The same procedure was used to examine the mediation effect of child's SOC between the child's report of mother's Criticism and Externalizing scores. The direct effect from mother's Criticism directed toward child and child's Externalizing behavior scores dropped from .433 to .258 (Table 4.19 and Figure 4.10). Sobel's test confirmed that the degree of reduction from .433 to .258 was significant ( $z = 5.42, p < .001$ ). The mediation effect is presented in).

**Mediation of SE on Criticism and Behavior Problems.** Similarly, SE partially mediated the relationship between child report of mother's Criticism and child's Internalizing and Externalizing behavior problems. The relationship between Criticism and Internalizing dropped from .407 to .188 (Table 4.20 and Figure 4.11), and between Criticism and Externalizing dropped from .433 to .258 (Table 4.21 and Figure 4.11). Sobel's test confirmed the significant partial mediation effect of SE on the path from

mother's Criticism and Internalizing ( $z = 3.23, p < .001$ ), and Externalizing ( $z = 2.57, p < .001$ ) behaviors.

#### **Mediation of SE on Mother's Report of Her Own Criticism and Behavior**

**Problems.** The relationship between mother's report of her own Criticism and Internalizing Behavior Problems was partially mediated by SE. The direct effect of mother's own Criticism on child's Internalizing behavior scores dropped from .188 to .141 (Table 4.22 and Figure 4.12). Sobel's test confirmed that the drop was significant ( $z = -2.73, p < .001$ ).

#### **Hypothesis 4. Testing the SEM**

**Specific Aim 4:** To test the model fit with the data with Structural Equation Modeling.

#### **Modeling**

**H<sub>4.1</sub>:** An adequate model can be developed that describes the relationships among family environment, child resiliency, and behavior problems.

The SEM was constructed to reflect the predicted mediation paths from child and mother perceptions through SOC and SE to Internalizing and Externalizing diagrammed in Figure 3.1. Because the AMOS-18 software used for the SEM analyses does not allow missing data, the "Listwise" method was used to exclude missing data. Those missing data were assumed as a missing completely at random (MCAR) because they did not

depend on any demographic variables or any of the measured variables. Accordingly, 20 of the 285 cases were not included because of a missing score as follows: YSR ( $n = 9$ ), SOC (1), mother's FRI (1), child's EEAC (5), and mother's EEAC (4).

Four test statistics are reported for the models: the chi-square ( $\chi^2$ ), the  $\chi^2$  per degrees of freedom (CMIN/DF), the comparative fit index (CFI), and the root-mean-square error of approximation (RMSEA).  $\chi^2$  is inflated by the sample size, and would be expected to be significant, implying a poor fit. Therefore, the other three test statistics were evaluated. The CMIN/DF allows for a correction of the  $\chi^2$ -value by the degrees of freedom, and values in the range of 2 to 1 or 3 to 1 indicate acceptable fit between the hypothetical model and the sample data (Carmines & McIver, 1981). CFI compares the fit of the estimated model to the independence model. CFI values of .90 or higher are accepted as indicating a good-fitting model. There is some disagreement as to the acceptable values for the RMSEA. Brown and Cudeck (1993) argue that RMSEA values of .05 or less indicate a good model fit, and limit their range to 0.0-.05. However, Hu and Bentler (1999) states that RMSEA values below .05 indicate a "good" fit for a model, values above .10 indicate a "poor" fit, and values between .05 and .10 an "adequate" fit.

First, the measurement model was tested to confirm the adequate fit with the data (omitting error terms and correlations). The measurement model provided acceptable fit to the data,  $\chi^2(104, n = 265) = 259.186, p < .001$ ; CMIN/DF = 2.492; CFI = .903; and RMSEA = .075.

Figure 4.12 depicts the full model examining the relationships among the latent variables of mother's perceptions, defined as her reports of her level of depression (CES-D), her own Criticism toward and Involvement with her child (EEAC), and her view of family relationships (FRI); child's perceptions, defined as his/her reports of his/her mother's Criticism and Involvement; the two resiliency factors (Sense of Coherence and Self-Esteem); and, as outcome measures, child Internalizing and Externalizing behaviors. The model predicted that negative perceptions of the mother and child (mother's depression, child and mother reports of high levels of mother's Criticism or low levels of mother's involvement, and poor family relationships) would be negatively related to both SOC and SE, as resiliency factors (Antonovsky, 1987; Jacquez et al., 2004; Johnson, 2004) and as well as directly and positively related to Internalizing and Externalizing behavior problems. Further, the model predicted that both SE and SOC would be negatively related to Internalizing and Externalizing problem behaviors. Further, the full

model tested whether SE and/or SOC would have a mediating effect on child and/or mother perceptions.

The full SEM that included the direct and indirect effects from mother and child perceptions, child's resiliency factors, and Internalizing and Externalizing symptoms proved to be an adequate fit (Figure 4.12) with  $\chi^2 (105, n = 265) = 260.557, p < .001$ ; CMIN/DF = 2.481, CFI = .903; RMSEA = .075, 90%-ile confidence interval = .064-.086. Significant pathways were found for both direct and indirect effects from child perceptions to Internalizing and Externalizing behaviors. Child SOC and SE partially mediated child's perceptions to child's both Internalizing and Externalizing behavior symptoms (Figure 4.13<sup>2</sup>). SOC and SE combined mediated 42% of child perceptions to child's Internalizing behavior symptoms and 19% of child's perceptions to child's Externalizing symptoms (Shrout & Bolger, 2002).

An alternative SEM that allowed only direct effects (no mediation pathways) also had an acceptable fit with the data:  $\chi^2 (49, n = 265) = 128.197, p < .001$ ; CMIN/DF = 2.616; CFI = .908; RMSEA = .078, 90%-ile confidence interval = .062-.095. As was true

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<sup>2</sup>For simplicity in showing the significant pathways in Figure 4.12, Figure 4.13 omits error terms, correlations between error terms, and nonsignificant path coefficients.

for the model described in Figures 4.12 and 4.13, there was no significant direct between other perceptions and Internalizing and Externalizing behavior symptoms. Similarly, when indirect pathways were removed from this alternative model, the pathways between child perceptions were significantly and positively related to both Internalizing and Externalizing behaviors. Although the two models had statistically adequate fit with the data, the full model, because it includes both direct and indirect effects gives more information about the mechanism of the relationship among family factors, resiliency factors, and behavior symptoms. Although the data are cross-sectional and causality cannot be assumed, this information about indirect pathways can help to identify the critical components of interventions, e.g., finding ways to increase SOC presumably would reduce both Internalizing and Externalizing problems for all children, but especially those in suboptimal home environments.

In both the full and alternative models, the direct and indirect pathways from mother's perceptions to Internalizing and Externalizing behaviors were not significant. However, a model that removed the child's perceptions, but left those of the mother also provided an adequate fit for the data.. This mother-only model had an acceptable fit with the data:  $\chi^2 (68, n = 265) = 174.224, p < .001$ ; CMIN/DF = 2.562; CFI = .912; RMSEA = .077, 90%-ile confidence interval = .063-.091.

The result with the mother-only model demonstrated significant pathways to both child's resiliency factors and behavior symptoms. Because child's perceptions as a latent variable had a stronger relationship with child's resiliency factors, SOC and SE, it accounted for the variances of child's resiliency factors to a large extent. In effect, when both mother's and child's perceptions were taken into consideration in the model, mother's perceptions became hidden or nonsignificant.

The child's negative perceptions in the family were negatively related to both SOC and SE scores. As expected, child's SOC was negatively related to child's both Internalizing and Externalizing behaviors, functioning as a mediator to reduce the negative effects from family environment on child behavior problems. However, unexpectedly, the latent variable, "Self-esteem," was positively related to child's both Internalizing and Externalizing behavior symptoms. SE, by itself, was negatively correlated with both Internalizing and Externalizing behaviors (Table 4.3) and was a mediator between mother's Criticism and Involvement in a simple mediation model (Figures 4.9 and 4.11). In the SEM, SE created a suppression effect that inconsistently increased the effects of negative child perceptions of the family environment to both Internalizing and Externalizing behaviors (MacKinnon, Krull, & Lockwood, 2000). This inconsistent effect of SE was found when the mother and child perceptions were omitted

from the SEM, indicating that it was not the result of the presence of either of these latent variables.

### **Principal Components Analysis of the SE Scale**

Because of the puzzling results of the SEM analyses, a varimax principal components analysis limited to 3 components was conducted with the 16 SE scale items. The three components accounted for 49.3% of the variance in the items. Three subscales were constructed based on two criteria to select an item for a scale, (a) a minimum component loading of .5 and (b) no loading above .3 on any other component. Seven SE items (#s 2, 3, 5, 9, 12, 14, and 15[reworded positively]) loaded on the first component (the component accounted for 30% of the variance) made up a scale labeled “Positive Self-image.” Items were all positively worded (e.g., “I am highly effective at the things I do, I am secure in my sense of self-worth”). The second scale, “Negative Self-image,” was made up of 3 items (#s 1, 6, and 7) from the second component (11.5% of the variation). Items were all negatively worded (e.g., “It is sometimes unpleasant for me to think about myself”). The third scale, was made up of 3 items (#s 10, 13, and 16) from the third component (7.7% of the variance), and was labeled “Self-criticism.” Items were all worded in negative ways (e.g., “I wish I were more skillful in my activities”). Of the 3 remaining items, 2 had positive loadings above .3 on Positive Self-image and Self-

criticism (# 4, “I am almost always able to accomplish what I try for, “ and #11, “I never doubt my personal worth”), and #8 had a positive loading on Negative Self-image and Self-criticism (“At times, I find it difficult to achieve the things that are important to me”).

Table 4.23 presents the correlations between the 3 component-based subscales and Internalizing and Externalizing scores. Paradoxically, all 3 subscales are significantly and negatively related to Externalizing and Internalizing scores. Further, the strength of the correlation between Internality and Positive Self-image or Negative Self-image is significant, with the Negative Self-image-Internality correlation significantly stronger.

Table 4.1

*Child Measures by Gender*

	Girls ( <i>n</i> = 140)		Boys ( <i>n</i> = 136)		Total ( <i>N</i> = 276)	
Measure	<i>M</i>	<i>Med.</i>	<i>M</i>	<i>Med.</i>	<i>M</i>	<i>Med.</i>
	( <i>SD</i> )		( <i>SD</i> )		( <i>SD</i> )	
Sense of Coherence	27.3	28.0	28.1	29.0	27.7	28.0
	(6.0)		(4.8)		(5.5)	
Meaningfulness	8.6	9.0	8.7	9.0	8.6	9.0
	(1.9)		(2.0)		(2.1)	
Manageability	8.5	9.0	8.8	9.0	8.6	9.0
	(2.2)		(2.0)		(2.1)	
Comprehensibility	10.2	11.0	10.7	11.0	10.4	11.0
	(2.8)		(2.3)		(2.6)	
Self-Esteem	46.2	46.0	48.7	47.5	47.4	47.0
	(8.3)		(9.0)		(8.7)	
Self-Liking	23.6	24.0	25.5	25.0	24.5	24.0
	(5.1)		(5.5)		(5.3)	

Table 4.1 (cont'd)

Measure	Girls ( <i>n</i> = 140)		Boys ( <i>n</i> = 136)		Total ( <i>N</i> = 276)	
	<i>M</i>	<i>Med.</i>	<i>M</i>	<i>Med.</i>	<i>M</i>	<i>Med.</i>
	( <i>SD</i> )		( <i>SD</i> )		( <i>SD</i> )	
Self-Competence	22.5 (4.2)	22.0	23.2 (4.6)	23.0	22.9 (4.4)	22.9
Family Relationship Inventory	8.7 (2.2)	9.0	8.2 (2.2)	8.4	8.4 (2.2)	9.0
Cohesion	2.9 (0.9)	3.0	2.7 (1.0)	3.0	2.8 (1.0)	3.0
Expressivity	2.4 (1.1)	3.0	2.4 (1.2)	3.0	2.6 (1.1)	3.0
Conflict	2.9 (1.0)	3.0	3.0 (0.9)	3.0	3.0 (0.9)	3.0
Child Involvement toward mother	59.5 (16.7)	61.0	58.6 (15.0)	59.5	59.1 (15.9)	60.5

Table 4.1 (cont'd).

Measure	Girls ( <i>n</i> = 140)		Boys ( <i>n</i> = 136)		Total ( <i>N</i> = 276)	
	<i>M</i>	<i>Med.</i>	<i>M</i>	<i>Med.</i>	<i>M</i>	<i>Med.</i>
	( <i>SD</i> )		( <i>SD</i> )		( <i>SD</i> )	
Child criticism	26.6	25.0	25.8	23.0	26.2	24.0
toward mother	(11.1)		(11.8)		(11.4)	
Mother Involvement	63.9	68.0	63.3	65.0	63.6	67.0
toward child	(13.4)		(12.7)		(13.0)	
Mother criticism	23.1	21.0	22.9	20.5	23.0	21.0
toward child	(11.1)		(11.4)		(11.2)	
YSR Total ( <i>T</i> )	51.8	51.0	50.1	50.0	50.1	50.0
	(10.2)		(9.8)		(9.7)	
YSR Internalizing	50.3	49.0	49.8	50.0	50.1	50.0
( <i>T</i> )	(10.1)		(9.2)		(9.7)	
YSR Externalizing	51.8	49.0	49.0	49.0	49.6	49.0
( <i>T</i> )	(10.2)		(9.8)		(9.9)	

Table 4.2.

*Maternal Measures by Child Gender.*

Measure	Girls ( <i>n</i> = 140)		Boys ( <i>n</i> = 136)		Total ( <i>N</i> = 276)	
	<i>M</i>	<i>Med.</i>	<i>M</i>	<i>Med.</i>	<i>M</i>	<i>Med.</i>
	( <i>SD</i> )		( <i>SD</i> )		( <i>SD</i> )	
Family Relationship Inventory	9.4 (1.6)	9.8	9.5 (2.1)	10.0	9.4 (1.9)	10.0
Maternal Depression	4.9 (7.2)	3.0	5.5 (8.5)	2.0	5.2 (7.8)	2.0
Mother Involvement toward child	65.4 (12.0)	67.0	66.2 (10.5)	66.2	65.7 (11.4)	68.0
Mother criticism toward child	26.1 (11.0)	25.0	25.4 (11.0)	23.3	26.0 (11.0)	24.0
Child Involvement toward mother	63.8 (12.3)	65.0	63.6 (12.6)	58.0	63.9 (12.0)	66.0
Child criticism toward mother	23.9 (10.1)	22.0	23.1 (11.7)	24.0	23.6 (10.9)	21.0

Table 4.3.

*Correlations between Child Variables (N = 276).*

Measure	A	B	C	D	E	F	G	H	I
A. Sense of Coherence	-								
B. Self-esteem	.593	-							
C. Family Relationship Inventory	.471	.424	-						
D. Mother positivity toward child	.420	.504	.499	-					
E. Mother criticism toward child	-.436	-.340	-.442	-.556	-				
F. Positivity toward mother	.342	.502	.440	.690	-.496	-			
G. Criticism toward mother	-.486	-.403	-.430	-.465	.666	-.493	-		
H. YSR Internalizing	-.586	-.332	-.330	-.364	.407	-.237	.380	-	
I. YSR. Externalizing	-.514	-.290	-.386	-.297	.433	-.307	.521	.593	-

Note: All correlations are significant,  $p < .001$ . Large effect sizes are boxed ( $r \geq .500$ , Cohen, 1988, 1992).

Table 4.4.

*Correlations between Child Variables by Gender.*

Measure	A	B	C	D	E	F	G	H	I
A. Sense of Coherence	-	<b>.614**</b>	<b>.461**</b>	<b>.515**</b>	<b>-.518**</b>	<b>.434**</b>	<b>-.532**</b>	<b>-.594**</b>	<b>-.539**</b>
B. Self-esteem	<b>.576**</b>		<b>.440**</b>	<b>.552**</b>	<b>-.419**</b>	<b>.572**</b>	<b>-.502**</b>	<b>-.302**</b>	<b>-.329**</b>
C. Family Relationship Inventory	<b>.525**</b>	<b>.458**</b>	-	<b>.600**</b>	<b>-.482**</b>	<b>.545**</b>	<b>-.447**</b>	<b>-.310**</b>	<b>-.413**</b>
D. Mother positivity toward child	<b>.291**</b>	<b>.474**</b>	<b>.386**</b>	-	<b>-.669**</b>	<b>.703**</b>	<b>-.547**</b>	<b>-.358**</b>	<b>-.414**</b>
E. Mother criticism toward child	<b>-.334**</b>	<b>-.268*</b>	<b>-.408**</b>	<b>-.430**</b>	-	<b>-.599**</b>	<b>.665**</b>	<b>.500**</b>	<b>.565**</b>
F. Positivity toward mother	<i>.210</i>	<b>.448**</b>	<b>.320**</b>	<b>.674**</b>	<b>-.376**</b>	-	<b>-.563**</b>	<b>-.319**</b>	<b>-.424**</b>
G. Criticism toward mother	<b>-.436**</b>	<b>-.309**</b>	<b>-.427**</b>	<b>-.384**</b>	<b>.667**</b>	<b>-.420**</b>	-	<b>.390**</b>	<b>.554**</b>
H. YSR Internalizing	<b>-.579**</b>	<b>-.370**</b>	<b>-.366**</b>	<b>-.374**</b>	<b>.294**</b>	<b>-.129</b>	<b>.369**</b>	-	<b>.602**</b>
I. YSR. Externalizing	<b>-.480**</b>	<b>-.240**</b>	<b>-.375**</b>	<b>-.159</b>	<b>.283**</b>	<b>-.168</b>	<b>.485**</b>	<b>.583**</b>	-

**\*\*** $p < .001$ , **\*** $p < .005$ , non-significant correlations in *italics*. Large effect sizes are boxed ( $r \geq .500$ , Cohen, 1988, 1992)

Note: Correlations for boys are presented in the lower half of the table; for girls, in boldface in the upper half.

Table 4.5.

*Correlations between Mother Variables and Child Outcome Variables (N = 276).*

Measure	A	B	C	D	E	F	G	H
A. Maternal Family Relationship Inventory	-							
B. Maternal Depression Scale	-.393**	-						
C. Maternal report of child positivity	.410**	-.273**	-					
D. Maternal report of child criticism	-.436**	.251**	-.536**	-				
E. Maternal report of her positivity toward child	.359**	-.254**	.560**	-.318**				
F. Maternal report of her criticism toward child	-.404**	.256**	-.396**	.564**	-.443**			
G. YSR Internalizing	-.051	.045	-.056	.196**	-.134*	.188**		
H. YSR. Externalizing	-.079	.005	-.076	.138*	-.117	.087	.593**	-

\*\* $p < .001$ , \* $p < .005$ , non-significant correlations in *italics*. Large effect sizes are boxed ( $r \geq .500$ , Cohen, 1988, 1992).

Table 4.6.

*Correlations between Mother Variables and Child Outcome Variables by Gender.*

	A	B	C	D	E	F	G	H
A. Maternal Family Relationship Inventory	-	<b>-.371**</b>	<b>.406**</b>	<b>-.382**</b>	<b>.248**</b>	<b>-.425**</b>	<b>.003</b>	<b>-.073</b>
B. Maternal Depression Scale	<b>-.426**</b>	-	<b>-.254**</b>	<b>.099</b>	<b>-.218**</b>	<b>.249**</b>	<b>.021</b>	<b>-.055</b>
C. Maternal report of child Involvement	<b>.417**</b>	<b>-.298**</b>	-	<b>-.442**</b>	<b>.545**</b>	<b>-.453**</b>	<b>-.033</b>	<b>-.052</b>
D. Maternal report of child criticism	<b>-.477**</b>	<b>.415**</b>	<b>-.619**</b>	-	<b>-.242**</b>	<b>.548**</b>	<b>.176*</b>	<b>.186*</b>
E. Maternal report of her Involvement toward	<b>.481**</b>	<b>-.305**</b>	<b>.587**</b>	<b>-.404**</b>	-	<b>-.399**</b>	<b>-.045</b>	<b>-.048</b>
F. Maternal report of her criticism toward child	<b>-.390**</b>	<b>.266**</b>	<b>-.339**</b>	<b>.581**</b>	<b>-.499**</b>	-	<b>.166*</b>	<b>.109</b>
G. YSR Internalizing	<b>-.106</b>	<b>.079</b>	<b>-.085</b>	<b>.218*</b>	<b>-.260**</b>	<b>.214*</b>	-	<b>.602**</b>
H. YSR. Externalizing	<b>-.080</b>	<b>.081</b>	<b>-.103</b>	<b>.087</b>	<b>-.203*</b>	<b>.056</b>	<b>.583**</b>	-

**\*\*** $p < .001$ , **\*** $p < .005$ , non-significant correlations in *italics*. Large effect sizes are boxed ( $r \geq .500$ , Cohen, 1988, 1992).

Note: Correlations for mothers of boys are presented in the lower half of the table; for mothers of girls, in boldface in the upper half.

Table 4.7.

*YSR Normal-Risk vs. High-Risk Groups by Gender and Grade.*

Gender	Normal Risk	High Risk	Total	Normal Risk	High Risk	Total
Girls	123 (83.7%)	24 (16.3%)	147 (100%)	124 (84.4%)	23 (15.6%)	129 (100%)
Boys	108 (83.7%)	21 (16.3%)	129 (100%)	115 (89.1%)	14 (10.9%)	147 (100%)
Total	231 (87.3%)	45 (16.3%)	276 (100%)	239 (86.6%)	37 (13.4%)	276 (100%)
Grade						
5th Grade	147 (84.5%)	27 (15.5%)	174 (100%)	152 (87.4%)	22 (12.6%)	174 (100%)
6th Grade	80 (82.5%)	17 (17.5%)	97 (100%)	82 (84.5%)	15 (15.5%)	97 (100%)

Table 4.8

*YSR Normal-risk and High-risk Groups: Child Reports of Mother's Involvement and Criticism.*

Mother's Involvement toward the Child	YSR Internalizing		YSR Externalizing	
	Normal-Risk	High-Risk	Normal-Risk	High-Risk
	Group	Group	Group	Group
Low Involvement	46 (42.2%)	24 (85.7%)	54 (47.0%)	16 (72.7%)
High Involvement	63 (57.8%)	4 (14.3%)	61 (53.0%)	6 (37.5%)
Risk Group Total	109 (100%)	28 (100%)	115 (100%)	22 (100%)

Mother's Criticism toward the Child	YSR Internalizing		YSR Externalizing	
	Normal- Risk	High-Risk	Normal-Risk	High-Risk
	Group	Group	Group	Group
Low CRIT	69 (59.0%)	1 (5.0%)	68 (59.6%)	2 (8.3%)
High CRIT	48 (41.0%)	20 (95.0%)	46 (40.4%)	22 (91.7%)
Risk Group Total	117 (100%)	21 (100%)	114 (100%)	24 (100%)

Table 4.9

*YSR Normal-risk and High-risk Groups: Mother's Reports of Her Own Involvement and Criticism of Her Child*

Measure	YSR Internalizing		YSR Externalizing	
	Normal	High-Risk	Normal	High-Risk
Mother's Involvement Toward Her Child	Group	Group	Group	Group
Low Involvement	50 (47.2%)	16 (69.6%)	53 (47.3%)	13 (76.5%)
High Involvement	56 (52.8%)	7(30.4%)	59 (52.7%)	4 (23.5%)
Risk Group Total	106 (100%)	23(100%)	112 (100%)	17 (100%)
Mother's Criticism of Her Child	Internalizing		Externalizing	
	Normal	High-Risk	Normal	High-Risk
	Group	Group	Group	Group
Low CRIT	60 (54.1%)	4(19.0%)	57 (50.9%)	7 (35%)
High CRIT	51 (45.9%)	17 (81.0%)	55 (49.1%)	13 (65.0%)
Total	111 (100%)	21 (100%)	112 (100%)	20 (100%)

Table 4.10

*Coefficients for Regression of Criticism and Involvement on Externality (full sample).*

Model 1					
	B	Std. Error	$\beta$	<i>t-test</i>	<i>p</i>
Mother reported Involvement	-.082	.052	-.096	-1.589	.113
Mother reported Criticism	-.066	.055	-.074	-1.197	.233
Child reported Mother Involvement	-.020	.052	-.026	-.374	.709
Child reported Mother Criticism	.404	.063	.447	6.374	.001
Model 2					
	B	Std. Error	$\beta$	<i>t-test</i>	<i>p</i>
Mother reported Involvement	-.056	.044	-.065	-1.257	.210
Mother reported criticism	-.094	.048	-.105	-1.969	.050
Child reported Mother Involvement	.053	.046	.069	1.151	.251
Child reported Mother criticism	.280	.056	.310	5.001	.001
<i>T</i> -score Internalizing	.511	.052	.506	9.734	.001

Table 4.11

*Coefficients for Regression of Criticism and Involvement on Internality (full sample).*

Model 1	B	Std. Error	$\beta$	<i>t-test</i>	<i>p</i>
Mother reported Involvement	-.051	.052	-.060	-.988	.324
Mother reported criticism	.054	.056	.061	.979	.328
Child reported Mother					
Involvement	-.141	.052	-.187	-2.693	.008
Child reported Mother criticism	.242	.063	.270	3.818	.001
Model 2	B	Std. Error	$\beta$	<i>t-test</i>	<i>p</i>
Mother reported Involvement	-.009	.045	-.011	-.202	.840
Mother reported criticism	.088	.048	.100	1.844	.066
Child reported Mother					
Involvement	-.131	.045	-.174	-2.906	.004
Child reported Mother criticism	.035	.059	.039	.602	.548
<i>T</i> -score Externalizing	.513	.053	.517	9.734	.001

Table 4.12

*Coefficients for Regression of Criticism and Involvement on Internality among Externalizing High-Risk Group of Children.*

Model 1	B	Std. Error	$\beta$	<i>t-test</i>	<i>p</i>
Mother reported Involvement	-.131	.120	-.246	-1.092	.283
Mother reported criticism	.014	.099	.031	.142	.888
Child reported Mother Involvement	.010	.081	.026	.120	.905
Child reported Mother criticism	.112	.098	.268	1.149	.259
Model 2	B	Std. Error	$\beta$	<i>t-test</i>	<i>p</i>
Mother reported Involvement	-.136	.119	-.257	-1.146	.260
Mother reported criticism	.002	.099	.005	.021	.983
Child reported Mother Involvement	.017	.081	.047	.214	.832
Child reported Mother criticism	.087	.099	.207	.876	.388
<i>T</i> -score Externalizing	.123	.103	.206	1.197	.240

Table 4.13

*Coefficients for Regression of Criticism and Involvement on Internality among Internalizing High-Risk Group of Children.*

Model 1	B	Std. Error	$\beta$	<i>t-test</i>	<i>p</i>
Mother reported Involvement	-.124	.048	-.330	-2.608	.013
Mother reported criticism	.076	.054	.184	1.404	.168
Child reported Mother Involvement	.060	.056	.172	1.068	.292
Child reported Mother criticism	.217	.070	.516	3.111	.003
Model 2	B	Std. Error	$\beta$	<i>t-test</i>	<i>p</i>
Mother reported Involvement	-.109	.046	-.291	-2.356	.024
Mother reported criticism	.088	.052	.212	1.669	.103
Child reported Mother Involvement	.048	.054	.139	.888	.380
Child reported Mother criticism	.154	.074	.366	2.079	.044
T-score Externalizing	.139	.068	.271	2.027	.050

Table 4.14.

*Mediator Effect of SOC on the Relationship between Child's Report of Mother's Involvement and YSR Internalizing Behavior Scores*

Testing steps in mediation model	<i>B</i>	<i>SE B</i>	95% CI	$\beta$
Testing Step 1 (Path c)				
Outcome: YSR Internalizing score				
Predictor: child report of mother's Involvement toward child	-.271	.042	-.353, -.188	-.364***
Testing Step 2 (Path a)				
Outcome: SOC				
Predictor: child report of mother's Involvement toward child	.176	.023	.132, .221	.420***
Testing Step 3 (Paths b and c')				
Outcome: YSR Internalizing score				
Mediator: SOC	-.934	.095	-1.120, -.747	-.526***
Predictor: child report of mother's Involvement toward child	-.106	.040	-.184, -.028	-.143*

Note. CI = confidence interval; SOC = Sense of Coherence.

\*  $p < .01$ ; \*\*  $P < .005$ ; \*\*\*  $P < .001$ .

Table 4.15.

*Mediator Effect of SOC on the Relationship between Child's Report of Mother's Involvement and YSR Externalizing Behavior Scores*

Testing steps in mediation model	<i>B</i>	<i>SE B</i>	95% CI	$\beta$
Testing Step 1 (Path c)				
Outcome: YSR Externalizing score				
Predictor: child report of mother's Involvement to child	-.225	.044	-.311, -.139	-.297***
Testing Step 2 (Path a)				
Outcome: SOC				
Predictor: child report of mother's Involvement to child	.176	.023	.132, .221	.420***
Testing Step 3 (Paths b and c')				
Outcome: YSR Externalizing score				
Mediator: SOC	-.853	.103	-1.056, -.651	-.472***
Predictor: child report of mother's Involvement to child	-.075	.043	-.160, .010	-.099

Note. CI = confidence interval; SOC = Sense of Coherence.

\* $P < .01$ ; \*\* $p < .005$ ; \*\*\* $p < .001$ .

Table 4.16.

*Mediator Effect of SE on the Relationship between Child's Report of Mother's Involvement and YSR Internalizing Behavior Scores*

Testing steps in mediation model	<i>B</i>	<i>SE B</i>	95% CI	$\beta$
Testing Step 1 (Path c)				
Outcome: YSR Internalizing score				
Predictor: child report of mother's Involvement to child	-.271	.042	-.353, -.188	-.364**
Testing Step 2 (Path a)				
Outcome: SE				
Predictor: child report of mother's Involvement to child	.337	.034	.269, .405	.504**
Testing Step 3 (Paths b and c')				
Outcome: YSR Internalizing score				
Mediator: SE	-.221	.071	-.361, -.080	-.199**
Predictor: child report of mother's Involvement to child	-.196	.048	-.290, -.103	-.264***

Note. CI = confidence interval; SE = Self-Esteem.

\*  $p < .01$ ; \*\*  $p < .005$ ; \*\*\*  $p < .001$ .

Table 4.17.

*Mediator Effect of SE on the Relationship between Child's Report of Mother's Involvement and YSR Externalizing Behavior Scores*

Testing steps in mediation model	<i>B</i>	<i>SE B</i>	95% CI	$\beta$
Testing Step 1 (Path c)				
Outcome: YSR Externalizing score				
Predictor: child report of mother's Involvement to child	-.225	.044	-.311, -.139	-.297**
Testing Step 2 (Path a)				
Outcome: SE				
Predictor: child report of mother's Involvement to child	.337	.034	.269, .405	.504**
Testing Step 3 (Paths b and c')				
Outcome: YSR Externalizing score				
Mediator: SE	-.213	.075	-.360, -.067	-.189**
Predictor: child report of mother's Involvement to child	-.153	.050	-.251, -.055	-.202**

Note. CI = confidence interval; SE = Self-Esteem.

\*\*  $p < .005$ ; \*\*\*  $P < .001$ .

Table 4.18.

*Mediator Effect of SOC on the Relationship between Child Report of Mother's Criticism and YSR Internalizing Behavior Scores*

Testing steps in mediation model	<i>B</i>	<i>SE B</i>	95% CI	$\beta$
Testing Step 1 (Path c)				
Outcome: YSR Internalizing				
Predictor: child report of mother's criticism to child	.352	.048	.258, .446	.407***
Testing Step 2 (Path a)				
Outcome: SOC				
Predictor: child report of mother's criticism to child	-.212	.026	-.263, -.161	-.436***
Testing Step 3 (Paths b and c')				
Outcome: YSR Internalizing				
Mediator: SOC	-.895	.095	-1.082, -.709	-.504***
Predictor: child report of mother's criticism to child	.162	.046	.071, .253	.188***

Note. CI = confidence interval; SOC = Sense of Coherence.

\* $P < .01$ ; \*\* $p < .005$ ; \*\*\* $p < .001$ .

Table 4.19

*Mediator Effect of SOC on the Relationship between Child's Report of Mother's Criticism and YSR Externalizing Behavior Scores*

Testing steps in mediation model	<i>B</i>	<i>SE B</i>	95% CI	$\beta$
Testing Step 1 (Path c)				
Outcome: YSR Externalizing				
Predictor: child report of mother's criticism to child	.380	.048	.286, .475	.433***
Testing Step 2 (Path a)				
Outcome: SOC				
Predictor: child report of mother's criticism to child	-.212	.026	-.264, -.161	-.436***
Testing Step 3 (Paths b and c')				
Outcome: YSR Externalizing				
Mediator: SOC	-.725	.100	-.923, -.528	-.402***
Predictor: child report of mother's criticism to child	.226	.049	.130, .323	.258***

Note. CI = confidence interval; SOC = Sense of Coherence.

\* $P < .01$ ; \*\* $p < .005$ ; \*\*\* $p < .001$ .

Table 4.20.

*Effect of SE on the Relationship between Child's Report of Mother's Criticism and YSR*

*Internalizing Behavior Scores*

Testing steps in mediation model	<i>B</i>	<i>SE B</i>	95% CI	$\beta$
Testing Step 1 (Path c)				
Outcome: YSR Internalizing score				
Predictor: child report of mother's criticism to child	.352	.048	.258, .446	.407***
Testing Step 2 (Path a)				
Outcome: SE				
Predictor: child report of mother's criticism to child	-.264	.043	-.349, -.178	-.340***
Testing Step 3 (Paths b and c')				
Outcome: YSR Internalizing score				
Mediator: SE	-.243	.064	-.368, -.118	-.218***
Predictor: child report of mother's criticism to child	.288	.049	.191, .385	.333***

Note. CI = confidence interval; SE = Sense of Coherence.

\* $P < .01$ ; \*\* $p < .005$ ; \*\*\* $p < .001$ .

Table 4.21.

*Mediator Effect of SE on the Relationship between Child's Report of Mother's Criticism and YSR Externalizing Behavior Scores*

Testing steps in mediation model	<i>B</i>	<i>SE B</i>	95% CI	$\beta$
Testing Step 1 (Path c)				
Outcome: YSR Externalizing score				
Predictor: child report of mother's criticism to child	.380	.048	.286, .475	.433***
Testing Step 2 (Path a)				
Outcome: SE				
Predictor: child report of mother's criticism to child	-.264	.043	-.349, -.178	-.340***
Testing Step 3 (Paths b and c')				
Outcome: YSR Externalizing score				
Mediator: SE	-.184	.065	-.311, -.056	-.162**
Predictor: child report of mother's criticism to child	.332	.050	.233, .431	.377**

Note. CI = confidence interval; SE = Sense of Coherence.

\*  $p < .001$ ; \*\*  $p < .005$ ; \*\*\*  $p < .001$ .

Table 4.22.

*Effect of SE on the Relationship between Mother's Report of Her Own Criticism Directed toward Child and YSR Internalizing Behavior Scores*

Testing steps in mediation model	<i>B</i>	<i>SE B</i>	95% CI	$\beta$
Testing Step 1 (Path c)				
Outcome: YSR Internalizing score				
Predictor: mother report of her own Criticism to child	.167	.053	.063, .271	.188**
Testing Step 2 (Path a)				
Outcome: SE				
Predictor: mother report of her own Criticism to child	-.124	.047	-.217, -.031	-.155*
Testing Step 3 (Paths b and c')				
Outcome: YSR Internalizing score				
Mediator: SE	-.350	.064	-.476, -.224	-.313***
Predictor: mother report of her own Criticism to child	.125	.051	.025, .225	.141*

Note. CI = confidence interval; SE = Self-Esteem.

\* $p < .01$ ; \*\* $p < .005$ ; \*\*\* $p < .001$ .

Table 4.23.

*Correlations between YSR Scales and SE Subscales Derived from Component Analysis.*

Scale	T-SCORE	T-SCORE
	EXTERNALITY	INTERNALITY
Positive Self-image	-.208 <sup>***</sup>	-.197 <sup>**</sup>
Negative Self-image	-.338 <sup>***</sup>	-.480 <sup>***</sup>
Self-criticism	-.231 <sup>***</sup>	-.223 <sup>***</sup>

\*\*\* $p < .001$ ; \*\* $p < .002$

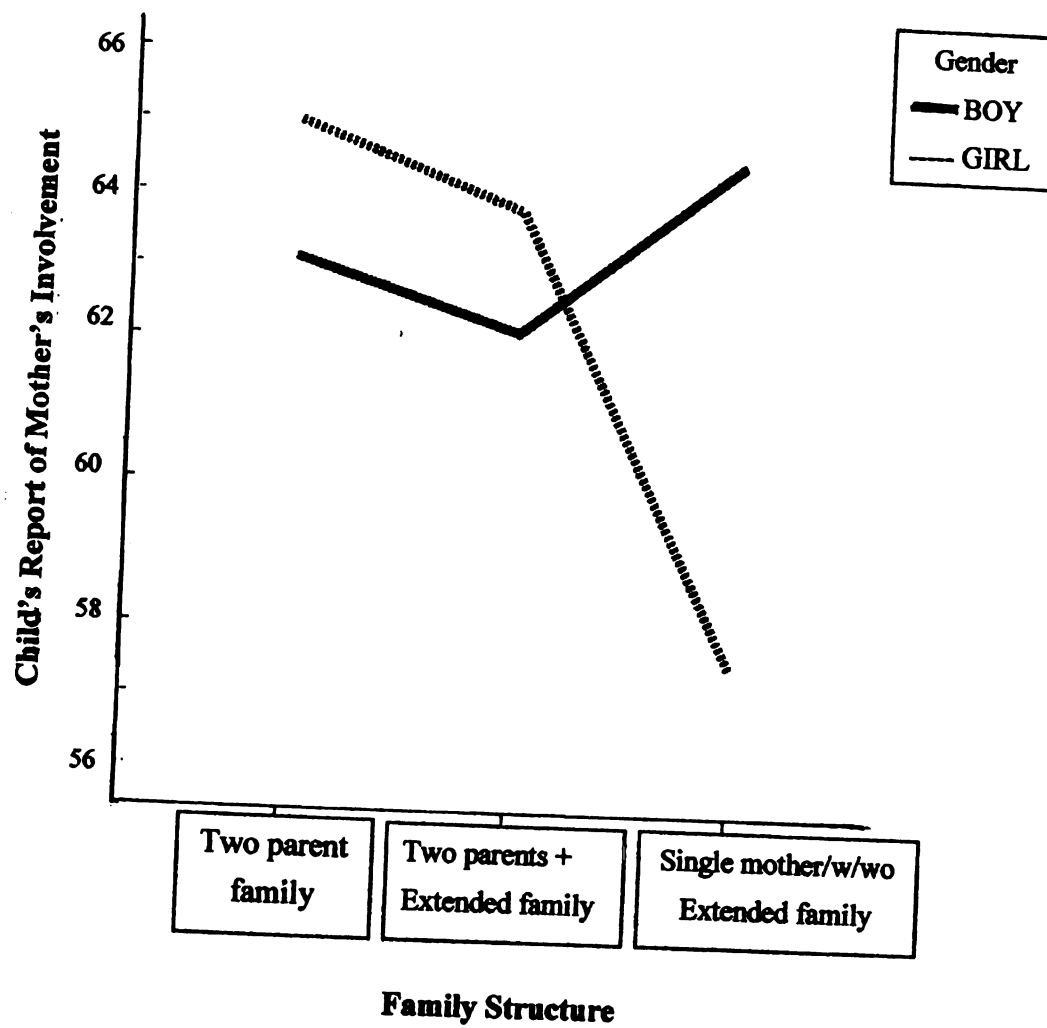


Fig. 4.1. Child Report of Mother's Involvement by Family Structure



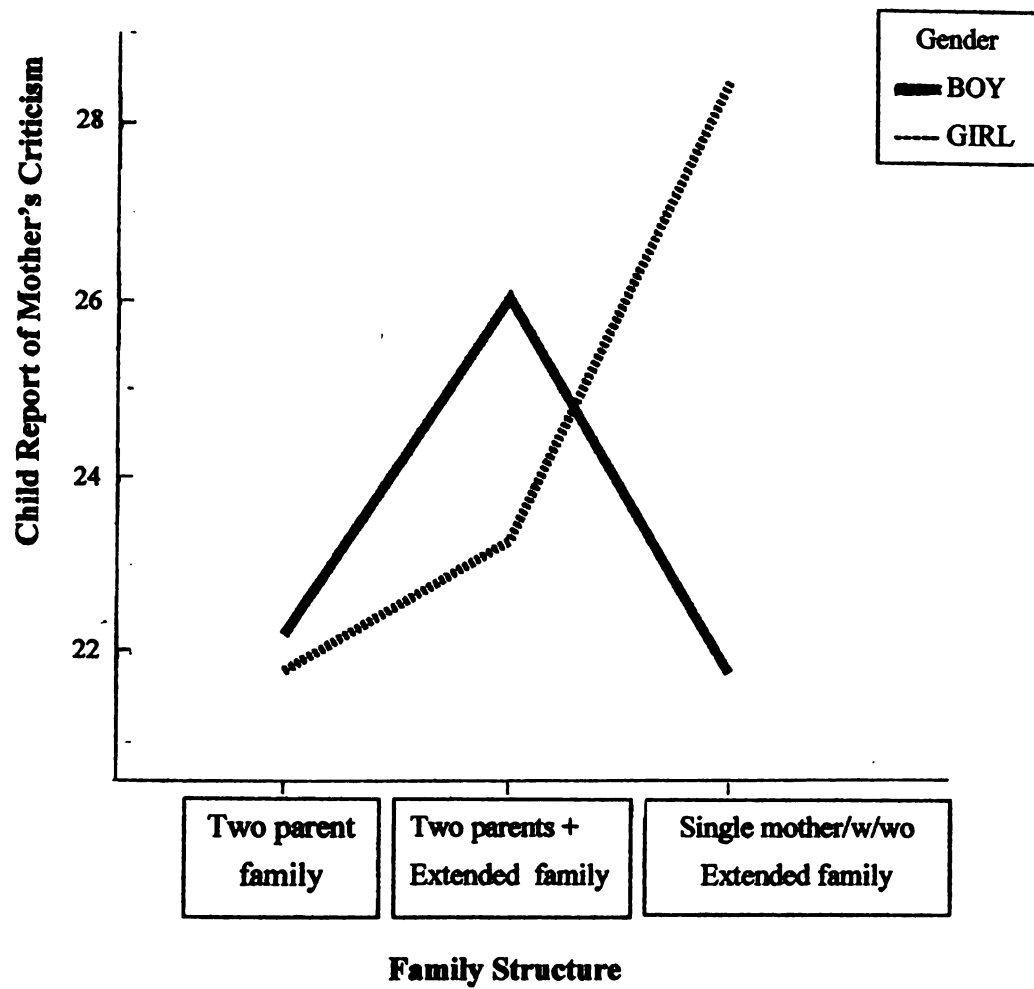


Fig. 4.2. Child Report of Mother's Criticism by Family Structure



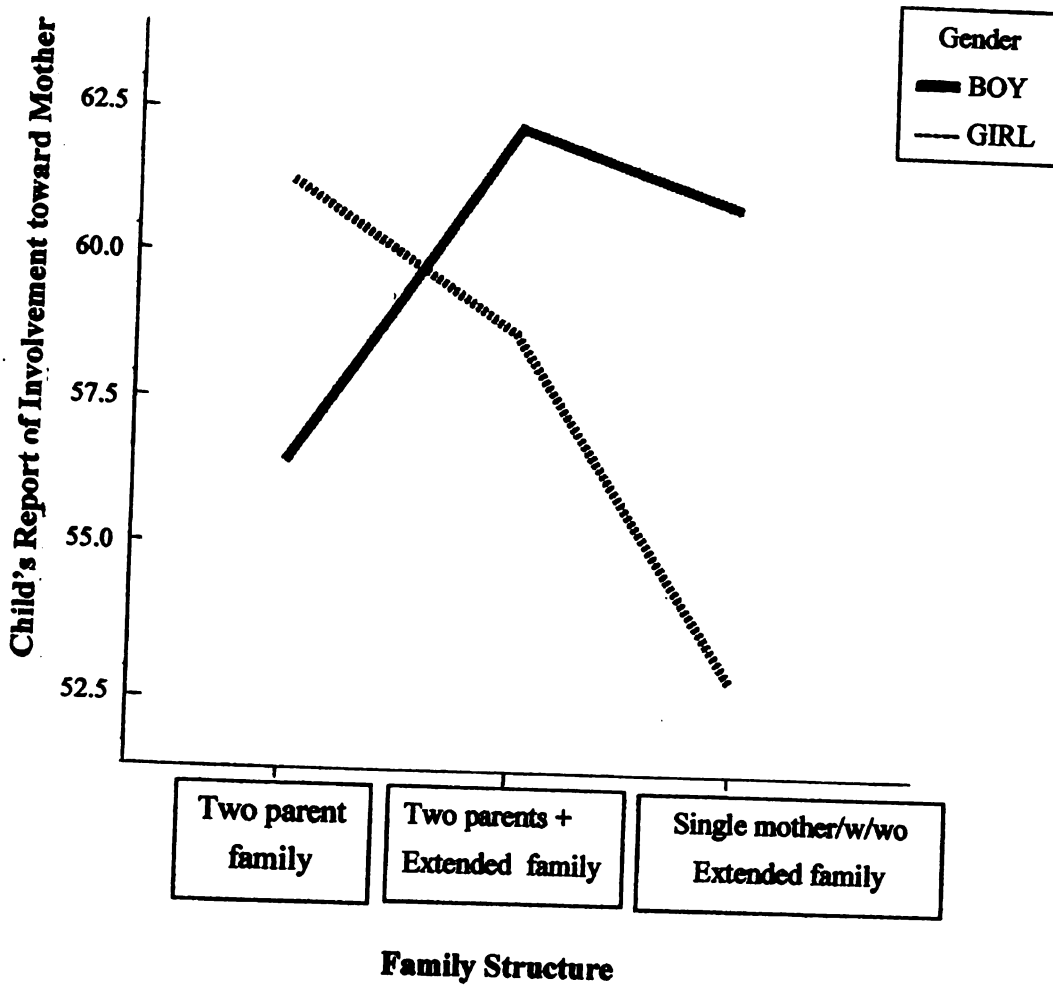


Fig. 4.3. Child Report of Involvement Toward Mother by Family Structure

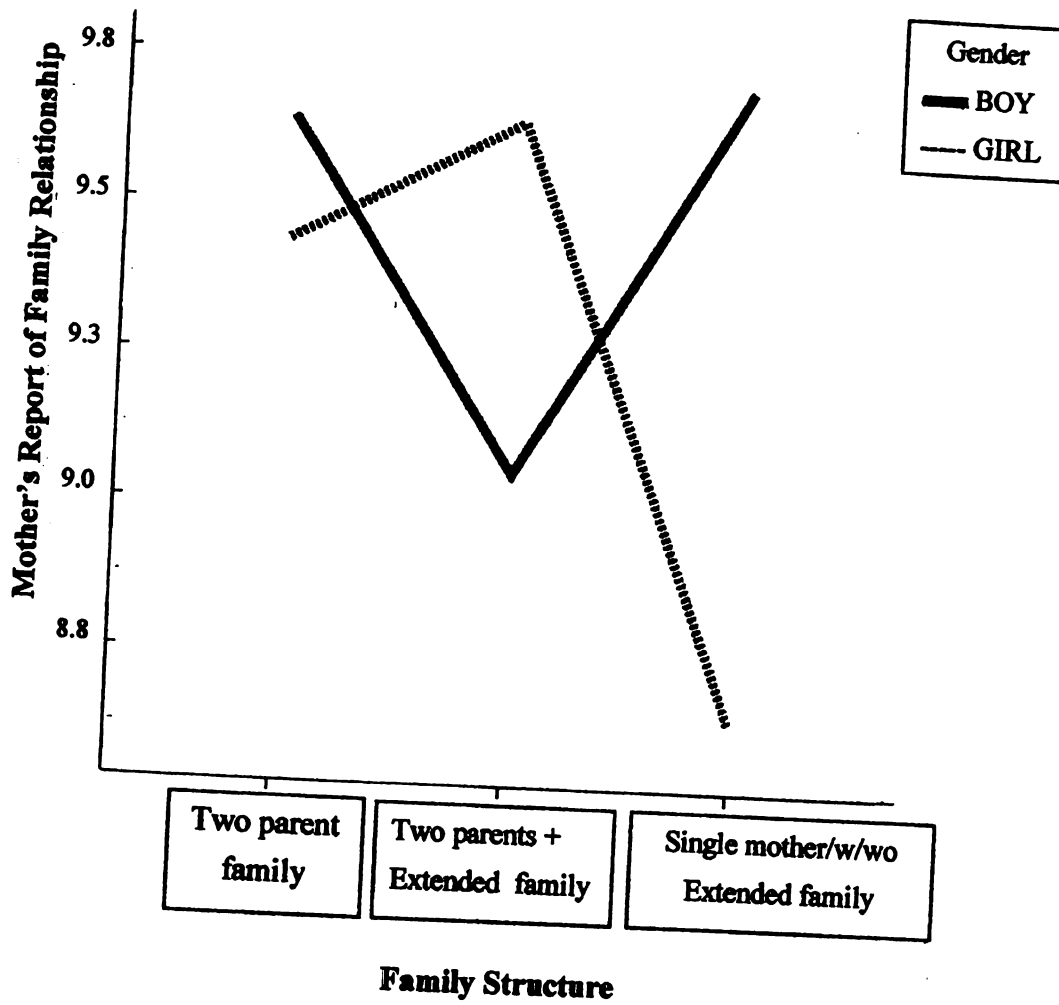


Fig. 4.4. Mother's Family Relationship Inventory by Family Structure

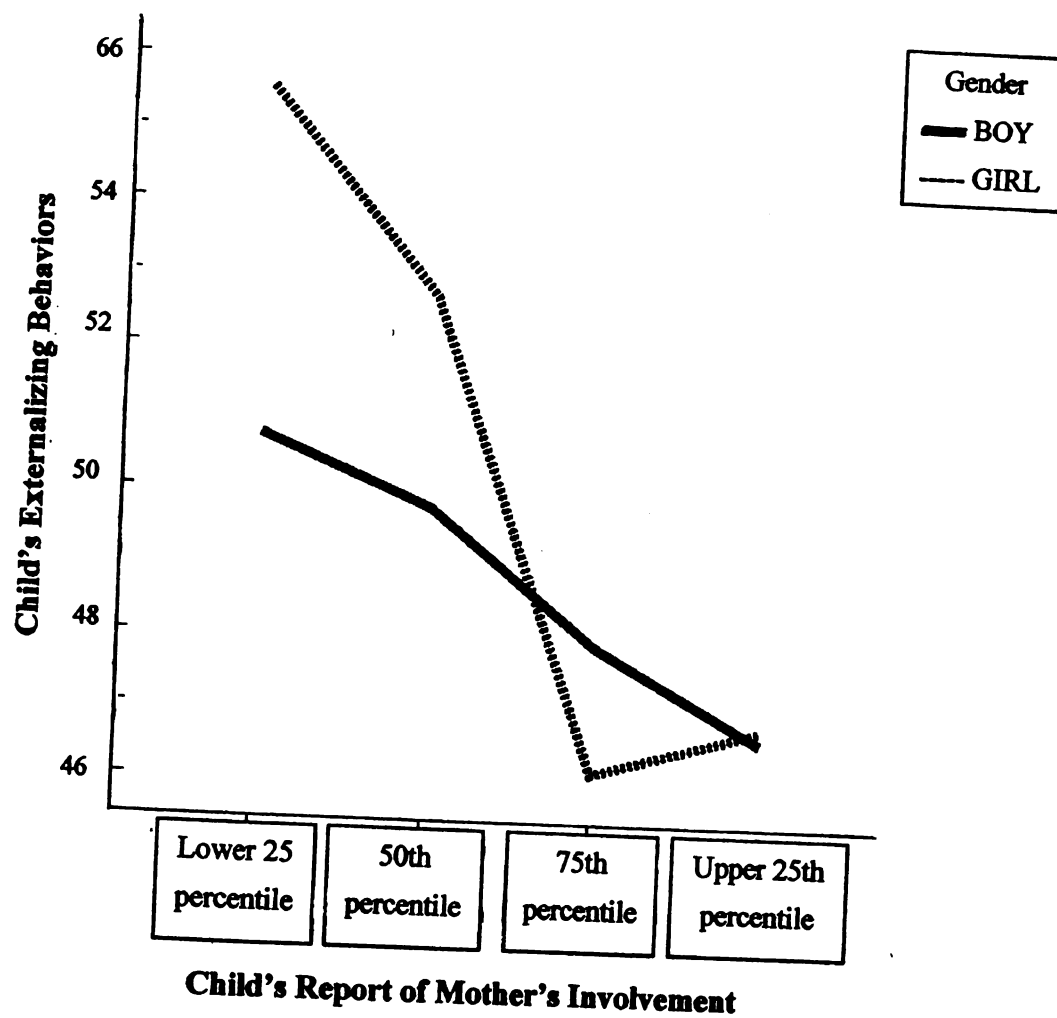


Figure 4.5. Moderating effect of gender on the relationship between mother's Involvement and Externality.

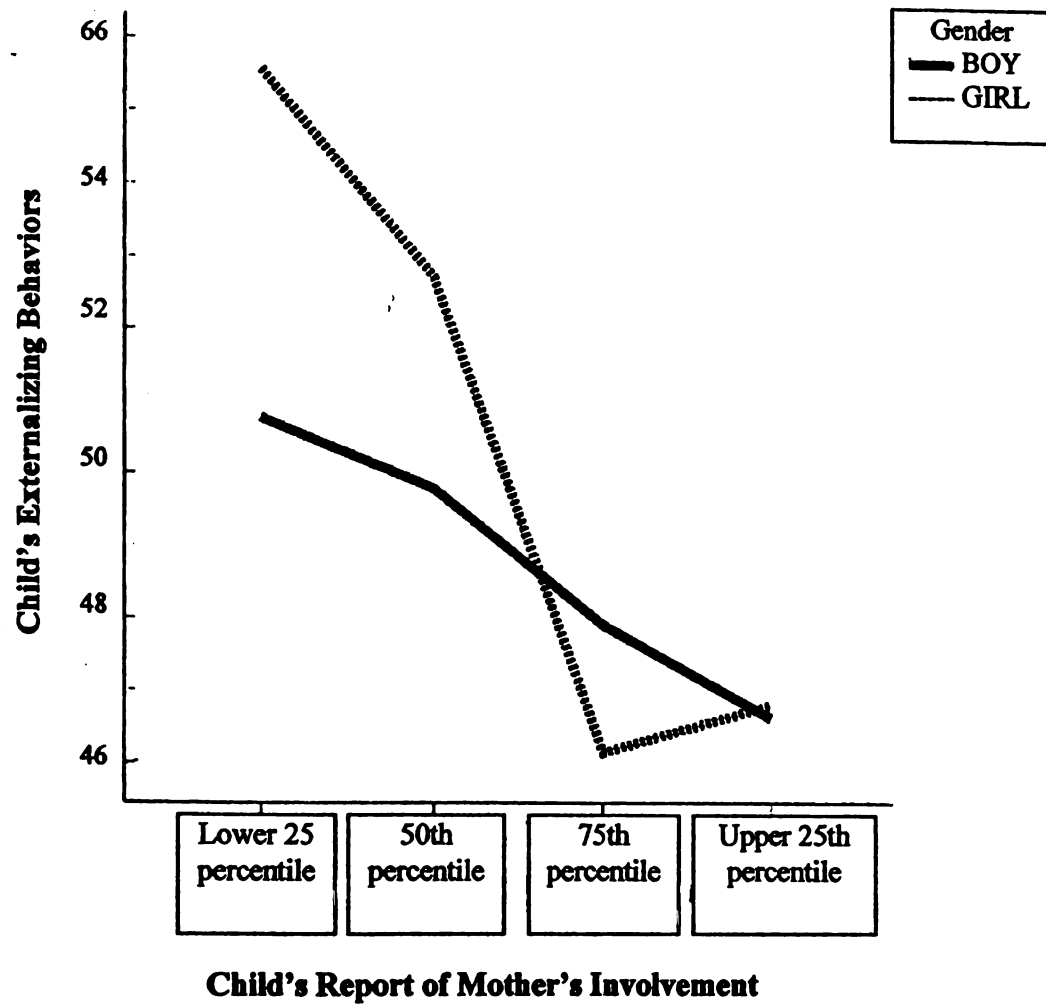


Figure 4.6. Moderating effect of gender on the relationship between mother's Criticism and Internality.

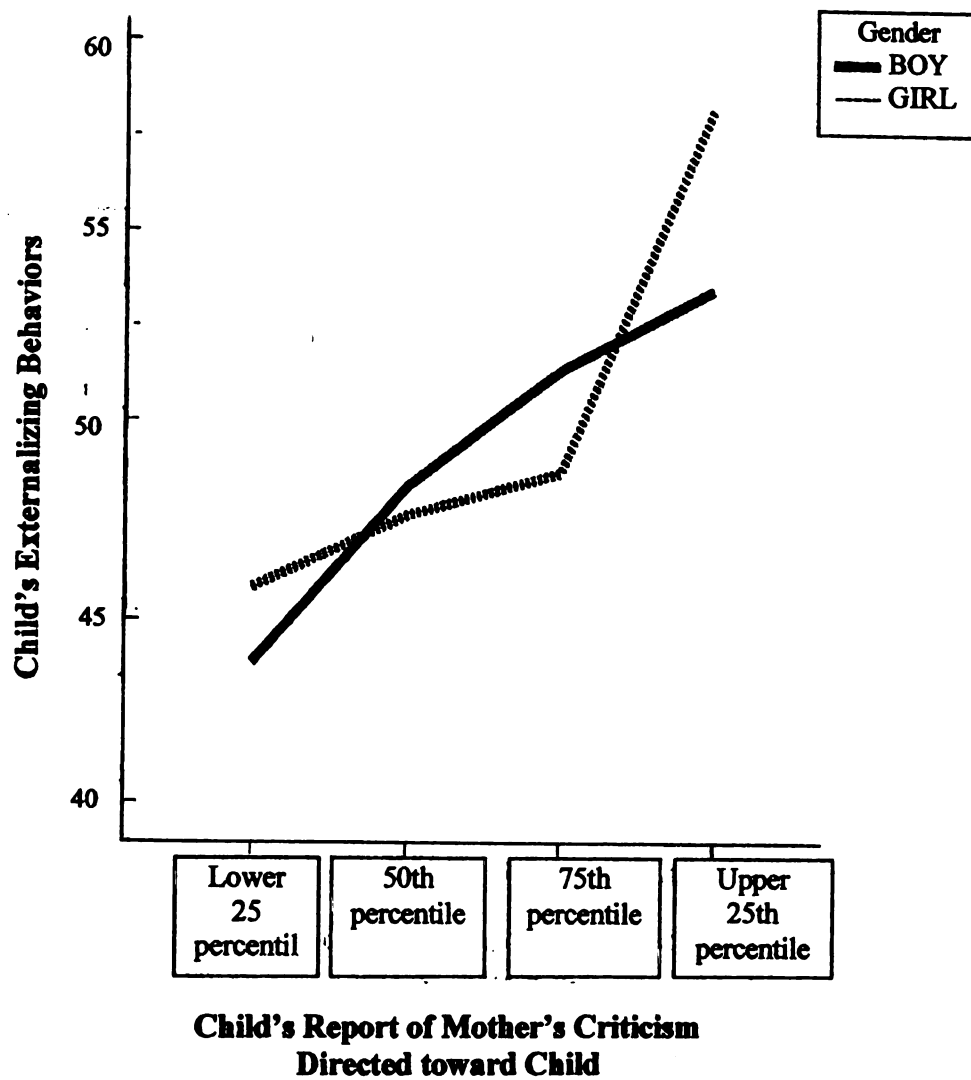
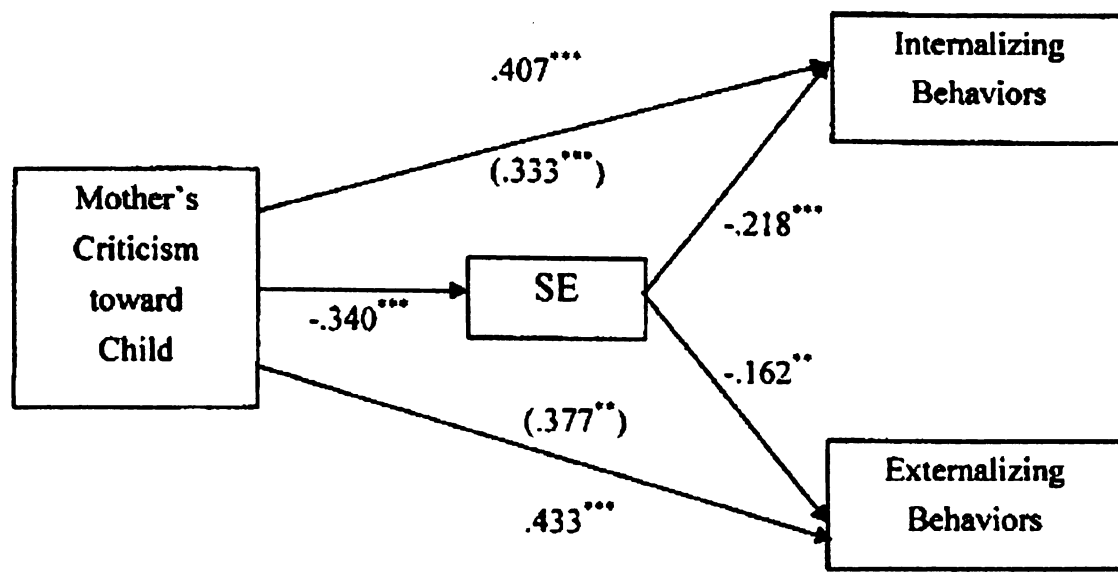


Figure 4.7. Moderating effect of gender on the relationship between mother's Criticism and Externality.



*Figure 4.11.* Child's SE mediates the relationship between child's report of mother's Criticism directed toward mother and child's Internalizing and Externalizing behavior problems. Note. The regression weights in the parentheses are new standardized coefficients (beta weight) before the mediator is added to the model. \* $p < .01$ ; \*\* $p < .005$ ; \*\*\* $p < .001$ .

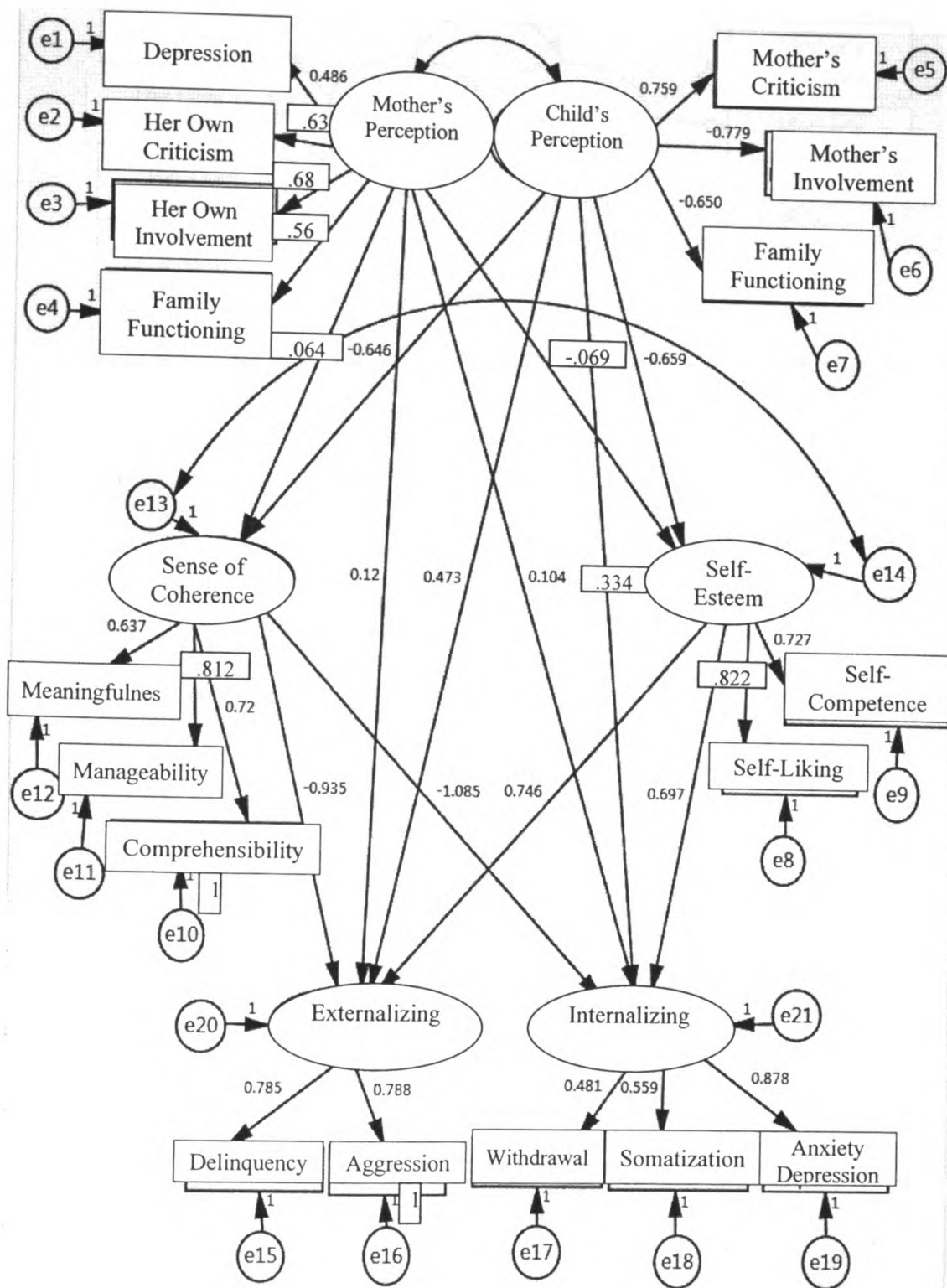


Figure 4.12. Full model showing all standardized path coefficients.

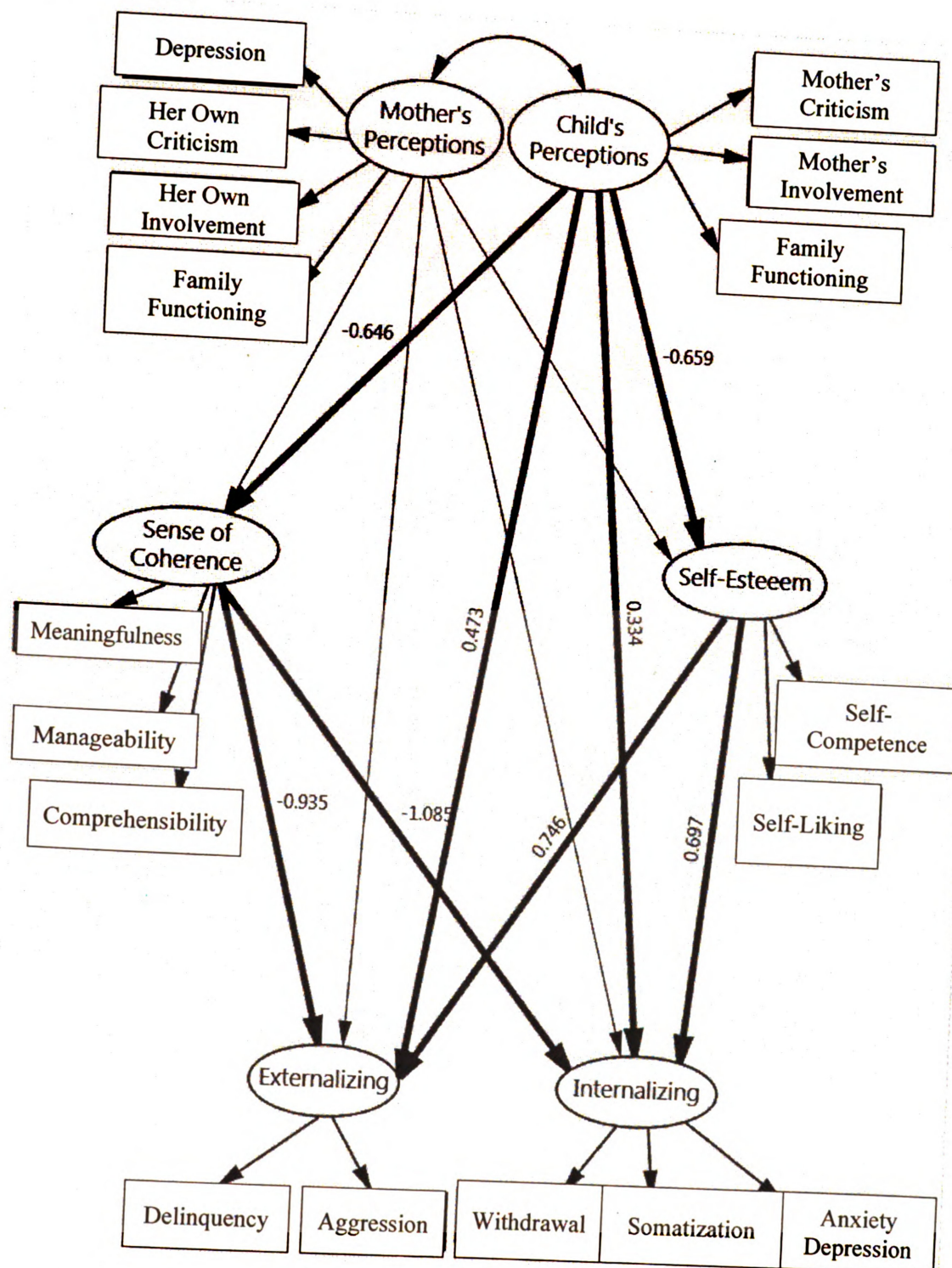
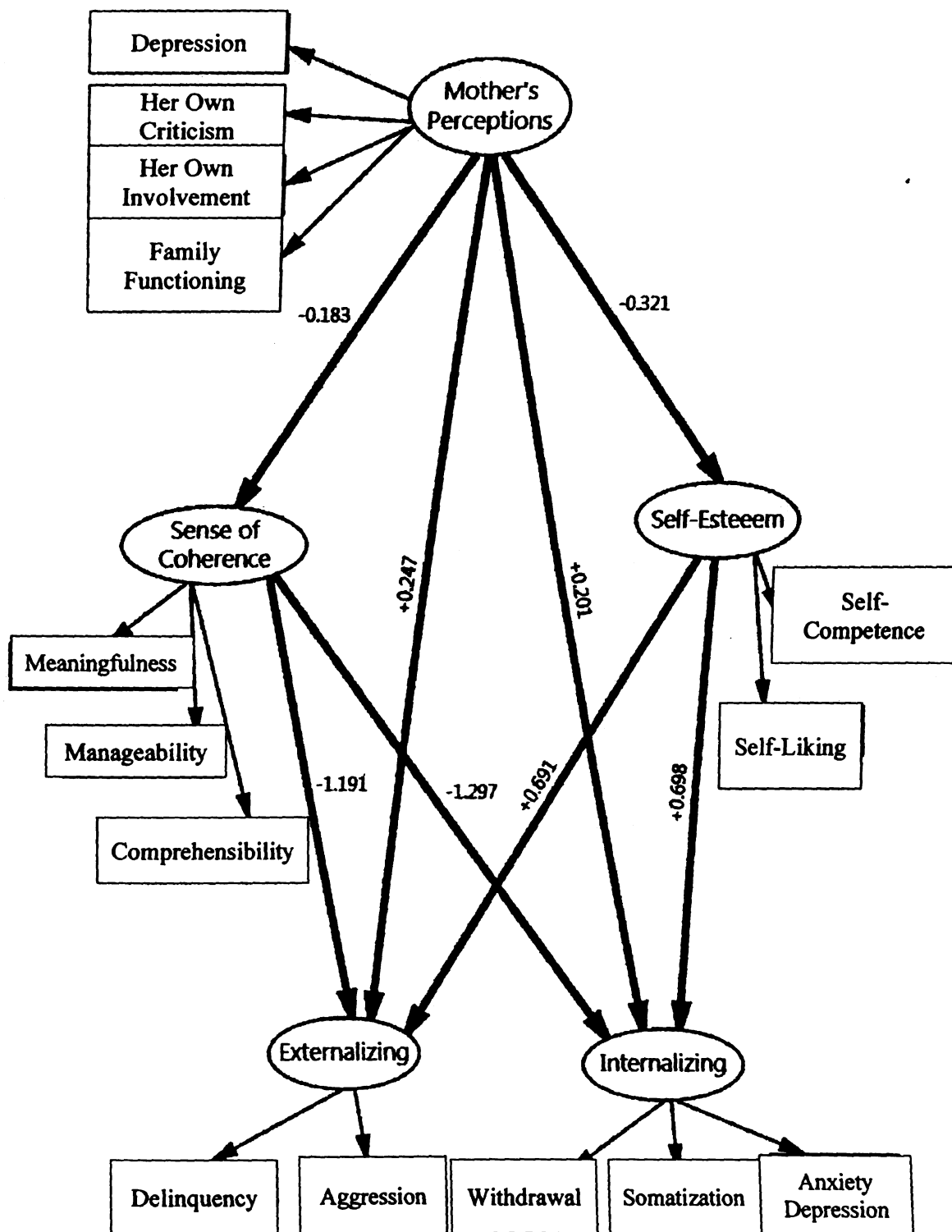


Figure 4.13. SEM showing predictor variables and significant pathways between latent variables. Significant negative pathway coefficients are shown horizontally; significant positive pathways, obliquely.



*Figure 4.14. SEM excluding child report data showing predictor variables and significant pathways between latent variables. Significant negative pathway coefficients are shown horizontally; significant positive pathways, obliquely.*

## **CHAPTER V**

### **DISCUSSION AND CONCLUSIONS**

#### **Demographic Information**

##### **Sample Characteristics**

Several findings of interest emerged regarding the characteristics of children who participated in the present study. Compared to normative Japanese samples (Itani et al., 2001; Tejima et al., 1994; Tejima et al., 1995; Tejima et al., 1996), only 2% of the present sample should be in the clinical range on each YSR scales (i.e., above 98<sup>th</sup> %-ile), and only 4% of the present sample should be in the borderline clinical range (i.e., between the 94<sup>th</sup> and 98<sup>th</sup> %-ile). However, the prevalence rates for Internalizing behavior problems were 8.3% (clinical range) and 8.0% (borderline range), with girls less likely to be in the borderline range (6.1% vs. 10.1% for boys) and more likely to be in the clinical range (10.2% vs. 6.2% for boys). The prevalence rate for Internalizing behaviors in the clinical range is similar to that reported for a large sample of elementary school Japanese children by Denda (2007), using the Birleson Depression Scale (7.8%). The prevalence rates for Externalizing behavior problems were 8.3% (clinical range) and 5.1% (borderline range), with girls more likely to be in the borderline range (6.8% vs. 3.1% for boys) and slightly more likely to be in the clinical range (8.8% vs. 7.8% for boys). It is a matter of concern that 19 of the children in the sample (6.9%) had both Internalizing and Externalizing scores in the clinical or borderline clinical range, making up 42.2% of the high-risk Internalizing group and 51.4% of the high-risk Externalizing group. Internalizing and Externalizing scores are not independent. The positive relationship between the two scales ( $r = .593$ ) in the present study allows the prediction that children

with high-risk scores on one scale would have high-risk scores on the other scale.

However, these 19 children would be placed in a double risk category because of their high scores on both YSR scales. It would seem that these children would be prime candidates for interventions either at school or through community therapists.

### **Gender Differences**

**Gender differences in Internalizing and Externalizing.** Although more girls (absolute number and percentage) than boys had symptoms in the high-risk range on both Internalizing and Externalizing, no statistical difference was found between boys and girls in scores on either scale or in the gender distribution between borderline clinical and clinical groups. Further, there was no difference in behavior problems by age. These results differ from most previous studies showing that boys have more Externalizing behavior problems than girls (American Psychiatric Association, 2005; Rothbaum & Weisz, 1994), and girls start showing more depression-like symptoms than boys around age of 10 (Angold and Rutter, 1992).

It is worth noting that norms for the YSR have typically been assumed to be parallel to those of the CBCL (e.g., Itani et al. 2001); however, it is possible that this is not the case in Japanese samples. Parents of children and adolescents, ages 6-17, in 12 cultures reported in Internalizing and Externalizing behavior symptoms (Crijnen, Achenbach, & Verhulst, 1997). However, parents across cultures reported that girls have more symptoms than boys on somatic complaints and anxious/depressed (Internalizing symptoms), but fewer symptoms on attention problems, delinquent behavior, and aggressive behavior (Externalizing symptoms). Crijnen et al. do not provide information on gender differences by age. The absence of gender or age differences in the present

study suggests that the gender difference in 11 and 12 year-old Japanese (85% of the children in this study) has not emerged yet.

**Possible sampling bias.** It is important to remember that the present participants were volunteers recruited from public schools. Variation by family structure and age was limited. Most of the participants came from two-parent families, and only a few of children were 10 or 13 years old. There is also a disadvantage in that 45% of children eligible for the study and 64% of mothers did not participate in the study. Overall, 285 mother-child pairs were formed from the data, representing 27.3% of all possible participants. This is a limitation of the study in that the characteristics of the missing pairs are not reflected to the results. Future research will examine any differences between the children in the present sample versus the children whose mothers consented for their children but did not participate themselves, and the mothers who completed the survey and the mothers who completed the survey but did not consent for their child to participate.

**Gender and self-esteem.** The predicted gender difference was found in the level of self-esteem: girls had significantly lower self-esteem than boys, consistent with the findings in many other studies. The lower self-esteem in Japanese girls may be related to cultural practices that suppress the development of self-esteem for girls. In the period of middle childhood, social relationships become more complicated, and gender role expectations are intensified (Bolognini, Plancherel, Bettschart, & Halfon, 1996). It becomes harder to maintain the sense of self in the peer group and other relationships because the development of self-concept or self-esteem relies to large extent on success in maintaining a sense of group acceptance, fitting in with others, and maintaining

interpersonal harmony with social roles (Kitayama et al., 1997; Markus & Kitayama, 1991).

In the single-mother family, those cultural and social expectations would be expected to impact in an additive manner on girls' self-esteem. Considering that Japanese girls are expected to take more responsibility for helping out their mothers (Kojima, 1986), single mothers were reported by their children to be more critical of their daughters than sons. Single mothers reported that their daughters expressed more criticism than their sons, and their daughters reported more maternal criticism and less positive involvement. The result reflects the reciprocal negative interaction between mother and daughter, each expressing more criticism and less involvement with the other in a single-mother home.

### **Family Environment Factors, Resiliency Resources, and Internalizing and Externalizing Behaviors**

#### **General Findings**

The predicted relationships among the variables in the full sample were found for child reports in terms of zero-order correlations. Children who perceived a negative family environment were more likely to have a higher score on Internalizing and Externalizing behaviors. Those children were also more likely to have a lower self-esteem and less well-developed sense of coherence. Girls showed higher correlations between maternal emotional expressions and other variables (e.g., between higher Criticism and more Internalizing) than boys. This difference reflects both family structure and the reality that mothers and daughters in most cultures have more frequent and more intense interactions than mothers and sons. Compared to child's perceptions, mother perceptions were less

related to children's self-report of SE and SOC, and Internalizing and Externalizing behaviors.

### **Child Perceptions of Maternal EE and Behavior Problems: Comparisons between Normal-Risk and High-Risk Groups of Children**

There were significant differences between normal-risk and high-risk groups in child perceptions of his or her mother's Criticism and Involvement directed toward him/herself. Children in the high-risk group perceived their mothers as being more critical and hostile and showing less positive involvement than children in the normal-risk group. EE studies have found that mothers of children with behavior problems engage in more antagonistic and negative comments and expression of disgust (i.e., criticism), compared to mothers with low or marginal levels of EE (McCarty et al., 2004; McCarty & Weisz, 2002). The results of the present study are consistent with the earlier studies and confirm the connection between high maternal Criticism and increased Internalizing and Externalizing behaviors.

The reciprocal negative perception of Criticism between mother and child was found in the high-risk group of children and their mothers. Children who live in a family environment with high levels of maternal Criticism would be predicted to have a negative information processing style (cognitive diathesis) and to be less sensitive to positive comments from their mothers. Such children would be more likely to develop behavior problems (e.g., Kwon & Laurenceau, 2002; Turner & Cole, 1993; Hankin, Abramson, & Silar, 2001).

Although it was hypothesized that mother and child perceptions of EE would have different relationships to that child's behavior problems, the child reports of mother's

Criticism were related to both Internalizing and Externalizing behaviors. The mother reports of her own Criticism were related only to Internalizing behaviors. The results of the present study are consistent with the results of many studies indicating the relationship between high EE Criticism and Externalizing and Internalizing problems (Asarnow et al., 2001; Hirshfield et al., 1997; McCarty et al., 2004; McCarty & Weisz, 2002; Stubbe et al., 1993; Vostanis et al., 1994).

In the full sample, a lower level of maternal Involvement was predictive of both Internalizing and Externalizing behaviors. However, the level of Involvement was more strongly related to Internalizing than Externalizing behaviors. There was a significant difference, as well, in child perception of mother's Involvement between normal-risk group and high-risk groups of children. High-risk children reported less Involvement. There was a significant difference in boy's Internalizing behaviors between the two risk groups, but girls in the high-risk group and those in the normal-risk group did not differ in terms of Internalizing behaviors. Further, a negative relationship between mother's Involvement and boy's Internalizing behaviors was found. This finding is important because, although girls are more vulnerable to depression (Abela, 2001; Abela & Payne, 2003; Abela & Taylor, 2003; Angold & Rutter, 1992; Cicchetti & Toth, 1998; Hankin et al., 2001; Hankin & Abramson, 2001; Holsen, Kraft & Vitterso, 2000), boy's internalizing behaviors tend to be overlooked. Further investigation of the expression of Internalizing behaviors (somatization, withdrawal, depression/anxiety) in Japanese boys would be useful.

#### **Maternal High Criticism and Low Involvement as a Risk Factor**

Mother and child perceptions of maternal Criticism and Involvement were investigated as predictors of child's Internalizing and/or Externalizing behaviors in the full sample. Mothers evaluated their own Criticism and Involvement directed toward their child, and children evaluated their mother's Criticism and Involvement. After controlling for Externalizing behavior scores, only the child reports of mother's Involvement was a significant predictor of Internalizing behaviors. When the same variables were used to predict Externalizing behaviors while controlling for Internalizing scores, only the child perception of mother's Criticism was a significant predictor.

In the high-risk Internalizing group, the results were somewhat different. With Externalizing scores controlled, mother reports of her own Involvement with her child and her child's perception of her Criticism both predicted a higher score on Internalizing symptoms. Next, predictors of Externalizing behavior problems in the Externalizing high-risk group of children were assessed. No significant predictor was found when Internalizing scores were controlled.

In summary, research is needed to further examine the effects of mother Criticism and Involvement on Internalizing and Externalizing behaviors. The full sample results follow expected lines with child reports of low levels of Involvement related to Internalizing behaviors and high levels of Criticism related to Externalizing behaviors. However, in the high-risk Internalizing group, the mother's own report of her Involvement and the child's report of her Criticism were related to Internalizing. This finding suggests the mothers of these high risk children realized that they were less involved with their children. Further, the absence of significant predictors of Externalizing in the high-risk Externalizing group suggests a positive feedback loop in

which the child's delinquent or aggressive behaviors feed back to produce still more problematic behaviors without reference to maternal behaviors.

While maternal reports of Criticism toward the child were a weak, but significant, predictor of Internalizing behaviors, they accounted for less than 4% of the variance in Internalizing behaviors. This was also true for maternal reports of the child's Criticism of herself. Only mother reports of her child's Criticism of herself was a significant predictor of her child's Externalizing; again a weak but significant correlation was found ( $< 2\%$  of variance in common). That is, although mother reports of her own criticism of the child were linked to the child's depression-related symptoms (Internalizing), the mother's experience of criticism from her child was the only maternal variable linked the child's acting-out behaviors (Externalizing). Cultural issues may be important here as well.

Although a Japanese mother is expected to love and support her child, she is also expected to provide very explicit criticism to guide her child, and would be expected to be quite reactive to any negative behavior directed toward her from the child. The

#### **Constructs of Maternal Criticism and Emotional Involvement in Japanese Culture**

The validity of a measure in one culture is always an important issue when the measure was created in different culture. Mother Involvement on the EEAC originally was aimed to assess the mother's excessive worries about the child in an extremely enmeshed or symbiotic-like relationship. Using other assessments (CFI or FMSS), high level of Emotional Overinvolvement has been reported to be related specifically to anxiety disorders in both Western and Japanese studies (Chambless & Steketee, 1999; Stubbe et al., 1993; Yoshida, 2001; Hirshfield et al., 1997). However, the present study did not produce this result. The construct validity of EOI is sensitive to cultural values and

beliefs. The normative standard in Japanese culture for a mother's involvement in her child's life differs from European-American culture because the Japanese mother's emotional expressions are established in the culture imperative that defines a mother's responsibilities, beliefs, and expectations for emotional closeness in a relationship.

The Japanese conception of a child's development is that great potential characteristics and abilities are given equally to each newborn baby (Takata, 1987). These potential gifts are actualized through the mother's proper support and guidance. Japanese mothers accept that it is their responsibility to provide the support and motivation for their children to achieve in school and, ultimately, to meet the societal and familial expectations for success. Reciprocally, Japanese mothers also gain satisfaction by devoting themselves to their child's success which structures a physically and emotionally close mother-child relationship.

Maternal expression of Criticism in Japan is also established to teach and maintain the cultural norms and values. For example, "Don't be so arrogant, there are many people who are much better than you, so keep working" is a frequently-repeated slogan for mothers. In Japanese society, being hard worker, showing effort and perseverance, and maintaining group harmony through acceptance of social roles and conforming to norms are all very important values that children need to learn in this age period. Thus, criticism for a Japanese child and mother is for self-improvement and does not convey a negative message directed toward child.

Mother-child interaction is also different by the age of the child. The way a mother responds to her child in middle childhood would be very different than the way she would respond to an adolescent or adult child with a psychological diagnosis (Mino

et al., 2001; Nomura et al., 2005; Shimodera et al., 2002; Yoshida, 2001). The norms for appropriate interaction between mother and child must be considered based on child's development of chronology as well (Bronfenbrenner, 1979). Research is need to establish better instruments to assess Japanese mother-child interactions.

### **Moderation Effects of Gender**

Moderation analysis allows the researcher to identify relationships between predictor variables and outcomes that are stronger for people with differing characteristics (Frazier et al., 2004). Different levels of Sense of Coherence or Self-Esteem did not moderate the relationships between different levels of family environment and behavior outcomes in either child and mother reports. However, the effects of mother's low Involvement and Criticism on child's outcome behaviors were different between girls and boys. Girls were more strongly influenced than boys by mother's Involvement and Criticism (child's report). Specifically, when mothers were more positively involved, girl's Externalizing behaviors were significantly reduced. When mothers were disengaged with girls, girls' Externalizing behaviors started accelerating, while boy's Externalizing behaviors kept increasing linearly with decreasing levels of maternal Involvement.

Mother Criticism (child's report) was related differentially to both Internalizing Externalizing behavior problems. The direction of the relationship between mother Criticism and behavior outcomes was the same between genders: the higher mother's Criticism was, the more severe the Internalizing and Externalizing problems were. However, compared to boys, the magnitude of the influence from mother's Criticism was stronger for girls.

In summary, Japanese girls' and boys' Internalizing and Externalizing behaviors change at different rates in relationship mother Involvement and Criticism. Girls were more negatively influenced than boys by the lowest level of mother Involvement and highest level of Criticism. This is consistent with research showing that girls are more sensitive and vulnerable to mother's negative remarks and warm encouragement in this age range.

### **Mediation Effects and Resiliency Factors**

The present study addressed the likely mechanisms through which family environment factors relate to Internalizing and Externalizing behavior problems. The constructs of Sense of Coherence (SOC) and Self-Esteem (SE) as child resiliency factors were hypothesized to mediate between negative family environment factors and Internalizing and Externalizing behaviors.

According to a series of regression analyses, SOC and SE served as mediating variables, accounting for a significant portion of the direct effect between family environment and child behavior outcomes. Because the child report of mother's Criticism and Involvement were still significant predictors of child behavior outcomes after the mediating variable was introduced, SOC and SE served as partial mediators for the relationship. SOC and SE appeared to protect children from lower levels of Involvement and higher levels of Criticism. Even though children are affected by negative family environments, children with higher levels of SOC and SE seemed to have better ways to handle these negative effects. Child's SOC and SE contributed as protective factors in a dynamic process of adaptation to a risk setting.

However, the model fit analysis using SEM demonstrated that SOC and SE have different effects on the relationship between family environment and behavior problems. To the extent that a causal model is assumed, SOC absorbed the effects of the child's perception of negative family environment factors and protected the child from having Internalizing or Externalizing behaviors. Children with a better-established sense of coherence are cognitively and emotionally capable of understanding the nature of problems and are more willing to confront them. As such, SOC is a construct that cuts across many cultures, Eastern and Western. In order to cope with a problem, the child must be able to comprehend the problem (culturally-specific), find meaning in it (culturally-specific), and find a way to manage the problem (also, culturally-specific). The Japanese translation of the SOC scale necessarily incorporates the Japanese cultural concepts reflecting these skills.

On the other hand, child SE contributed to increasing Internalizing and Externalizing behaviors. In zero-order correlation and simple mediation tests, SE was a negative predictor and mediator of the effect of maternal Criticism or Involvement on YSR scores. Similar findings would be expected when only these simple regression models are used. However, when included in the SEM, total SE score was an "inconsistent" mediator. Statistically speaking, the correlations between child's SOC and SE and between Internalizing and Externalizing behaviors might have caused problems in estimating SE that actually heightened the scores on behavior problems. Self-esteem in Japanese culture does not necessarily correspond to the Western description of self-esteem as how well individuals evaluate their overall worth as a person based on the positive aspects of the individual self (Rosenberg, 1979; Harter,

1999). In Japan, self-criticism is a tool for the self-improvement, and a willingness to be critical of one's self is taken as an individual strength. Japanese children's self-esteem will be more closely related to how well they are connecting with key persons, e.g., mother, because the value of the self is established by being a part of the family. Western self-esteem scales based on individual positive self-appraisal do not capture the Japanese sense of self or "*jibun*" which is created under a cultural imperative that self is found through relationships with others. Western self-esteem scales are missing the contextualization in place, event, and social group (Rosenberger, 1989).

The results of the principal components analysis, used in the construction of the new self-esteem subscales confirmed this argument. Contrary to the Western image of negative self-image and self-criticism as factors that would diminish self-esteem, the negative self-image and self-criticism were related to less, not more, Internalizing and Externalizing behaviors in this sample. However, because the total score for the SE scale was used, these items actually were subtracted from the total SE scale. The analysis suggest very strongly that they should be added instead. More research is needed, examining how these important cultural elements regarding self-esteem among Japanese children are achieved through effort, perseverance, commitment, modesty, cooperation, obedience, and conformity to family and social group norms.

### **Contributions of Mother's Perceptions**

Mother perceptions of the family environment were not related significantly to either child resiliency or behavior problems when they were included in the SEM along with child perceptions. However, further SEM analyses showed that there were both direct of mother's perceptions on Internalizing and Externalizing behavior outcomes and

indirect effects through SE and SOC. It is not surprising that child perceptions of a negative family environment have a stronger relationship with behavior problems. The children were describing their own perceptions and behaviors, some of which would not be obvious to their mothers. It would be interesting to have mothers complete the Japanese version of the CBCL and compare those results to the children's responses on the YSR. The discrepancies between CBCL and YSR results would point to areas where mother and child reports might differ on other measures.

In Japanese culture, children see themselves differently from European American children in terms of a construction of self. For Japanese children, a harmonious interrelationship with a great commitment to the expected roles may become an advantage to build a good sense of self because the sense of self is recognized by finding meaning through the group (Rosenberger, 1989). Positive emotions come from being part of a group and relating harmoniously (Kitayama, Markus, & Kurokawa, 2000). Children learn to vary their behavior based on context. That is, for Japanese children, presenting others with a social-self (including self-criticism), rather than an individual-self (working for self-enhancement), has "positive social and psychological consequences" (Kitayama et al., 1997, p. 1246). In middle childhood, Japanese children may have difficulties in situations that require achieving some balance between individual-self and social-self. Striving for autonomy and accommodation are competing skills for Japanese children, and achieving harmony is a value that may take precedence of achieving autonomy. Therefore, researchers must understand the construct of self-esteem to measure and carefully interpret child behavior problems in the context of the family

environment. Child behaviors in Japan can never be understood without contextualization in regard to place, relationship, and social group as well.

### **Limitations**

The results of the present study cannot be generalized to children living on the main islands of Japan without some reservations because the samples were recruited in Okinawa. Although Japanese in ethnicity, culture, and values, Okinawa has a strong identity established by a long history of being isolated by distance from the main islands of Japan. Okinawans may be more likely to emphasize the importance of social networks and family support systems, to hold a strong sense of identity as an islander, and to be committed to involvement with the community. Some cultural differences do exist between "Northerners" and the population of Okinawa, as evidenced by the finding that Okinawan families were more likely to have large families.

Although there is substantial agreement between the results of this study and previous studies in regard to the effect of maternal criticism and positive emotional expressions, care must be taken not to over-generalize to other Asian populations or to Western populations. The ways children interpret their mothers' verbal and nonverbal communications differ between East and West and among Asian cultures. Although the schools selected for the study were not a random sample of Okinawan schools, they are reasonably representative of Okinawan schools. Duplicating this research with clinical samples where it is more likely to find extreme levels of EE will help in better understanding the relationship between family environment and children's resiliency factors and behavior problems.

The validity of the EEAC as a measure of EOI is questionable (Hooley & Parker, 2006). It was developed to be a less time-consuming alternative to the CFI or FMSS, but it does not correspond well with those two measures. Therefore, it will be necessary to use the FMSS to assess the range of emotional involvement statements in Japanese mothers to establish a baseline. As noted, the use of the CFI with non-adults is limited to a single study on older Japanese adolescents with eating disorders that used the CFI (Yoshida, 2001). Yoshida reported that the mothers of these adolescents had high levels of EOI, but were less likely to have high levels of Criticism than mothers of adult patients with schizophrenia or mood disorders. However, the meaning of Yoshida's results is not clear. Accepting Western standards for scoring EOI or Criticism in Japanese populations may not be useful; only further research can provide an answer.

The present study was cross-sectional in nature, and, therefore, cannot draw definitive conclusions regarding cause-and-effect relationships between family environment and child behavior problems. It was not possible to include other, possibly important factors, such as the father's experience in the family and the child's peer relationships. This study was focused on the mother-child relationship in the context of family. Other research has shown that father's positive involvement with the child is significantly related to decreased child behavior problems (Dunham et al., 2000).

The construct validity of the measurements needs to be considered when using any scale developed in different cultures and among specific samples. The SE scale (Self-Linking/Self-Competence) was selected because it was thought to be more sensitive to the cultural differences in view of the self. The measurement assesses the overall evaluation of oneself as a source or agent and includes self-efficacy and autonomy on one

hand and overall sense of worth as an individual with social significance on the other. However, the present study provides clear evidence that culturally important elements of the Japanese social self are missing or mis-scored in the scale.

Another measurement problem was the Criticism scale of the EEAC (Expressed Emotion Adjective Checklist). In Japan, self-criticism is used as a tool for self-improvement, and mothers also use criticism in the interactions with her child. However, the meaning and purpose of mother's criticism are practiced under the rules of the culture. There are also difficulties in detecting mother's involvement (emotional, physical, and social) to establish a normative standard.

Further, the Youth Self Report has been translated into Japanese and is widely used. Different cut-off points have been identified for Japanese children. As is true for using the YSR in Japanese children, maternal expressed emotion (EE) among Japanese samples may need different criteria to distinguish a high or low level of Criticism, reflecting the different ways Criticism is displayed. The present study is the first step for understanding maternal EE and child's development, and will be followed by an analysis of the interviews with mothers in Okinawa already collected.

Further, the study relies on self-report measures to assess the variables of interest. Multiple measurements by different informants (e.g., teacher's report) to assess the behavior problems would allow for triangulation of the child reports. Similarly, observing mother-child interactions would allow for triangulation with the self-report data. Finally, only a single instrument developed in American samples initially was used to assess each variable; for example, the YSR was used to evaluate the children's behaviors. Because of their origin in Western cultures, their fit with Japanese cultural norms can be questioned.

### **Clinical Implications**

There is an extensive research literature showing the correlation between maternal depression and child behavior problems, as well between maternal EE and child Internalizing and Externalizing behaviors. However, as shown in this study, there are gaps between mother and child perceptions of family relationships and their mutual patterns of Criticism and Involvement. In the present study, mother reports were not associated strongly with either resiliency factors or behavior problems. In contrast, child reports of maternal behaviors had strong correlations with the child's sense of coherence and self-esteem and with Internalizing and Externalizing behaviors. Family therapy could help mother and child to minimize their perception discrepancies and come to a better understanding of their differences.

Secondly, individual, group, and family therapies with activities or exercises to enhance the level of sense of coherence can be helpful to encourage the child to adopt more appropriate strategies to the needs of different contexts. Further research regarding the sense of coherence is needed with children who have disadvantages in their lives, but who function well. How to enhance a sense of coherence in at-risk children is an important challenge for future research.

Thirdly, there were differences in perceptions of mother's Criticism and Involvement not only between normal-risk and high-risk children but also between boys and girls. In some aspects, high-risk children would be expected to be less responsive to maternal attempts at positive emotional connection, the result of feeling unfairly criticized and/or ignored by the mother. Girls were much more vulnerable to maternal negative emotionality and behaviors. Therapy interventions need to take those gender

differences and similarities into consideration when working with families, and explore the social and cultural expectation differences for boys and girls with mother and child.

It is very important to acknowledge that changes in maternal or child behavior may not result in changes in the perception of mother or child because of prior negative experiences. This lack of responsiveness need to be considered before attempting to rebuild the mother-child relationship and change the perceptions of children and mothers about each other's willingness to connect more positively. Importantly, the influences from cultural values need to be reflected in therapy practice.



APPENDICIES

子ども用アンケート冊子  
(Child's Questionnaire)

ミシガン州立大学

あなたのご家族について教えてください。「はい」か「いいえ」のどちらか一つを○で囲んで下さい。

1	私・ぼくの家族は、みんなでお互い助け合い、支え合っている。	はい	いいえ
2	私・ぼくの家族は、お互いに思っていることや、気持ちを話さないことが多い。	はい	いいえ
3	私・ぼくの家族は、よくけんかをする。	はい	いいえ
4	私・ぼくの家族は、家でヒマつぶしをしていることが多い。	はい	いいえ
5	私・ぼくのうちでは、言いたいことを何でも言っている。	はい	いいえ
6	私・ぼくの家族は、おこった時、ほとんど顔にあらわさない。	はい	いいえ
7	私・ぼくの家族は、家族みんなで一緒にいろいろなことをする。	はい	いいえ
8	私・ぼくの家族は、おこった時、ほかの人を傷つけずに気持ちを落ち着けることが難しい。	はい	いいえ
9	私・ぼくの家族の中に、物を投げるくらい怒る人がいる	はい	いいえ
10	私・ぼくの家族は、考えが一つにまとまっている。	はい	いいえ
11	私・ぼくの家族は、お互いに自分の悩みを話し合う	はい	いいえ

12	私・ぼくの家族の人は、ちょっとしたことで、ほとんど怒り出すことはない。	はい	いいえ
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下の質問について、あなたにもっとも当てはまると思う番号を一つ選んで○で囲んでください。

1=全く思わない   2=あまり思わない   3=時々思う   4=よく思う   5=いつも思う

1	ぼく・私は、大切な存在ではないと思うことがよくある。	1	2	3	4	5
2	ぼく・私は、とてもみんなの役に立っていると思う。	1	2	3	4	5
3	ぼく・私は、自分にとってもまんぞくしている。	1	2	3	4	5
4	何かにちょうせんした時、ほとんど最後までやり終えることができる。	1	2	3	4	5
5	ぼく・私は、自分の良いところをはっきりわかっている。	1	2	3	4	5
6	ぼく・私は、自分の事を考えるとたまにいやになる。	1	2	3	4	5
7	ぼく・私は、自分に対していつも自信がない。	1	2	3	4	5
8	ぼく・私は、自分にとって大切だと思うことを最後までやり終えることが難しいと思う。	1	2	3	4	5
9	ぼく・私は、自分をとてもすごいと感じる。	1	2	3	4	5
10	ぼく・私は、難しいと思うことにちょうせんする時、うまく対処できないことがある。	1	2	3	4	5
11	ぼく・私は、自分が大切な存在であることを疑うことはない。	1	2	3	4	5
12	ぼく・私は、うまくできることがたくさんある。	1	2	3	4	5
13	ぼく・私は、思うように目標をはたせないことがある。	1	2	3	4	5
14	ぼく・私は、自分はとても才能があると思う。	1	2	3	4	5

15	ぼく・私は、自分の性格や行いをすばらしいと思っている。	1	2	3	4	5
16	ぼく・私は、いろいろなことをもっと上手にできたらいいと思う。	1	2	3	4	5

下の質問について、あなたの気持ちをもっともよくあらわしている答えを○で囲んでください。

- あなたは、自分のまわりで起こっていることがどうでもいい、というげやりな気持ちになることがありますか？  
とてもよくある      よくある      ときどきある      まったくない
- あなたは、これまでに、よく知っていると思っていた人の、思わぬ行動におどろかされたことがありますか？  
とてもよくある      よくある      ときどきある      まったくない
- あなたは、あてにしていた人にがっかりさせられたことがありますか？  
とてもよくある      よくある      ときどきある      まったくない
- 今まで、あなたの生活の中でとてもはっきりした目標があった。  
とてもそう思う      いくらかそう思う      あまり思わない      全くそう思わない
- あなたは、自分では理解できないようなひどいあつかいを受けているという気持ちになることはありますか？  
とてもよくある      よくある      ときどきある      まったくない
- あなたは、いつもと違う状況の中にいると感じ、どうすればよいのかわからないと感じたことがありますか？  
とてもよくある      よくある      ときどきある      まったくない
- あなたは、毎日していることによって、楽しくてうれしい気持ちになる。  
とてもそう思う      いくらかそう思う      あまり思わない      全くそう思わない
- あなたは、自分の気持ちや考えがとても混乱することがありますか？  
とてもよくある      よくある      ときどきある      まったくない
- あなたは、本当なら感じたくないような気持ちを抱いてしまうことがありますか？  
とてもよくある      よくある      ときどきある      まったくない

10. どんなに強い人でさえ、ときどき「自分は思うようにうまくできない。」とか、「友達のようにうまくできなくてダメだな。」と感ずることがあります。あなたは、そのように感ずることがありますか？  
 とてもよくある                  よくある                  ときどきある                  まったくない
11. あなたは、毎日の生活の中で、次に何をしたらいいのか全くわからないと思うことがありますか。  
 とてもよくある                  よくある                  ときどきある                  まったくない
12. あなたは、毎日の生活でやっていることに、ほとんど意味がないと感ずることがありますか？  
 とてもよくある                  よくある                  ときどきある                  まったくない
13. あなたは、自分の気持ちや行動をうまく調整することに自信がなくなることがありますか？  
 とてもよくある                  よくある                  ときどきある                  まったくない

あなたの性別を○で囲んで下さい。

男                  女

あなたのお母さんはあなたと接する時、あなたに対してどのような態度で接しますか。過去三カ月のお母さんのあなたに対する態度を思い出して、一番当てはまる数字を○で囲んでください。

		全く 思わない		ときどき そう思う		いつも そう思う			
1	お母さんは、私のことを受け入れてくれる。	1	2	3	4	5	6	7	8
2	お母さんは、私と活動的になって何事もやってくれる。	1	2	3	4	5	6	7	8
3	お母さんは、私に対して怒っている。	1	2	3	4	5	6	7	8
4	お母さんは、私に飽きている。	1	2	3	4	5	6	7	8
5	お母さんは、私に言いたいことをはっきり伝える。	1	2	3	4	5	6	7	8
6	お母さんは、私に対して思いやりがある。	1	2	3	4	5	6	7	8
7	お母さんは、私のお願いをいつも拒否する。	1	2	3	4	5	6	7	8

8	お母さんは、私に協力的になってくれる。	1	2	3	4	5	6	7	8
9	お母さんは、私に嘘をつく。	1	2	3	4	5	6	7	8
10	お母さんは、私のために一生懸命になってくれる。	1	2	3	4	5	6	7	8
11	お母さんはいつも仲良くしてくれる。	1	2	3	4	5	6	7	8
12	お母さんはいつもやさしくしてくれる。	1	2	3	4	5	6	7	8
13	お母さんは、おだやかだ。	1	2	3	4	5	6	7	8
14	お母さんは、私につらくあたる。	1	2	3	4	5	6	7	8
15	お母さんは、私と約束したことに無責任だ。	1	2	3	4	5	6	7	8
16	お母さんは、私に対していらいらしている。	1	2	3	4	5	6	7	8
17	お母さんは、なまけている。	1	2	3	4	5	6	7	8
18	お母さんは、私に愛情をそそいでくれる。	1	2	3	4	5	6	7	8
19	お母さんは、私に対して意地悪だ。	1	2	3	4	5	6	7	8
20	お母さんは、私に対して態度が悪い。	1	2	3	4	5	6	7	8

次は、過去三カ月のあなたのお母さんに対する態度を思い出して答えてください。あなたがお母さんと接する時、あなたはお母さんに対してどのような態度で接しますか。

		全く 思わない		ときどき そう思う		いつも そう思う			
1	ぼく・わたしは、お母さんのことを受け入れている。	1	2	3	4	5	6	7	8
2	ぼく・わたしは、お母さんと活動的になって何事もやっている。	1	2	3	4	5	6	7	8
3	ぼく・わたしは、お母さんに対して怒っている。	1	2	3	4	5	6	7	8
4	ぼく・わたしは、お母さんに飽（あ）きている。	1	2	3	4	5	6	7	8
5	ぼく・わたしは、お母さんに言いたいことをはっきり伝える。	1	2	3	4	5	6	7	8

6	ぼく・わたしは、お母さんに対して思いやりをもって接している。	1	2	3	4	5	6	7	8
7	ぼく・わたしは、お母さんの願いをいつもことわる。	1	2	3	4	5	6	7	8
8	ぼく・わたしは、お母さんに協力的である。	1	2	3	4	5	6	7	8
9	ぼく・わたしは、お母さんに嘘（うそ）をつく。	1	2	3	4	5	6	7	8
10	ぼく・わたしは、お母さんのために一生懸命になる。	1	2	3	4	5	6	7	8
11	ぼく・わたしは、お母さんといつもと仲良くしている。	1	2	3	4	5	6	7	8
12	ぼく・わたしは、お母さんにいつもやさしい。	1	2	3	4	5	6	7	8
13	ぼく・わたしは、お母さんに対しておだやかだ。	1	2	3	4	5	6	7	8
14	ぼく・わたしは、お母さんにつらくあたる。	1	2	3	4	5	6	7	8
15	ぼく・わたしは、お母さんと約束したことに無責任だ。	1	2	3	4	5	6	7	8
16	ぼく・わたしは、お母さんに対していらいらする。	1	2	3	4	5	6	7	8
17	ぼく・わたしは、なまけている。	1	2	3	4	5	6	7	8
18	ぼく・わたしは、お母さんが大好きだ。	1	2	3	4	5	6	7	8
19	ぼく・わたしは、お母さんに対して意地悪だ。	1	2	3	4	5	6	7	8
20	ぼく・わたしは、お母さんに対して態度が悪い。	1	2	3	4	5	6	7	8



# 母親用アンケート冊子 (Mother's Questionnaire)

ミシガン州立大学

アンケートにお答えいただいた個人情報は全て「疫学研究に関する倫理の指針」  
において保護されます。

以下の質問にお答えください。

1. 子どもの年齢 \_\_\_\_\_
2. お母さんの年齢 \_\_\_\_\_
3. 子どもの数 \_\_\_\_\_
4. 家族構成について当てはまる項目にチェックしてください。

☐ 核家族

☐ 母子家庭

☐ 二世帯家族

5. あなたは働いていますか。 ☐ はい ☐ いいえ

「はい」と答えた人のみ、当てはまる職種を○で囲んでください。

- ① 自営業    ② 会社員（正社員）    ③会社員（契約社員）    ③ 公  
務員    ④ その他

6. 父親は働いていますか。 ☐ はい ☐ いいえ

「はい」と答えた場合のみ、当てはまる職種を○で囲んでください。

- ① 自営業    ② 会社員（正社員）    ③会社員（契約社員）    ③ 公務員  
④ その他

あなたのご家族について教えてください。「はい」か「いいえ」のどちらか一つを選んで、○で囲んで下さい。

1	私の家族は、お互いに助け合い、支え合っている。	はい	いいえ
2	私の家族は、お互いに感情を表に出さないことが多い。	はい	いいえ
3	私の家族は、よくけんかをする。	はい	いいえ
4	私の家族は、家でヒマつぶしをしていることが多い。	はい	いいえ
5	私の家族は、言いたいことを何でも言っている	はい	いいえ
6	私の家族は、めったに怒りを表にあらわさない	はい	いいえ
7	私の家族は、みんなんで何かをすることを大切にしている	はい	いいえ
8	私の家族は、相手を傷つけずに怒りを発散するのが難しい	はい	いいえ
9	私の家族には、物を投げるくらい怒る人がいる	はい	いいえ
10	私の家族には、一体感がある	はい	いいえ
11	私の家族は、お互いに個人的な悩みを話し合う	はい	いいえ
12	私のうちの人、ちょっとしたことですぐに怒り出すところがほとんどない	はい	いいえ

下の文章を読んでください。それぞれの項目について、先週一週間の、あなたの心や体の状態を最も適切に表している番号に丸で囲んでください。

0 = 週一日未満 1 = 1-2 日程度 2 = 週 3-4 日程度 3 = 週 5-7 日程度

- |                               |   |   |   |   |
|-------------------------------|---|---|---|---|
| 1. 普段は何でもないことがわずらわしい.....     | 0 | 1 | 2 | 3 |
| 2. 食べたくない。食欲が落ちた.....         | 0 | 1 | 2 | 3 |
| 3. 家族や友達から励まされても、気分が晴れない..... | 0 | 1 | 2 | 3 |
| 4. 自分は他人の人より劣っていると感じる.....    | 0 | 1 | 2 | 3 |
| 5. 物事に集中できない.....             | 0 | 1 | 2 | 3 |
| 6. 憂うつだ.....                  | 0 | 1 | 2 | 3 |
| 7. 何をするのも面倒だ.....             | 0 | 1 | 2 | 3 |
| 8. これからの事を考えると悲観的になる.....     | 0 | 1 | 2 | 3 |
| 9. 過去のことについてくよくよ考える.....      | 0 | 1 | 2 | 3 |
| 10. 何か恐ろしい気持がする.....          | 0 | 1 | 2 | 3 |
| 11. なかなか安眠できない.....           | 0 | 1 | 2 | 3 |
| 12. 生活に不満がある.....             | 0 | 1 | 2 | 3 |
| 13. 普段より口数が少ない.....           | 0 | 1 | 2 | 3 |
| 14. 一人ぼっちで寂しい.....            | 0 | 1 | 2 | 3 |
| 15. 皆がよそよそしいと思う.....          | 0 | 1 | 2 | 3 |
| 16. 毎日が楽しくない.....             | 0 | 1 | 2 | 3 |
| 17. 急に泣き出すことがある.....          | 0 | 1 | 2 | 3 |

- 18 悲しいと感じる..... 0 1 2 3
- 19 皆が自分を嫌っていると感じる..... 0 1 2 3
- 20 仕事が手につかない..... 0 1 2 3

過去三カ月のお子さんのあなたに接する態度を考えて、最も当てはまる数字を○で囲んでください。

		全く 思わない		ときどき そう思う			いつも そう思う		
1	子どもは、私のことを受け入れてくれる。	1	2	3	4	5	6	7	8
2	子どもは、私と活動的になって何事もやってくれる。	1	2	3	4	5	6	7	8
3	子どもは、私に対して怒っている。	1	2	3	4	5	6	7	8
4	子どもは、私に飽きている。	1	2	3	4	5	6	7	8
5	子どもは、私に言いたいことをはっきり伝える。	1	2	3	4	5	6	7	8
6	子どもは、私に対して思いやりがある。	1	2	3	4	5	6	7	8
7	子どもは、私のお願いをいつも拒否する。	1	2	3	4	5	6	7	8
8	子どもは、私に協力的になってくれる。	1	2	3	4	5	6	7	8
9	子どもは、私に嘘をつく。	1	2	3	4	5	6	7	8
10	子どもは、私のために一生懸命になってくれる。	1	2	3	4	5	6	7	8
11	子どもはいつも仲良くしてくれる。	1	2	3	4	5	6	7	8
12	子どもはいつもやさしくしてくれる。	1	2	3	4	5	6	7	8
13	子どもは、おだやかだ。	1	2	3	4	5	6	7	8
14	子どもは、私につらくあたる。	1	2	3	4	5	6	7	8
15	子どもは、私と約束したことに無責任だ。	1	2	3	4	5	6	7	8

16	子どもは、私に対していらいらしている。	1	2	3	4	5	6	7	8
17	子どもは、なまけている。	1	2	3	4	5	6	7	8
18	子どもは、私に愛情をそそいでくれる。	1	2	3	4	5	6	7	8
19	子どもは、私に対して意地悪だ。	1	2	3	4	5	6	7	8
20	子どもは、私に対して態度が悪い。	1	2	3	4	5	6	7	8

次は、過去三カ月のあなたの子どもに対する態度を思い出して答えてください。  
あなたが子どもと接する時、どのような態度で接しますか。

		全く 思わない		ときどき そう思う		いつも そう思う			
1.	私は、子どものことを受け入れている。	1	2	3	4	5	6	7	8
2	私は、子どもと活動的になって何事もやっている。	1	2	3	4	5	6	7	8
3	私は、子どもに対して怒っている。	1	2	3	4	5	6	7	8
4	私は、子どもに飽きている。	1	2	3	4	5	6	7	8
5	私は、伝えたいことをはっきり子どもに伝えている。	1	2	3	4	5	6	7	8
6	私は、子どもに対して思いやりをもって接している。	1	2	3	4	5	6	7	8
7	私は、子どもの願いをよく拒否する。	1	2	3	4	5	6	7	8
8	私は、子どもに協力的である。	1	2	3	4	5	6	7	8
9	私は、子どもに嘘をつく	1	2	3	4	5	6	7	8
10	私は、子どものために一生懸命になる。	1	2	3	4	5	6	7	8
11	私は、子どもといつも仲良くしている。	1	2	3	4	5	6	7	8
12	私は、子どもにいつもやさしくしている。	1	2	3	4	5	6	7	8
13	私は、子どもに対しておだやかだ。	1	2	3	4	5	6	7	8

14	私は、子どもにつらくあたる。	1	2	3	4	5	6	7	8
15	私は、子どもとの約束に無責任だ。	1	2	3	4	5	6	7	8
16	私は、子どもに対していらいらしている。	1	2	3	4	5	6	7	8
17	私は、なまけている。	1	2	3	4	5	6	7	8
18	私は、子どもに愛情をもって接している。	1	2	3	4	5	6	7	8
19	私は、子どもに対して意地悪だ。	1	2	3	4	5	6	7	8
20	私は、子どもに対して態度が悪い。	1	2	3	4	5	6	7	8

## 子どもの日常生活と家族関係 調査参加への母親の同意書

### 初めに

小学校5, 6年生の時期は、児童期から少年期に移行する大切な成長の時期です。その時期段階にある子どもたちは、自己に対する認識が著しく成長します。また、その時期は、児童と家族の関係も大きく変化する時期です。特に、母親との関係が減り、家庭外での活動が増えるために、友達との関係が強くなっていきます。

本調査は、小学生(5, 6年生)を対象に、児童期から少年期の移行期にあたる子どもの心身の健全な発達をよく理解し、子どもの心身の健康を向上に関わっている要因を探る調査です。アンケート調査では子どもの心身の健康と健全な行動発達、子どもの内因性要因、家族関係についての関連性を検証します。

この調査は、学校長の許可を得て保護者の皆様に連絡を差し上げていますが、学校からの調査ではありません。以下の調査機関及び、研究責任者の指導の下行われます。また、文部科学省の疫学研究の指針に従って行われます。調査への参加は、皆様の自由なご意志によって行われますので、調査への参加を断ることができます。

### 調査への意義とリスクについて

この調査は、小学5年生・6年という敏感な成長時期における、心身の健康と、健全な行動生活の手助けをするための貴重な情報を得ることができると考えています。これまで、児童期から青少年期への移行の時期にある子どもの調査の少なさが指摘されてきました。自己概念の発達が盛んなこの時期の子どもたちが、自己をどのように認識しているのか、子どもたちの適切な行動における発達と家庭の役割がどのようなものであるのかについて、理解を深めるための大きなステップになると考えています。その情報を得ることで、さまざまな社会の分野(学校保健、学校カウンセリング、家族のカウンセリングの発展など)において、子どもの健全な成長の手助けにつなげていけることを期待しています。

調査に参加することへのリスクはほとんどないと考えています。質問中に、答えたくない項目がある場合、その質問に答える必要はありません。調査の途中で気分が悪くなった場合、調査を中止することもできます。

### 秘密情報の厳守

あなた様とお子さまのアンケート調査結果はID番号で表示され厳密に保護られます。あなたのお名前や個人情報はコード番号で表記されるため、データからは、アンケート結果が誰のものであるか、個人を特定できないようになっています。

アンケート調査結果、及び面接調査でお聞きした全ての内容は、個人情報の秘密厳守の義務に従い最大限保護されます。すべての調査結果(アンケート、録音された面接)と同意書は、分析後もアメリカの研究室の安全な場所に3年間保管された後、安全に破棄されます。この調査結果へのアクセスが可能な者は、調査者(島袋静香)と主任教授(Dr. Richard Wampler)の2人のみです。

### 調査への同意について

調査に参加していただくために、保護者の皆様から以下の3点について、同意が必要です。アンケート調査と面接を両方受けられない方は、アンケート調査のみに参加していただいても結構です。詳しくは、2枚目の「調査実施の手順と参加について」をご覧ください。



- ① お子様が調査へ参加することに対する保護者の同意
- ② 母親がアンケート調査へ参加することへの同意
- ③ 母親の面接調査への同意

※ 面接調査は、研究者の島袋が、皆様から頂いた連絡用カードのご連絡先へ直接ご連絡差し上げて、面接の日程（日付、場所、時間）を事前に決めてから行います。

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研究機関名：ミシガン州立大学 (Michigan State University)

207 Olds Hall, MSU, East Lansing, MI 48824

研究責任者名

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## 同意書

下記に3つの同意書があります。調査への参加はあなたの自由意思で行われますので、すべての調査に同意しなければならないということはありません。

<p>a. 親の子どもアンケート調査参加への同意</p> <p><input type="checkbox"/> 子どもが学校で行われるアンケート調査に参加することに同意します。</p> <p><input type="checkbox"/> 子どもが学校で行われるアンケート調査に参加することに同意しません。</p> <p>お子さまのお名前 _____</p>
<p>b. 母親自身のアンケート調査参加への同意</p> <p><input type="checkbox"/> 私は母親用アンケートの調査に参加することに同意します。</p> <p><input type="checkbox"/> 私は母親用アンケートの調査に参加することに同意しません。</p>
<p>c. 母親の面接調査参加への同意</p> <p><input type="checkbox"/> 私は面接調査に参加することに同意します。</p> <p><input type="checkbox"/> 私は面接調査に参加することに同意しません。</p>

上記の同意に関する保護者の署名

保護者の署名 \_\_\_\_\_ 日付 \_\_\_\_\_

- 調査参加に同意する、しないに関わらず、アンケート、同意書、連絡用カードを元の封筒に入れて、お子さまを通して、クラスに設置された回収箱へご返還下さいますよう、よろしくお願い致します。回収締切日 12月22日(火)です。
- 面接調査に参加することに同意していただいた場合、アンケート調査後、島袋がご連絡を差し上げます。

子どもの日常生活と家族関係調査  
参加への子どもの同意書

このアンケートは、あなたの健康な発達と家族の関係を理解することを目的に行われるアンケート調査です。あなたが感じるお母さんとの会話の仕方、家族について、あなたが日ごろ考えていることや感じていることについての質問があります。アンケート調査は約40分です。

調査へ参加することは、あなたが自由に決めることができます。答えたくない質問は、答える必要がありません。

アンケート結果は、あなたの成績とはまったく関係ありません。また、アンケートの結果は他の人に知られることはありませんので、安心して正直に答えて下さい。

あなたのアンケート参加への同意

私・ぼくは、アンケート調査の目的と内容を理解しました。アンケート調査に参加することに同意します。

あなたの名前 \_\_\_\_\_

調査者の名前 \_\_\_\_\_

## Child's Survey

Which of these statements about your family is true, and which are false. **Circle** the answer that is the best description of your family.

1.    True   False    Family members really help and support one another.
2.    True   False    Family members often keep their feelings to themselves.
3.    True   False    We fight a lot in our family.
4.    True   False    We often seem to be killing time at home.
5.    True   False    We say anything we want to around home.
6.    True   False    Family members rarely become openly angry.
7.    True   False    We put a lot of energy into what we do at home.
8.    True   False    It is hard to "blow off steam" at home without upsetting somebody.
9.    True   False    Family members sometimes get so angry they throw things.
10.   True   False    There is a feeling of togetherness in our family.
11.   True   False    We tell each other about our personal problems.
12.   True   False    Family members hardly every lose their tempers.

## Self-Liking/Self-Competence Scale-Revised Version (SLCS-R) items

Please circle the number that is the most appropriate to yourself.

		never   sometimes   always				
1	I tend to devalue myself. (L -)	1	2	3	4	5
2	I am highly effective at the things I do. (L +)	1	2	3	4	5
3	I am very comfortable with myself. (L +)	1	2	3	4	5
4	I am almost always able to accomplish what I try for. (C +)	1	2	3	4	5
5	I am secure in my sense of self-worth. (L +)	1	2	3	4	5
6	It is sometimes unpleasant for me to think about	1	2	3	4	5

	myself. (L -)					
7	I have a negative attitude toward myself. (L -)	1	2	3	4	5
8	At times, I find it difficult to achieve the things that are important to me. (C -)	1	2	3	4	5
9	I feel great about who I am. (L +)	1	2	3	4	5
10	I sometimes deal poorly with challenges. (C -)	1	2	3	4	5
11	I never doubt my personal worth. (L +)	1	2	3	4	5
12	I perform very well at many things. (C +)	1	2	3	4	5
13	I sometimes fail to fulfill my goals. (C -)	1	2	3	4	5
14	I am very talented. (C +)	1	2	3	4	5
15	I do not have enough respect for myself. (L -)	1	2	3	4	5
16	I wish I were more skillful in my activities. (C -)	1	2	3	4	5

### Sense of Coherence Scale

Please mark the answer which best expresses your feelings about your life.

(Me) How often do you have the feeling that you don't really care about what goes on around you?

Very often

Often

Sometimes

Never



(C) How often has it happened in the past that you were surprised by the behavior of people who you thought you knew well?

**Very often                      Often                      Sometimes                      Never**

(Ma) How often has it happened that people whom you counted on disappointed you?

**Very often                      Often                      Sometimes                      Never**

(Me) How do you think you are going to feel about the things you will do in the future?

**Like it a lot                      Like it                      Its OK                      Don't like it all**

(Ma) How often do you have the feeling that you are being treated unfairly?

**Very often                      Often                      Sometimes                      Never**

(C) How often do you have the feeling that you are in a unfamiliar situation and don't know what to do?

**Very often                      Often                      Sometimes                      Never**

(Me) How do you feel about the things you do every day?

**Like it a lot                      Like it                      Its OK                      Don't like it all**

(C) How often does it happen that you don't quite understand your own feelings and ideas?

**Very often                      Often                      Sometimes                      Never**

(C) How often does it happen that you have feelings inside that you would rather not feel?

**Very often                      Often                      Sometimes                      Never**

(Me) Many people-even those with a strong character- sometimes feel like losers in certain situations. How often have you felt this way in the past?

**Very often                      Often                      Sometimes                      Never**

(C) How often does it happen that you have the feeling that you don't know exactly what's about to happen?

**Very often                      Often                      Sometimes                      Never**

(Me) How often do you have the feeling that there is little meaning in the things you do in your daily life?

**Very often                      Often                      Sometimes                      Never**

(Ma) How often do you have feelings that you're not sure you can keep under control.

**Very often                      Often                      Sometimes                      Never**

## The Way My Mother Is With Me

Please use the following adjectives to describe YOUR PARENT' BEHAVIOR OVER THE LAST HTREE MONTHS as it was DIRECTED TOWARD YOU. Please circle the best answer.

		never			some- times			always		
1	My mother is ACCEPTING of me.	1	2	3	4	5	6	7	8	
2	My mother is ACTIVE with me.	1	2	3	4	5	6	7	8	
3	My mother is ANGRY with me.	1	2	3	4	5	6	7	8	
4	My mother is BORED with me.	1	2	3	4	5	6	7	8	
5	My mother communicates with me CLEARLY.	1	2	3	4	5	6	7	8	
6	My mother is CONSIDERATE for me.	1	2	3	4	5	6	7	8	
7	My mother is CONTRARY against me.	1	2	3	4	5	6	7	8	
8	My mother is COOPERATIVE with me.	1	2	3	4	5	6	7	8	
9	My mother is DECEITFUL to me.	1	2	3	4	5	6	7	8	
10	My mother is DEVOTED to me.	1	2	3	4	5	6	7	8	
11	My mother is EASY TO GET ALONG WITH me.	1	2	3	4	5	6	7	8	
12	My mother is FRIENDLY to me.	1	2	3	4	5	6	7	8	
13	My mother is GOOD-NATURED.	1	2	3	4	5	6	7	8	
14	My mother is HOSTILE to me.	1	2	3	4	5	6	7	8	
15	My mother is IRRESPONSIBLE.	1	2	3	4	5	6	7	8	
16	My mother is IRRITABLE at me.	1	2	3	4	5	6	7	8	

17	My mother is LAZY.	1	2	3	4	5	6	7	8
18	My mother is LOVING.	1	2	3	4	5	6	7	8
19	My mother is MEAN to me.	1	2	3	4	5	6	7	8
20	My mother is RUDE to me.	1	2	3	4	5	6	7	8

### The Way I Am With My Mother

Now please use the same adjectives to describe YOUR OWN BEHAVIOR OVER THE LAST THREE MONTHS as it was DIRECTED TOWARD YOUR MOTHER. Please circle the best answer.

		never			some- times			always	
1.	I am ACCEPTING of my mother.	1	2	3	4	5	6	7	8
2	I am ACTIVE with my mother.	1	2	3	4	5	6	7	8
3	I am ANGRY with my mother.	1	2	3	4	5	6	7	8
4	I am BORED with my mother.	1	2	3	4	5	6	7	8
5	I communicate with my mother CLEARLY.	1	2	3	4	5	6	7	8
6	I am CONSIDERATE for my mother.	1	2	3	4	5	6	7	8
7	I am CONTRARY against my mother.	1	2	3	4	5	6	7	8
8	I am COOPERATIVE with my mother.	1	2	3	4	5	6	7	8
9	I am DECEITFUL to my mother.	1	2	3	4	5	6	7	8
10	I am DEVOTED to my mother.	1	2	3	4	5	6	7	8
11	I am EASY TO GET ALONG WITH my mother.	1	2	3	4	5	6	7	8

12	I am FRIENDLY to my mother.	1	2	3	4	5	6	7	8
13	I am GOOD NATURED.	1	2	3	4	5	6	7	8
14	I am HOSTILE toward my mother.	1	2	3	4	5	6	7	8
15	I am IRRESPONSIBLE for my mother.	1	2	3	4	5	6	7	8
16	I am IRRITABLE at my mother.	1	2	3	4	5	6	7	8
17	I am LAZY.	1	2	3	4	5	6	7	8
18	I am LOVING.	1	2	3	4	5	6	7	8
19	I am MEAN toward my mother.	1	2	3	4	5	6	7	8
20	I am RUDE to my mother.	1	2	3	4	5	6	7	8

## Mother Survey

Please remember that all answers will be kept confidential.

Which of these statements about your family is true, and which are false. **Circle** the answer that is the best description of your family.

- |            |  |
|------------|--|
| True False | Family members really help and support one another.                |
| True False | Family members often keep their feelings to themselves.            |
| True False | We fight a lot in our family.                                      |
| True False | We often seem to be killing time at home.                          |
| True False | We say anything we want to around home.                            |
| True False | Family members rarely become openly angry.                         |
| True False | We put a lot of energy into what we do at home.                    |
| True False | It is hard to "blow off steam" at home without upsetting somebody. |
| True False | Family members sometimes get so angry they throw things.           |
| True False | There is a feeling of togetherness in our family.                  |
| True False | We tell each other about our personal problems.                    |
| True False | Family members hardly every lose their tempers.                    |

## How I Am

Below is a list of some of the ways you may have felt or behaved. Please **circle** the number that best represents how often you have felt these feelings during the past week.

0 = Rarely or none of the time (less than 1 day)

1 = Some or a little of the time (1-2 days)

2 = Occasionally or a moderate amount of the time (3-4 days)

3 = Most or all of the time (5-7 days)

1. I was bothered by things that usually don't bother me.....	0	1	2	3
2. I did not feel like eating; my appetite was poor .....	0	1	2	3
3 I felt that I could not shake off the blues even with help from my family.....	0	1	2	3
4 I felt that I was just as good as other people.....	0	1	2	3
5 I had trouble keeping my mind on what I was doing.....	0	1	2	3
6 I felt depressed.....	0	1	2	3
7 I felt that everything I did was an effort.....	0	1	2	3
8 I felt hopeful about the future.....	0	1	2	3
9 I thought my life had my life had been a failure.....	0	1	2	3
10 I felt fearful.....	0	1	2	3
11 My sleep was restless.....	0	1	2	3
12 I was happy.....	0	1	2	3
13 I talked less than usual.....	0	1	2	3
14 I felt lonely.....	0	1	2	3
15 People were unfriendly.....	0	1	2	3
16 I enjoyed life.....	0	1	2	3
17 I had crying spells.....	0	1	2	3
18 I felt sad.....	0	1	2	3
19 I felt that people disliked me.....	0	1	2	3
20 I could not get "going".....	0	1	2	3

## The Way My Child Is With Me

Please use the following adjectives to describe YOUR PARENT' BEHAVIOR OVER THE LAST HTREE MONTHS as it was DIRECTED TOWARD YOU. Please circle the best answer.

		never			some- times			always		
1	My child is ACCEPTING of me.	1	2	3	4	5	6	7	8	
2	My child is ACTIVE with me.	1	2	3	4	5	6	7	8	
3	My child is ANGRY with me.	1	2	3	4	5	6	7	8	
4	My child is BORED with me.	1	2	3	4	5	6	7	8	
5	My child communicates with me CLEARLY.	1	2	3	4	5	6	7	8	
6	My child is CONSIDERATE for me.	1	2	3	4	5	6	7	8	
7	My child is CONTRARY against me.	1	2	3	4	5	6	7	8	
8	My child is COOPERATIVE with me.	1	2	3	4	5	6	7	8	
9	My child is DECEITFUL to me.	1	2	3	4	5	6	7	8	
10	My child is DEVOTED to me.	1	2	3	4	5	6	7	8	
11	My child is EASY TO GET ALONG WITH me.	1	2	3	4	5	6	7	8	
12	My child is FRIENDLY to me.	1	2	3	4	5	6	7	8	
13	My child is GOOD-NATURED.	1	2	3	4	5	6	7	8	
14	My child is HOSTILE to me.	1	2	3	4	5	6	7	8	
15	My child is IRRESPONSIBLE at me.	1	2	3	4	5	6	7	8	
16	My child is IRRITABLE at me.	1	2	3	4	5	6	7	8	
17	My child is LAZY.	1	2	3	4	5	6	7	8	
18	My child is LOVING.	1	2	3	4	5	6	7	8	
19	My child is MEAN to me.	1	2	3	4	5	6	7	8	
20	My child is RUDE to me.	1	2	3	4	5	6	7	8	

### The Way I Am With My Child

Now please use the same adjectives to describe YOUR OWN BEHAVIOR OVER THE LAST THREE MONTHS as it was DIRECTED TOWARD YOUR PARENTS. Please circle the best answer.

		never			some- times			always	
1.	I am ACCEPTING of my child.	1	2	3	4	5	6	7	8
2	I am ACTIVE with my child.	1	2	3	4	5	6	7	8
3	I am ANGRY with my child.	1	2	3	4	5	6	7	8
4	I am BORED with my child.	1	2	3	4	5	6	7	8
5	I communicate with my child CLEARLY.	1	2	3	4	5	6	7	8
6	I am CONSIDERATE for my child.	1	2	3	4	5	6	7	8
7	I am CONTRARY against my child.	1	2	3	4	5	6	7	8
8	I am COOPERATIVE with my child.	1	2	3	4	5	6	7	8
9	I am DECEITFUL to my child.	1	2	3	4	5	6	7	8
10	I am DEVOTED to my child.	1	2	3	4	5	6	7	8
11	I am EASY TO GET ALONG WITH my child.	1	2	3	4	5	6	7	8
12	I am FRIENDLY to my child.	1	2	3	4	5	6	7	8
13	I am GOOD NATURED.	1	2	3	4	5	6	7	8
14	I am HOSTILE toward my child.	1	2	3	4	5	6	7	8
15	I am IRRESPONSIBLE.	1	2	3	4	5	6	7	8
16	I am IRRITABLE at my child.	1	2	3	4	5	6	7	8
17	I am LAZY.	1	2	3	4	5	6	7	8
18	I am LOVING.	1	2	3	4	5	6	7	8
19	I am MEAN to my child.	1	2	3	4	5	6	7	8
20	I am RUDE to my child.	1	2	3	4	5	6	7	8

## CHILDREN'S DAILY LIFE AND FAMILY

### Informed Consent to Participate as a Research Subject

#### **Introduction:**

Ms. Shizuka Shimabukuro is completing her doctoral studies at Michigan State University. In her research, she is interested in how 5<sup>th</sup> and 6<sup>th</sup> children in Japan deal with the stresses of everyday life. She has the school principal's permission to contact you; however, the school is not endorsing this research project.

(a) Ms. Shimabukuro would like to obtain information from your child, and she will need your agreement to that (see a, below). (b) If you agree, she would like to ask you about how you see your family living together, how you are feeling right now, and how you see your child's behavior. To do this, we will ask you to fill out three questionnaires. (c) In addition, she would like to conduct an interview with you about your child.

All the information you or your child give us will be kept confidential. Ms. Shimabukuro would like to use your information and compare it to what your child reports about how he or she is feeling and behaving at home and school.

Your participation and your child's participation are strictly voluntary. You may decide not to participate in the research. No one at the school will know whether you agreed to participate or not. You and your child are free to skip any question or to stop your participation at any time.

#### **Procedures and Participation:**

- (a) With your permission, Ms. Shimabukuro will give your child a series of questionnaires about his or her behaviors, how s/he sees her/himself, and how s/he sees your relationship. Completing the questionnaires will take about 30-40 minutes.
- (b) With your permission, you will be asked to complete three brief questionnaires that are included in this envelope. Your child can return them to school in a sealed envelope. Completing these questionnaires should take approximately 20 minutes. Ms. Shimabukuro will collect the questionnaires from the school. No one else will know whether you decided to participate.
- (c) With your permission, Ms. Shimabukuro will contact you by e-mail, letter, or phone to set up a time to meet with you to talk about the way you see your child. She can come to your home or meet you elsewhere at your convenience. The interviews will be audiotaped for later analysis.

#### **Risks and Benefits of Participation:**

We think there is little risk for you or your child if you consent to participate in the study. It may be uncomfortable for your child to answer questions about behaviors and feelings, but your child can stop at any time or skip a question that is bothersome. Similarly, you may feel uncomfortable answering a particular question about your child or yourself. However, you are free to skip that question or stop altogether. In the interview, Ms. Shimabukuro will remind you that you may decline to answer a question or stop the interview at any time. We believe that the results of this study will be of benefit by providing information about the links between home, family, and school, and how to help children use their resources to their best advantage.

#### **Protection of Confidentiality:**

The confidentiality of your answers and your child's answers will be protected. All documents will be given a number to link your and your child's answers. Any information

that would identify you or your child (e.g., this consent form) will be separated from the survey and stored separately. You are not required to write your name on survey. Actual survey data will be stored in a lockable cabinet for three years before disposal. No one, except Ms. Shimabukuro and her academic advisor (Dr. Wampler), will have access to the data. The interview information will be coded by number and stored securely as well.

**Questions about the Research:**

For questions about this research study, please contact either:

Richard S. Wampler, Ph.D., Professor	Shizuku Shimabukuro, MA
Family and Child Ecology	2-21 Kinjyo Shuri Naha City,
Rm. 7, Human Ecology Building	Okinawa, Japan
Michigan State University	Phone: 886-4611
E. Lansing, MI 48824	E-mail: shimabu1@msu.edu
(rwampler@msu.edu)	

**If you have any questions or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this research study, you may contact, anonymously if you wish, the Michigan State University Human Research Protection Program at 517-355-2180, FAX 517-432-4503, or e-mail [irb@msu.edu](mailto:irb@msu.edu), or regular mail at: 207 Olds Hall, MSU, East Lansing, MI 48824.**

**Consent Forms:** Consent forms are on the next pages. There are two copies, please send one of the copies back with the questionnaires (signed or not) and keep a copy for yourself.

**Consent:** There are three different consent sections below. You may select all or any or none of them. We do ask that you return the contents of this envelope to school in a sealed envelope. You are free to decline to complete the questionnaire or interview; however, we do ask that you return the envelope's contents.

**a. Consent for Child's Survey Study Participation**

Sign the consent form below for your child to participate in the child's survey study.

*I consent to my child's participation in the survey study to be conducted at school.*

Child's Name \_\_\_\_\_

Mother's Name \_\_\_\_\_

**b. Consent for Mother's Survey Study Participation**

Sign the consent form below for yourself to participate in the mother's survey study.

*I consent to my participation in the mother's survey study.*

Name \_\_\_\_\_ Date \_\_\_\_\_

**c. Consent for Mother's Interview Participation**

Sign the consent form below for yourself if you agree to be interviewed.

*I consent to my participation in the mother's interview.*

Name \_\_\_\_\_ Date \_\_\_\_\_

**If you agree to be interviewed about yourself and your child, please provide the**

**following contact information:**

**Phone:** \_\_\_\_\_

**E-mail:** \_\_\_\_\_

**Home address:** \_\_\_\_\_

## **Children's Daily Life and Family Assent Form**

My name is Shizuka Shimabukuro. I am trying to learn about a daily life of children in late childhood and family environment because children in this period of age need family support for growing through the pathways of transition between childhood and adolescence healthy. If you would like, you can be in my study.

If you decide you want to be in my study, you will fill out the questionnaire that will take about 35 minutes to complete. After you finish filling out, Shizuka Shimabukuro will collect it. This study will ask you about how you think about yourself and your behaviors in daily life. You might have to recall something that you do not want to think of and feel uncomfortable. However, this study will help your parents and teachers understand you better and help you to be successful.

Other people will not know if you are in my study. I will put things I learn about you together with things I learn about other children, so no one can tell what things came from you. When I tell other people about my research, I will not use your name, so no one can tell who I am talking about.

Your parents have to say it's OK for you to be in the study. After they decide, you get to choose if you want to do it too. If you don't want to be in the study, no one will be mad at you. If you want to be in the study now and change your mind later, that's OK. You can stop at any time.

My telephone number is 886-4611. You can call me if you have questions about the study or if you decide you don't want to be in the study any more. I will give you a copy of this form in case you want to ask questions later.

### **Agreement**

I have decided to be in the study even though I know that I don't have to do it. Ms. Shimabukuro has answered all my questions.

\_\_\_\_\_  
Signature of Study Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Researcher

\_\_\_\_\_  
Date

## BIBLIOGRAPHY

- Abela, J. (2001). The hopelessness theory of depression: A test of the diathesis-stress and causal mediation components in third and seventh grade children. *Journal of Abnormal Child Psychology*, 29, 241-245.
- Abela, J., & Payne, A. (2003). A test of the integration of the hopelessness and self-esteem theories of depression in schoolchildren. *Cognitive Therapy and Research*, 27, 489-591.
- Abela, J., & Taylor, G. (2003). Specific vulnerability to depressive mood reactions in children: The moderating role of self-esteem. *Journal of Clinical Child and Adolescent Psychology*, 32, 408-418.
- Achenbach, T. M. (1991). *Manual for the Child Behavior Checklist/4-18 and 1991 Profile*. Burlington, VT: University of Vermont Department of Psychiatry.
- Achenbach, T. M., & Rescorla, L. A. (2001). *Manual for the ASEBA School-Age Forms & Profiles*. Burlington, VT: University of Vermont, Research Center for Children, Youth, & Families.
- Ainsworth, M. (1967) *Infancy in Uganda: Infant care and the growth of love*. Baltimore, MD: Johns Hopkins University Press.
- American Psychiatric Association. (2005). *Diagnostic and statistical manual-Text revision (DSM-IV-TR)*. Washington, DC: author
- Ainsworth, M., & Bell, W. (1970). Attachment, exploration, and separation: Illustrated by the behavior of one-year-olds in a strange situation. *Child Development*, 41, 49-67.
- Ainsworth, M., Blehar, M., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Angold, A., & Rutter, M. (1992). Effects of age and pubertal status on depression in a large clinical sample. *Development and Psychopathology*, 4, 5-28.
- Antonovsky, A. (1976). *Health, stress, coping*. San Francisco, CA: Jossey-Bass.
- Antonovsky, A. (1987). *Unraveling the mystery of health: How people manage stress and stay well*. San Francisco, CA: Jossey-Bass.

- Asarnow, J. (1992). Suicidal ideation and attempts during middle childhood: Associations with perceived family stress and depression among child psychiatric inpatients. *Journal of Clinical Child Psychology*, 21, 35-40.
- Asarnow, J., Carlson, G., & Guthrie, D. (1987). Coping strategies, self-perceptions, hopelessness, and perceived family environments in depressed and suicidal children. *Journal of Consulting And Clinical Psychology*, 55, 361-366.
- Asarnow, J., Goldstein, M., Tompson, M., & Guthrie, D. (1993). One year outcomes of depressive disorders in child psychiatric in-patients: Evaluation of the predictive power of a brief measure of expressed emotion. *Journal of Child Psychology and Psychiatry*, 34, 129-138.
- Asarnow, J. Tompson, M., Hamilton, E., Goldstein, M., & Guthrie, D. (1994). Family-expressed emotion, childhood-onset depression, and childhood-onset schizophrenia spectrum disorders: Is expressed emotion a nonspecific correlate of child psychopathology or a specific risk factor for depression? *Journal of Abnormal Child Psychology*, 22, 129-146.
- Asarnow, J., Tompson, M., Woo, S., & Cantwell, D. (2001). Is expressed emotion a specific risk factor for depression or a non-specific correlation of psychopathology? *Journal of Abnormal Child Psychology*, 29, 573-583.
- Azuma, H. (1994). *Nihonjin no shitsuke to kyoiku* [Discipline and education in Japan]. Tokyo: Tokyo University Press.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, Strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Barrowclough, C., & Hooley, J., (2003). Attribution and expressed emotion: A review. *Clinical Psychology Review*, 23, 849-880.
- Bateson, G., Jackson, D., & Weakland, J. (1956). Toward a theory of schizophrenia. *Behavioral Science*, 1, 251-264.
- Belsky, J. (1984). The determinants of parenting: A process model. *Child Development*, 55, 83-96.
- Birmaher, B., Ryan, N., Williamson, D., Brent, D., Kaufman, J., Dahl, R., et al. (1996). Child and adolescent depression: A review of the past 10 years. *Journal of the American Academy of Child and Adolescent Psychiatry*, 35, 1427-1439.
- Bolognini, M., Plancherel, B., Bettschart, W., & Halfon, O. (1996). Self-esteem and mental health in early adolescence: development and gender difference. *Journal of Adolescence*, 19, 233-245.

- Bolton, C., Calam, R., Barrowclough, C., Peters, S., Roberts, J., Wearden, A., et al. (2003). Expressed emotion, attributions and depression in mothers of children with problem behavior. *Journal of Child Psychology and Psychiatry*, 44, 242-254.
- Bowlby, J. (1960). Grief and mourning in infancy and early childhood. *The Psychoanalytic Study of the Child*, 15, 9-52.
- Bowlby, J. (1980/1969). *Separation: Anxiety & anger*. Vol. 2 of *Attachment and loss*. New York: Basic Books.
- Bowlby, J. (1991/1980). *Loss, sadness, and depression*. Vol. 3 of *Attachment and loss*. New York: Basic Books.
- Bowlby, J. (1982/1969). *Attachment*. Vol. 1 of *Attachment and loss*. New York: Basic Books.
- Bowlby, J. (1988). *A secure base: Parent-child attachment and healthy human development*. New York: Basic Books.
- Boyce, T., Frank, E., Jensen, P., Kessler, R., Nelson, C., Steinberg, L., et al. (1998). *Development and Psychopathology*, 10, 143-164.
- Brewin, C., MacCarthy, B., Duda, K., & Vaughn, C. (1991). Attribution and expressed emotion in the relatives of patients with schizophrenia. *Journal of Abnormal Psychology*, 100, 546-554.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. MA: Harvard University Press.
- Bronfenbrenner, U. (2005). *Making human beings human: Bioecological perspectives on human development*. CA: Sage Publication, Inc.
- Brown, R. A. (2008). Self-perceptions of ordinariness and self-esteem in Japan. *Jyoho-Kenkyu [Research on Information]*, 38, 1-8.
- Brown, G., & Rutter, M. (1966). The measurement of family activities and relationships: A methodological study. *Human Relations*, 19, 241-263.
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. *Sociological Methods & Research*, 21, 230-258.
- Buehler, C., & Welsh, D. (2009). A process model of adolescents' triangulation into parents' marital conflict: The role of emotional reactivity. *Journal of Family Psychology*, 23, 167-180.

- Butzlaff, R., & Hooley, J. (1998). Expressed emotion and psychiatric relapse: A meta-analysis. *Archives of General Psychiatry*, 55, 547-552.
- Carmines, E., & McIver, J. (1981). Analyzing models with unobserved variables: Analysis of covariance structures. In G. Bohrnstedt and E. Borgatta (Eds.), *Social Measurement: Current Issues* (pp. 61-73). Beverly Hills, CA: Sage.
- Caron, C., & Rutter, M. (1991). Comorbidity in child psychopathology: Concepts, issues and research strategies. *Journal of Child Psychology and Psychiatry*, 32, 1063-1080.
- Carter, R. (2006). Solutions for missing data in structural equation modeling. *Research & Practice in Assessment*, 1, 1-6.
- Caspi, A., Moffitt, T., Morgan, J., Rutter, M., Taylor, A., Kim-Cohen, J., et al. (2004). Maternal expressed emotion predicts children's antisocial behavior problems: Using monozygotic-twin differences to identify environmental effects on behavioral development. *Developmental Psychology*, 40, 149-161.
- Chambless, L., Bryan, A., Aiken, L., Stelketee, G., & Hooley, J. (2001). Predicting expressed emotion: A study with families of obsessive-compulsive and agoraphobic outpatients. *Journal of Family Psychology*, 15, 225-240.
- Chambless, L., Floyd, F., Rodebaugh, T., & Stelketee, G. (2006). Expressed emotion and familial interaction: A study with agoraphobic and obsessive-compulsive patients and their relatives. *Journal of Family Psychology*, 15, 225-240.
- Chambless, L., & Stelketee, G. (1999). Expressed emotion and behavior therapy outcome: A prospective study with obsessive-compulsive and agoraphobic outpatients. *Journal of Consulting and Clinical Psychology*, 67, 658-665.
- Chao, R. K. (1994). Beyond parental control and authoritarian parenting style: Understanding Chinese parenting through the cultural notion of training. *Child Development*, 65, 111-1119.
- Cho, M. J., & Kim, K. H. (1998). Use of the Center for Epidemiologic Studies Depression (CES-D) Scale in Korea. *The Journal of Nervous & Mental Disease*, 186, 304-310.
- Cicchetti, D. (1996). Child maltreatment: Implications for developmental theory. *Human Development*, 39, 18-39.
- Cicchetti, D., & Howes, P. (1991). Developmental psychopathology in the context of the family: Illustrations from the study of child maltreatment. *Canadian Journal of Behavioural Science*, 23, 257-281.

- Cicchetti, D., & Rogosch, F. (1997). The role of self-organization in the promotion of resilience in maltreated children. *Development and Psychopathology*, 9, 799-817.
- Cicchetti, D., & Rogosch, F., Lynch, M., & Holt, K. (1993). Resilience in maltreated children: Processes leading to adaptive outcomes. *Development and Psychopathology*, 5, 629-647.
- Cicchetti, D., & Toth, S. (1998). The development of depression in children and adolescents. *American Psychologist*, 53, 221-241.
- Cicchetti, D., & Tucker, D. (1994). Development and self-regulatory structures of the mind. *Development and Psychopathology*, 6, 533-549.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). New York: McGraw-Hill.
- Cohen, J. (1992). Power primer. *Psychological Bulletin*, 112, 155-159.
- Coiro, M., & Gottesman, I. (1996). The diathesis and/or stressor role of expressed emotion in affective illness. *Clinical Psychology: Science and Practice*, 3, 310-322.
- Cole, D., Jacquez, F., & Maschman, T. (2001). Social origins of depressive cognitions: A longitudinal study of self-perceived competence in children. *Cognitive Research and Therapy*, 25, 377-395.
- Cole, D., Martin, J., Peeke, L., Seroczynski, A., & Fier, J. (1999). Children's over- and underestimation of academic competence: A longitudinal study of gender differences, depression and anxiety. *Child Development*, 70, 459-473.
- Cole, D., Martin, J., & Powers, B. (1997). A competency-based model of child depression: A longitudinal study of peer, parent, teacher, and self-evaluations. *Journal of Child Psychology and Psychiatry*, 38, 505-514.
- Cole, D., Martin, J., Powers, B., & Truglio, R. (1996). Modeling causal relations between academic and social competence and depression: A multitrait-multimethod longitudinal study of children. *Journal of Abnormal Psychology*, 105, 258-270.
- Cole, P., Michel, M., & Teti, L. (1994). The development of emotion regulation and dysregulation: A clinical perspective. *Monographs of the Society for Research in Child Development*, 59, 73-100.
- Conley, C., Haines, L., Hilt, L., & Metalsky, G. (2001). The Children's Attributional Style Interview: Developmental tests of cognitive diathesis-stress theories of depression. *Journal of Abnormal Psychology*, 29, 1573-2835.

- Coville, A., Miklowitz, D., Taylor, D., & Low, K. (2008). Correlates of high expressed emotion attitudes among parents of bipolar adolescents. *Journal of Clinical Psychology, 64*, 438-449.
- Crijnen, A. A. M., Achenbach, T. M., Verhulst, F. C. (1999). Problems reported by parents of children in multiple cultures: The child behavior checklist syndrome constructs. *American Journal of Psychiatry, 156*, 569-574.
- Crittenden, P. M. (2000). A dynamic-maturational exploration of the meaning of security and adaptation: Empirical, cultural, and theoretical considerations. In P. M. Crittenden & A. H. Claussen (Eds.), *The organization of attachment relationships: Maturation, culture, and context* (pp. 358-383). New York: Cambridge University Press.
- Davies, P., Dumpenci, L., Windle, M. (1999). The interplay between maternal depressive symptoms and marital distress in the prediction of adolescent adjustment. *Journal of Marriage and the Family, 61*, 238-254.
- Davies, P., & Forman, E. (2002). Children's patterns of preserving emotional security in the interparental subsystem. *Child Development, 73*, 1880-1903.
- DeGarmo, D., & Forgatch, M. S. (2005). Early development of delinquency within divorced families: Evaluating a randomized preventive intervention trial. *Developmental Science, 8*, 229-239.
- DeGarmo, D., Patterson, G., & Forgatch, M. (2004). How do outcomes in a specified parent training intervention maintain or wane over time? *Prevention Science, 5*, 73-89.
- Denda, K. (2007). 子どものうつ病 [Childhood Depression]. 母子保健情報 [Parental Health Information], 55, 69-72.
- Denda, K., Kako, Y., Kitagawa, N., & Koyama, T. (2006). Assessment of depressive symptoms in Japanese school children and adolescents using the Birleson depression self-rating scale. *International Journal of Psychiatry in Medicine, 36*, 231-241.
- Denda, K., Sasaki, Y., Asakura, S., Kitagawa, N., & Koyama, T. (2003). A clinical study of mood disorders in childhood and adolescence. *Japanese Journal of Child and Adolescent Psychiatry, 44*, 83-93.
- Denham, S., Workman, E., Cole, P., Weissbrod, C., Kendziora, K., & Zahn-Waxler, C. (2000). Prediction of externalizing behavior problems from early childhood to middle childhood: The role of parental socialization and emotional expression. *Developmental and Psychopathology, 12*, 23-45.

- Doane, J., West, K., Goldstein, M., Rodnick, E., & Jones, J. (1981). Predictors of subsequent schizophrenia spectrum disorders in vulnerable adolescents. *Archives of General Psychiatry*, 38, 679-685.
- Erikson, E. *Childhood and society*. (1963). New York: W. W. Norton & Co.
- Feng, X., Keenan, K., Hipwell, A., Henneberger, A., Rischall, M., Butch, J., et al. (2009). Longitudinal associations between emotion regulation and depression in preadolescent girls: Moderation by the caregiving environment. *Developmental Psychology*, 45, 798-808.
- Fergusson, D., Lynskey, M., & Horwood, J. (1992). The effect of maternal depression on maternal ratings of child behavior. *Journal of Abnormal Child Psychology*, 21, 1573-2835.
- Forgatch, M., & DeGarmo, D. (1999). Parenting Through Change: An effective parenting training program for single mothers. *Journal of Consulting and Clinical Psychology*, 67, 711-724.
- Forgatch, M., Patterson, G., DeGarmo, D., & Beldavs, Z. (2009). Testing the Oregon delinquency model with 9-year follow-up of the Oregon Divorce Study. *Development and Psychopathology*, 21, 637-660.
- Frazier, P. A., Tix, A. P., & Barron, K. E. (2004). Testing moderator and mediator effects in counseling psychology. *Journal of Counseling Psychology*, 51, 115-134.
- Friedmann, M. S., & Goldstein, M. J. (1993). Relatives' awareness of their own expressed emotion as measured by a self-report adjective checklist. *Family Process*, 32, 459-471.
- Frye, A., & Garber, J. (2005). The relationships among maternal depression, maternal criticism, and adolescents' externalizing and internalizing symptoms. *Journal of Abnormal Child Psychology*, 33, 1-11.
- Fujio, K. (2003). Characteristic of Japanese female breast cancer. *Sogo Rinsho*, 52, 3074-3076.
- Garnezy, N. (1995). Development and adaptation: The contributions of the MacArthur Foundation and William Bevan. In F. Kessel (Ed.), *Psychology, science, and human affairs: Essays in honor of William Bevan* (pp. 109-124). Boulder, CO: Westview Press.
- Glanz, K., Maskarinec, G., & Carlin, L. (2005). Ethnicity, sense of coherence, and tobacco use among adolescents. *Annals of Behavioral Medicine*, 29, 192-199.

- Gomez, R., DeMello, L., & Tallentm R. (2001). Perceived maternal control and support: Effects on hostile biased social information processing and aggression among clinic-referred children with high aggression, *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 42, 513-522.
- Hammen, C., & Rudolph, K. (2003). Childhood mood disorders. In E. J. Mash & R. A. Barkley, *Child psychopathology* (2nd ed., pp. 233-278). New York: Guilford Publications, Inc.
- Hankin, B., & Abramson, L. Y. (2001). Development of gender differences in depression: An elaborated cognitive vulnerability-transactional stress theory. *Psychological Bulletin*, 127, 773-796.
- Hankin, B., Abramson, L., & Silar M. (2001). A prospective test of the hopelessness theory of depression in adolescence. *Cognitive Therapy and Research*, 25, 607-632.
- Harnish, J., Dodge, K., & Valente, E. (1995). Mother-child interaction quality as a partial mediator of the roles of maternal depressive symptomatology and socioeconomic status in the development of child behavior problems. [Conduct Problems Prevention Research Group.] *Child Development*, 66, 739-753.
- Harter, S. (1999). *The construction of the self: A developmental perspective*. New York: The Guilford Press.
- Hass, M., & Graydon, K. (2009). Sources of resiliency among successful foster youth. *Children and Youth Services Review*, 31, 457-463.
- Hayami, T. (1984). Gakugyo seiseki ni tsuiteno genin kizoku suisoku katei no hattatsu [The development of inference process of causal attribution about academic achievements]. *Japanese Journal of Educational Psychology*, 32, 256-265.
- Hayhurst, H., Cooper, Z., Paykel, E., Vearnals, S., & Ramana, R. (1997). Expressed emotion and depression. *British Journal of Psychiatry*, 171, 439-443.
- Hedlund, S., Fichter, M., Quadflieg, N., & Brandl, C. (2003). Expressed emotion, family environment, and parental bonding in bulimia nervosa: A 6-year investigation. *Eating & Weight Disorder*, 8, 26-35.
- Hinshaw, S. P. (1992). Externalizing behavior problems and academic underachievement in childhood and adolescence: Causal relationship and underlying mechanisms. *Psychological Bulletin*, 111, 127-155.
- Hirshfeld, D., Biederman, J., Brody, L., Faraone, S., & Rosenbaum, J. (1997). Expressed emotion toward children with behavioral inhibition: Associations with maternal

anxiety disorder. *Journal of American Academy of Child & Adolescent Psychiatry*, 36, 910-917.

Hoffman, P., Fruzzetti, A., Buteau, E., Meiditch, E., Penney, D., Bruce M., et al. (2005). Family connections: a program for relatives of persons with borderline personality disorder. *Family Process*, 44, 217-225.

Holloway, S. (1988). Concepts of ability and effort in Japan and the United States. *Review of Educational Research*, 58, 327-345.

Holloway, S., Kashiwagi, K., Hess, R., & Azuma, H. (1986). Causal attributions by Japanese and American mothers and children about performance in mathematics. *International Journal of Psychology*, 21, 269-286.

Holsen, I., Kraft, P., & Vitterso, J. (2000). Stability in depressed mood in adolescence: Results from a 6-year longitudinal panel study. *Journal of Youth and Adolescence*, 29, 61-78.

Hooey, J. (1998). Expressed emotion and locus of control. *The Journal of Nervous and Mental Disease*, 186, 374-378.

Hooley, J., & Campbell, C. (2002). Control and controllability: Beliefs and behavior in high and low expressed emotion relatives. *Psychological Medicine*, 32, 1091-1099.

Hooley, J., & Gotlib, I. (2000). A diathesis-stress conceptualization of expressed emotion and clinical outcome. *Applied and Preventive Psychology*, 9, 135-151.

Hooley, J., Gruber, S., Scott, L., Hiller, J., & Yurgelun-Todd, D. (2005). Activation in dorsolateral prefrontal cortex in response to maternal criticism and praise in recovered depressed and healthy control participants. *Biological Psychiatry*, 57, 809-812.

Hooley, J., & Hiller, J. (2000). Personality and expressed emotion. *Journal of Abnormal Psychology*, 109, 40-44.

Hooley, J., & Licht, D. (1997). Expressed emotion and causal attributions in the spouses of depressed patients. *Journal of Abnormal Psychology*, 106, 298-306.

Hooley, J., Orley, J., & Teasdale, J. (1986). Levels of expressed emotion and relapse in depressed patients. *British Journal of Psychiatry*, 148, 642-647.

Hooley, J., & Parker, H. (2006). Measuring expressed emotion: An evaluation of the shortcuts. *Journal of Family Psychology*, 20, 386-396.

- Hooley, J., & Phil, D. (1998). Expressed emotion and locus of control. *The Journal of Nervous and Mental Disease*, 186, 374-378.
- Hooley, J., & Teasdale, J. (1989). Predictors of relapse in unipolar depressives: Expressed emotion, marital distress, and perceived criticism. *Journal of Abnormal Psychology*, 98, 229-235.
- Hu, L. & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1-55.
- Hubschmid, T., & Zemp, M. (1989). Interactions in high- and low-EE families. *Social Psychiatry and Psychiatric Epidemiology*, 24, 113-119.
- Huguelet, P., Favre, S., Binyet, S., Gonzales, C., & Zabala, I. (1995). The use of expressed emotion index as a predictor of outcome in first admitted schizophrenic patients in French speaking area of Switzerland. *Acta Psychiatrica Scandinavica*, 92, 447-452.
- Inoue, S., Tanaka, S., Shimodera, S., & Mino, Y. (1997). Expressed emotion and social function. *Psychiatry Research*, 72, 33-39.
- Itani, T., Kobayashi, Y., Tanaka, Y., Kita, M., Kuramoto, H., Negishi, T., et al. (2001). Standardization of the Japanese version of the Child Behavior Checklist/ 4-18. *Psychiatria et Neurologia Paediatrica Japonica*, 41, 243-252.
- Iwata, N., & Buka, S. (2002). Race/ethnicity and depressive symptoms: a cross-cultural/ethnic comparison among university students in East Asia, North and South America. *Social Science & medicine*, 55, 2243-2252.
- Iwata, N., & Roberts, R. E. (1996). Age differences among Japanese on the Center for Epidemiologic Studies Depression Scale: *An ethnocultural perspective on somatization*. *Social Science and Medicine*, 43, 967-974.
- Iwata, N., Saito, K., & Roberts, R. E. (1994). Responses to a self-administered depression scale among younger adolescents in Japan. *Psychiatry Research*, 53, 275-287.
- Iwata, N., Umesue, M., Egashira, K., Hiro, H., Mizoue, T., Mishima, N., & Nagata, S. (1998). Can positive affect items be used to assess depressive disorders in the Japanese population? *Psychological Medicine*, 28, 153-158.
- Jacquez, F., Cole, D., & Searle, B. (2004). Self-perceived competence as a mediator between maternal feedback and depressive symptoms in adolescents. *Journal of Abnormal Child Psychology*, 32, 355-367.

- Jenkins, J. (2008). Psychosocial adversity and resilience. In M. Rutter, D. Bishop, D. Pine, S. Scott, J. Stevenson, E. Taylor, & A. Thapar (Eds.), *Rutter's Child and Adolescent Psychiatry* (5th ed., pp. 377-391). MA: Blackwell Publishing.
- Joiner, T., & Wagner, K. (1996). Parental, child-centered attributions and outcome: A meta-analytic review with conceptual and methodological limitations. *Journal of Abnormal Child Psychology*, 24, 37-52.
- Johnson, F. (1993). *Dependency and Japanese socialization: Psychoanalytic and anthropological investigation into amae*. New York: New York University Press.
- Jonson, M. (2004). Approaching the salutogenesis of sense of coherence: The role of 'active' self-esteem and coping. *British Journal of Health Psychology*, 9, 419-432.
- Kamal, A. (1995). Variables in expressed emotion associated with relapse: A comparison between depressed and schizophrenic samples in an Egyptian community. *Current Psychiatry*, 2, 211-216.
- Kim, J., & Cicchetti, D. (2004). A process model of mother-child relatedness and psychological adjustment among maltreated and nonmaltreated children: The role of self-esteem and social competence. *Journal of Abnormal Child Psychology*, 32, 341-354.
- Kitayama, S., Markus, H., Matsumoto, H., & Norasakkunkit, V. (1997). Individual and collective processes in the construction of the self: Self-enhancement in the United States and self-criticism in Japan. *Journal of Personality and Social Psychology*, 72, 1245-1267.
- Kitayama, S., & Masuda, T. (1995). Reappraising cognitive appraisal from a cultural perspective. *Psychological Inquiry*, 6, 217-233.
- Kojima, H. (1986). Japanese concepts of child development from the mid-17th to mid-19th century. *International Journal of Behavioral Development*, 9, 315-329.
- Kovacs, M. (1996). Presentation and course of major depressive disorder during childhood and later years of the life span. *Journal of the American Academy of Child and Adolescent Psychiatry*, 35, 705-715.
- Kovacs, M. (1997). Depressive disorders in childhood: An impressionistic landscape. *Journal of Child Psychology and Psychiatry*, 38, 287-298.
- Kovac, M., & Devlin, B. (1998). Internalizing disorders in childhood. *Journal of Child Psychology and Psychiatry*, 39, 47-63.

- Kwon, P., & Laurenceau, J. (2002). A longitudinal study of the hopelessness theory of depression: Testing the diathesis-stress model within a differential reactivity and exposure framework. *Journal of Clinical Psychology*, 58, 1305-1321.
- Lebra, T. S. (1994). Mother and child in Japanese socialization: A Japan-U.S. comparison. In P. Greenfield & R. Cocking (Eds.), *Cross-cultural roots of minority child development* (pp. 259-274). Hillsdale, NJ: Erlbaum.
- Leff, J., & Vaughn, C. (1985). *Expressed emotion in families: Its significance for mental illness*. New York: Guilford Press.
- Lundberg, O., Nystrom, P. M. (1995). A simplified way of measuring sense of coherence: Experience from population survey in Sweden, *European Journal of Public Health*, 5, 56-59.
- Luther, S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development*, 71, 543-562.
- MacKinnon, D.P., Krull, J.L., & Lockwood, C.M. (2000). Equivalence of the mediation, confounding, and suppression effect. *Prevention Science*, 1, 173-181.
- Magana, A., Goldstein, M., Karno, M., Miklowitz, D., Jenkins, J., & Falloon, I. (1986). A brief method for assessing expressed emotion in relatives of psychiatric patients, *Psychiatry Research*, 17, 203-212.
- Maier, S., & Seligman, M. (1976). Learned helplessness: Theory and evidence. *Journal of Experimental Psychology: General*, 105, 3-46.
- Markus, H., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98, 224-253.
- Marom, S., Munitz, H., Jones, P., Weizman, A., & Hermesh, H. (2005). Expressed emotion: Relevance to rehospitalization in schizophrenia over 7 years. *Schizophrenia Bulletin*, 31, 751-758.
- Marsh, E., & Dozois, D. (2003). Child psychopathology: A developmental-systems perspective. In E. J. Mash & R. A. Barkley (Eds.), *Child Psychopathology* (pp. 3-74). New York: Guilford Press.
- Masten, A. (1994). Resilience in individual development: Successful adaptation despite risk and adversity. In M. C. Wang & E. W. Gordon, (Eds.), *Educational resilience in inner-city America: Challenges and prospects* (pp. 3-26). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Masten, A., & Coatsworth, J. (1998). The development of competence in favorable and unfavorable environments: Lessons from research on successful children. *American Psychologist*, 53, 205-220.

- Masten, A., Best, K., & Garnezy, N. (1991). Resilience and development: Contributions from the study of children who overcome adversity. *Development and Psychopathology*, 2, 425-444.
- May, R. *Love and will*. New York: Norton, 1969.
- McCreadie, R., Robertson, L., Hall, D., & Berry, I. (1993). The Nithdale schizophrenia surveys: XI. Relatives' expressed emotion stability over five years and its relation to relapse. *British Journal of Psychiatry*, 162, 393-397.
- McCarty, C., Lau, A., Valeri, S., & Wisz, J. (2004). Parent-child interactions in relation to critical and emotionally overinvolved expressed emotion (EE): Is EE a proxy for behavior? *Journal of Abnormal Child Psychology*, 32, 83-93.
- McCarty, C., & Weisz, J. (2002). Correlations of expressed emotion in mothers of clinically-referred youth: An examination of the Five-Minute Speech Sample. *Journal of Child Psychology and Psychiatry*, 43, 759-768.
- McCleary, L., & Sanford, M. (2002). Parental expressed emotion in depressed adolescents: Prediction of clinical course and relationship to comorbid disorders and social functioning. *Journal of Child Psychology and Psychiatry*, 43, 587-595.
- Meehl, P. (1962). Schizotaxia, schizotypy, schizophrenia. *American Psychologist*, 17, 827-838.
- Miklowitz, D., Goldstein, M., Falloon, I., & Doane, J. (1984). Interactional correlates of expressed emotion in the families of schizophrenics. *The British Journal of Psychiatry*, 144, 482-487.
- Miklowitz, D., Goldstein, M., Nuechterlein, K., Snyder, K., & Mintz, J. (1988). Family factors and the course of bipolar affective disorder. *Archives of General Psychiatry*, 45, 225-231.
- Miklowitz, D., Goldstein, M., Richards, J., Simoneau, T., & Succath, R. (2003). A randomized study of family-focused psychoeducation and pharmacotherapy in the outpatient management of bipolar disorder. *Archives of General Psychiatry*, 60, 904-912.
- Minami, M., & McCabe, A. (1995). Rice balls and bear hunts: Japanese and North American family narrative patterns. *Journal of Child Language*, 22, 423-445.
- Mino, Y., Inoue, S., Shimodera, S., & Tanaka, S. (2000). Evaluation of expressed emotion (EE) status in mood disorders in Japan: Inter-rater reliability and characteristics of EE. *Psychiatry Research*, 94, 221-227.

- Mino, Y., Inoue, S., Shimodera, S., Tanaka, S., Tsuda, T. & Yamamoto, E. (1998). Expressed emotion of families and negative/depressive symptoms in schizophrenia: a cohort study in Japan. *Schizophrenia Research*, 34, 159-168.
- Mino, Y., Inoue, S., Tanaka, S., & Tsuda, T. (1997). Expressed emotion among families and course of schizophrenia in Japan: A 2-year cohort study. *Schizophrenia Research*, 24, 333-339.
- Mino, Y., Shimodera, S., Inoue, S., Fujita, H., Tanaka, S., & Kanazawa S. (2001). Expressed emotion of families and the course of mood disorders: A cohort study in Japan. *Journal of Affective Disorders*, 63, 43-49.
- Minuchin, S. (1985). Families and individual development: Provocations from the field of family therapy. *Child Development*, 56, 289-302.
- Minuchin, S., & Fishman, H. (1981). *Family therapy techniques*. Cambridge, MA: Harvard University Press.
- Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review*, 100, 674-701.
- Moos, R. H. (1974). *Family Environment Scale preliminary manual*. Consulting Psychologists Press. Palo Alto, Calif.
- Moos, R., & Moos, B. (1981). *Family environment Scale Manual*. Palo Alto, CA: Consulting Psychologists Press
- Mun, E. Y., Fitzgerald, H. E., Von Eye, A., Puttler, L., & Zucker, R. A. (2001). Temperamental characteristics as predictors of externalizing and internalizing child behavior problems in the contexts of high and low parental psychology. *Infant Mental Health Journal*, 22, 393-415.
- Nelson, D., Hammen, C., Brennan, P., & Ullman, J. (2003). The impact of maternal depression on adolescent adjustment: The role of expressed emotion. *Journal of Consulting and Clinical Psychology*, 71, 935-944.
- Nichols, M., & Schwartz, R. (1998). The evolution of family therapy. In M. C. Nichols, & R. C. Schwartz (Eds.), *Family therapy concepts and methods* (4th ed., pp. 13-63). Boston, MA: Allyn and Bacon.
- Noh, S., Kasper, V., & Chen, X. (1998). Measuring depression in Korean immigrants: Assessing validity of the translated Korean version of the CES-D scale. *Cross-Cultural Research: The Journal of Comparative Social Science*, 32, 358-377.
- Nomura, H., Inoue, S., Kaminura, N., Shimodera, S., Mino, Y., Gregg, L., & Tarrier, N. (2005). A cross-cultural study on expressed emotion in careers of people with

dementia and schizophrenia: Japan and England. *Social Psychiatry and Psychiatric Epidemiology*, 40, 564-570.

O'Cougherty-Wright, M., Masten, A., Northwood, A., & Hubbard, J. (1997). Long-term effects of massive trauma: Developmental and psychobiological perspectives. In D. Cicchetti & Toth (Eds.), *Rochester symposium on developmental psychopathology: Vol. 8. Developmental perspectives on trauma* (pp. 181-225). Rochester, NY: University of Rochester Press.

Olsson, C., Bond, L., Burns, J., Vella-Brodrick, D., & Sawyer, S. (2003). Adolescent resilience: A concept analysis. *Journal of Adolescence*, 26, 1-11.

Ozono, S, Saeki, T., Inoue, S., Mantani, T., Okamura, H., & Yamawaki, S. (2005). Family functioning and psychological distress among Japanese breast cancer patients and families. *Support Care Cancer*, 13, 1044-1050.

Patrick, D., & Cicchetti, D. (2004). Toward an integration of family systems and developmental psychopathology approaches. *Developmental and Psychopathology*, 16, 477-481.

Patrick, E. S., & Niall Bolger. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, 7, 422-445.

Patterson, G.R. (1982). *Coercive family process*. Eugene, OR: Castalia Publishing Co.

Patterson, G., Reid, J., & Dishion, T. (1992). *A social learning approach: IV. Antisocial boys*. Eugene, OR: Castalia Publishing Co.

Peris, T., & Baker, B. (2000). Applications of the expressed emotion construct to young children with externalizing behavior: Stability and prediction over time. *Journal of Child Psychology and Psychiatry*, 41, 457-462.

Peterson, G., Maier, S., & Seligman, M. (1993). *Learned helplessness: A theory for the age of personal control*. New York: Oxford University Press.

Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1, 385-401.

Richardson, R. (2005). Developmental contextual considerations of parent-child attachment in the later middle childhood years. In K. A. Kerns, & R. A. Richardson (Eds.), *Attachment in middle childhood*. New York: The Guilford Press.

Richters, J. E., & Weintraub, S. (1990). Beyond diathesis: Toward an understanding of high-risk environments. In J. Rolf, A. S. Masten, D. Cicchetti, K. G. Nuechterlein,

& S. Weintraub (Eds.), *Risk and protective factors in the development of psychopathology* (pp. 67-96). New York: Cambridge University Press.

Rohner, R. P., & Britner, P. A. (2002). Worldwide mental health correlates of parental acceptance-rejection: Review of cross-cultural and intercultural evidence. *Cross-Cultural Research*, 36, 16-47.

Rosenberg, M. (1979). *Conceiving the Self*. New York: Basic Books.

Rosenberger, N. R. (1989). Dialectic balance in the polar model of self: The Japan case. *Ethos*, 17, 88-113.

Rosenthal, D. (1963). A suggested conceptual framework. In D. Rosenthal (Ed.), *The Genain quadruplets* (pp. 505-516). New York: Basic Books.

Rothbaum, F., Pott, M., Azuma, H., Miyake, K., & Weisz, J. (2000). The development of close relationships in Japan and the United States: Paths of symbiotic harmony and degenerative tension. *Child Development*, 71, 1121-1142.

Rothbaum, F., & Weisz, J. (1994). Parental caregiving and child externalizing behavior in nonclinical samples: A meta-analysis. *Psychological Bulletin*, 116, 55-74.

Rubin, D. B. (1976). Inference and missing data. *Biometrika*, 61, 581-592.

Rutter, M. (1979). Protective factors in children's responses to stress and disadvantage. In M. W. Kent & J. E. Rolf (Eds.), *Primary prevention in psychopathology: Social competence in children* (Vol. 8, pp. 49-74). Hanover, NH: University Press of New England.

Rutter, M. (1990). Psychosocial resilience and protective mechanisms. In J. Rolf, A. S. Masten, D. Cicchetti, K. H. Nuechterlein, & S. Weintraub (Eds.), *Risk and protective factors in the development of psychopathology* (pp. 181-214). New York: Cambridge.

Rutter, M. (1993). Resilience: Some conceptual considerations. *Journal of Adolescent Health*, 14, 626-631.

Sagy, S., & Antonovsky, H. (2000). The development of the sense of coherence: A retrospective study of early life experiences in the family. *Journal of Aging and human development*, 51, 155-166.

Sameroff, A., & Chandler, M. (1975). Reproductive risk and the continuum of caretaking casualty. In F. D. Horowitz (Ed.), *Review of child development research* (Vol. 4, pp. 187-244). Chicago: University of Chicago Press.

- Sanford, M., Szatmari, P., Spinner, M., Munroe-Blum, H., Jamieson, E., Walsh, C., et al. (1995). Predicting the one-year course of adolescent major depression. *Journal of the American Academy of Child & Adolescent Psychiatry*, 34, 618-628.
- Santrock, J. W. (2000). *Adolescence* (7th ed.). University of Texas at Dallas: Brown & Benchmark
- Satake, H., Yamashita, H., & Yoshida, K. (2004). The family psychological characteristics of child with attention-deficit hyperactivity disorder with or without oppositional or conduct problems in Japan. *Child Psychiatry and Human Development*, 34, 219-235.
- Schulze, H., Hornung, W., Stricker, K., & Buchkremer, G. (1997). Expressed emotion in an 8 years follow-up. *European Psychiatry*, 12, 105-110.
- Schwartz, C., Dorer, D., Beardslee, W., Lavori, P., & Keller, M. (1990). Maternal expressed emotion and parental affective disorder: Risk for childhood depressive disorder, substance abuse, or conduct disorder. *Journal of Psychiatric Research*, 24, 231-250.
- Seifer, R., Sameroff, A., Baldwin, C., & Baldwin, A. (1992). Child and family factors that ameliorate risk between 4 and 13 years of age. *Journal of the American Academy of Child & Adolescent Psychiatry*, 31, 893-903.
- Shimahara, N. K. (1986). The cultural basis of student achievement in Japan. *Comparative Education*, 22, 19-26.
- Shimodera, S., Inoue, S., Mino, Y., & Fujita, H. (2002). Expressed emotion studies in Japan. In H. Kashima, I. R. H. Falloon, M. Mizuno, & M. Asai (Vol. Ed.), *Comprehensive treatment of schizophrenia: Vol. 8. Linking neurobehavioral findings to psychosocial approaches* (8th ed., pp. 94-99). Tokyo: Springer.
- Shrout, P.E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, 7, 422-445.
- Shwalb, D., Shwalb, B., & Shoji, J. (1996). Japanese mothers' ideas about infants and temperament. In S. Harkness & C. M. Super (Eds.), *Parents' Cultural Belief Systems: Their Origins, Expressions, and Consequences*. New York: Guilford Press.
- Smith-Slep, A., & O'Leary, S. (1998). The effects of maternal attributions on parenting: An experimental analysis. *Journal of Family Psychology*, 12, 234-243.
- Snyder, J. J. (1995). Coercion: A two-level theory of antisocial behavior. In W. T. O'Donohue & L. Krasner (Eds.), *Theories of behavior therapy: Exploring*

*behavior change* ( pp. 313-348). Washington, DC: American Psychological Association.

Sroufe, L. A. (1997). Psychopathology as outcome of development. *Development and Psychopathology*, 9, 251-268.

Strachan, A., Goldstein, M., & Miklowitz, D. (1986). Do relatives express expressed emotion? In M. J. Goldstein, I. Hand, & K. Hahlweg (Eds.). *Treatment of schizophrenia: Family assessment and intervention*. Heidelberg: Springer-Verlag.

Stubbe, D., Zahner, G., Goldstein, M., & Leckman, J. (1993). Diagnostic specificity of a brief measure of expressed emotion: A community study of children. *Journal of Child Psychology and Psychiatry*, 34, 139-154.

Surgeon General's Report: Mental health (n.d.). *Chapter 3: Depression and suicide in children and adolescents*. Retrieved May 5, 2009, from <http://www.surgeongeneral.gov/library/mentalhealth/chapter3/sec5.html>

Tafarode, R. W., & Swann, W. B. (1995a). Self-liking and self-competence as dimensions of global self-esteem: Initial validation of a measure. *Journal of Personality Assessment*, 65, 322-342.

Tafarode, R. W., & Swann, W. B. (1995b). Two-dimensional self-esteem: Theory and measurement. *Personality and Individual Differences*, 31, 653-673.

Takata, T. (1987). Self-depreciative tendencies in self-evaluation through social comparison. *Japanese journal of Experimental Social Psychology*, 27, 27-36.

Takata, T. (1995). The structure of self in Japanese culture: Aspects and age differences. *Japanese Journal of Psychology*, 66, 213-218.

Tanaka, S., Mino, Y., & Inoue, S. (1995). Expressed emotion and the course of schizophrenia in Japan. *British Journal of Psychiatry*, 167, 794-798.

Taniguchi, N. (2005). From poarization to pluralization: The Japanese sense of self and Bowen theory. In M. Rastogi & E. Wieling (Eds.). *Voices of color: First-person accounts of ethnic minority therapists*. Thousand Oaks, CA: Sage Publications, Inc.

Tejima, N., Kawasaki, C., Iwanaga, R., et al. (1994). The validity of Child Behavior Checklist. *Nihon Syouni Hoken Conference*, 41, 658-659.

Tejima, N., Sawada, K., Kawasaki, C., et al. (1995). The application of Child Behavior Checklist to Japanese children. *Nihon Syouni Hoken Conference*, 42, 448-449.

- Tejima, N., Sawada, K., Kawasaki, C., et al. (1996). The relationship between Child Behavior Checklist and school. *Nihon Syouni Hoken Conference*, 42, 448-449.
- Togari, T. (2005). Examination of the reliability and factor validity of 13-item five point version Sense of Coherence Scale. *Minzoku eisei*, 7, 168-182.
- Torsheim, T., Aaroe, L. E., & Wold, B. (2001). Sense of coherence and school-related stress as predictors of subjective health complaints in early adolescence: Interactive, indirect or direct relationships? *Social Science and Medicine*, 53, 603-614.
- Toth, S. L., Cicchetti, D., & Kim, J. E. (2002). Relations among children's perceptions of maternal behavior, attributional styles, and behavioral symptomatology in maltreated children. *Journal of Abnormal Child Psychology*, 30, 487-501.
- Turner, J. & Cole, D. (1994). Developmental differences in cognitive diatheses for child depression. *Journal of Abnormal Child Psychology*, 22, 1573-2835.
- Uehara, T., Yokoyama, T., Goto, M., & Ihda, S. (1996). Expressed emotion and short-term treatment outcome of outpatients with major depression. *Comprehensive Psychiatry*, 37, 299-304.
- Vaughn, C., & Leff, J. (1976). The influence of family and social factors on the course of psychiatric illness: A comparison of schizophrenic and depressed neurotic patients. *British Journal of Psychiatry*, 129, 125-137.
- Vostanis, P., Nicholls, J., & Harrington, R. (1994). Maternal expressed emotion in conduct and emotional disorders of childhood. *Journal of Child Psychology and Psychiatry*, 35, 365-376.
- Werner, E., & Smith, R. (1992). *Overcoming the odds: High risk children from birth to adulthood*. New York: Cornell University Press.
- Wolff, A., & Ratner, P. (1999). Stress, social support, and sense of coherence. *Western Journal of Nursing Research*, 21, 182-197.
- Yamazaki, Y. (1999). Solutogenesis as new perspectives on sense of coherence. *The Japanese Journal of Nursing Educaiton & Nursing Research*, 5, 825-832.
- Yoshida, S. (2001). Characteristics of Japanese families with adolescents suffering from eating disorders determined by evaluating expressed emotion. *川崎医学会誌 [Kawasaki Medical Journal]*, 27, 291-230.
- Zucker, R. A., Ellis, D. A., Fitzgerald, H. E., Bingham, C. R., & Sanford, K. P. (1996). Other evidence for at least two alcoholisms, II: Lift course variation in

antisociality and heterogeneity of alcoholic outcome. *Development and Psychopathology*, 8, 831-848.

Zembar, M., & Blume, L. (2008). *Middle childhood development: A contextual approach*. NJ: Pearson.

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