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AN INVESTIGATION OF PARENTING COMPETENCY AND
SENSE OF BELONGING IN A SAMPLE OF MOTHERS
WITH AND WITHOUT MENTAL ILLNESS

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STATEMENT

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Janet Salerno D'Arcangelo
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Trustworthy motherliness requires a trustworthy universe
Erik Erikson
1902 – 1994
Child Development Theorist
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CHAPTER I

THE RESEARCH OBJECTIVE

Introduction

In 1994, Charmaine Sweat, a woman with mental illness and a mother of two children wrote this letter to the editor of the Newsletter of the New York State Office of Mental Health.

To the editor:

I am the recipient of mental health services and I also am a woman and a mother of two children. I am writing to let all women who are recipients of mental health services know that it is a losing fight to have children within the mental health system.

When someone is labeled as mentally ill, whether or not you are showing symptoms, all maternal rights are at once taken away from you. At childbirth, your babies are snatched away from you and all emotional drives to be with your baby are denied.

There is no way to comfort yourself.

Can you imagine the excruciating pain of being misled that you are about to leave the hospital with your newborn baby, only to find that you are going home alone or being admitted to a psychiatric facility? The only way you can leave the hospital is with a family member. God forbid you and your family don’t get along, like me and mine.

Once my children were placed in foster care, they never came back. I never had an advocate in negotiating the child care system. I completely lost my daughter and only have access to my son because I agreed to an open adoption where I could visit him. To me, it was wiser to negotiate than to keep fighting and lose all access to my son.

I would like my peers to think twice before they consider having children while they are engaged in the mental health system. If I can put someone through a little less pain by warning them, it will ease mine.

Charmaine’s letter is a poignant example of one mother’s experience.

When a woman with mental illness chooses motherhood as a life role, she
encounters extraordinary challenges of both parenting and living with a disabling illness.

Women with mental illness are sexually active, express desires to have children, and have similar rates of fertility as women without mental illness (Apfel & Handel, 1993; Coverdale & Aruffo, 1989; Pancheri, Romito, Marconi, & Valigi, 1990, The Well Being Project, 1989). Research finds that mothers with mental illness are concerned about being good parents (Mowbray, Oyserman & Ross, 1995), speak of their children frequently when hospitalized (Schwab, Clark & Drake, 1991; Wang & Goldschmidt, 1994), and participate in parent support programs when such services are available (Bagedahl-Strindlund, 1988; Mohit, 1996; Oyserman, Mowbray, & Zemencuk, 1994; Sands, 1995). They express involvement with their child, the parenting role, and the deep meaning that parenting has for them (Sands, 1995; Mowbray et al., 1995).

Mothers with mental illness express concern about their parenting skills and the skepticism held by others about their parenting competency (Ritsher, Coursey, & Farrell, 1997). Studies of mothers with differing levels of mental illness (Kumar, Marks, Platz, & Yoshida, 1995; Mowbray et al., 1995; Nicholson, Sweeney, & Geller, 1998a; Ritsher, Coursey, & Farrell, 1997; Sands, 1995; Schwab et al., 1991; Wang & Goldschmidt, 1994) provide perspectives on the normalizing influence that motherhood has on their lives. One of the themes that runs through the narratives of mothers with mental illness is the deep feeling of connection and belonging with their children. Women living in a community rehabilitation residential program for mentally ill mothers and their children
described motherhood as central to their existence and as giving focus and meaning to their lives (Sands, 1995). When asked what children meant to her, one mother said, "Near my life." Women in Sands' study speak about relationships with their children as sources of motivation to adhere to a stable lifestyle. Participants in a study conducted by Mowbray et al. (1995) described the relationships to their children as contributing to their own growth, as resources for connectedness to the social world. Nicholson, et al., (1998a) also found that children contribute to motivation for mothers to recover. In the same study, mothers revealed concerns about loss of their children because of their illness, which undermines their well being.

The literature (Fitzmaurice & Deutsch, 1990; Rich, 1986) indicates that the mothering experience is characterized not only by a relationship to a child, but involves women in a normative social role and connects women to internal motives for growth. Thus, parenting is a source of multiple relationships. The concept of "Sense of Belonging," defined by Hagerty, Lynch-Sauer, Patusky, Bouwsema and Collier (1992), most accurately describes the ongoing connection and involvement reported by mothers. Sense of Belonging is a feeling or perception that one is an integral part of a relationship with a person, object, group or environment. It encompasses two attributes: valued involvement where a person feels valued, needed, and accepted by the relational referent; and fit, where a person experiences a congruence with the relational referent or perceives that his or her characteristics articulate with, are shared by, or complement the relational referent (Hagerty et al., 1992). Sense of belonging is pertinent to
mothers with mental illness because there is a need to understand ongoing
maternal-child relatedness in the context of an illness that has significant
consequences for relationships.

A second theme in qualitative studies of mothers with mental illness is
parenting competency (Nicholson et al., 1998a; Ritsher et al., 1997). Once again,
this is a concern common to all mothers (Ament, 1990; Koniak-Griffin, 1993).
Parenting competency is a set of parental characteristics that effect favorable
outcomes for children (Herman, 1990). The set of parental characteristics does not
refer exclusively to parenting behaviors, but includes ability to make judgements
regarding the care of their children (Mrazek, Mrazek, & Klinnert, 1995), and
ability to engage in a nurturing relationship with the child (Goldstein, Freud, &

Relational factors, such as sense of belonging, are powerful influences on
parenting competency (Goldstein et al., 1973), yet relational factors are rarely
studied in mothers with mental illness. In spite of the competing demands of
maternal psychiatric disability and parenting, mothers with mental illness desire
children and aspire to appropriate levels of parenting competency (Ritsher et al.,
1997; Sands, 1995; The Well-Being Project, 1989). For example, in order to
secure adequate housing for their children, some mothers accept community
supports that they perceive as restrictive (Sands, 1995).

One client expressed her frustration when clinicians overlooked her
competence: “The system tells me I cannot be a parent and that my child would
be better off with someone else. I can function, I can get up, I can cook, clean—
you know, the whole thing. But the system says I'm not capable of raising my child because I had a nervous breakdown” (Willis, The Well Being Project, 1989, p. 63). In their work with mothers with mental illness and their children, clinicians face the daunting task of assessing the well being of both mother and child. Increased understanding of the effect of relational factors, such as sense of belonging, on the parenting competency of women with mental illness, may provide information useful to the assessment process, thus, increasing the options for intervention and treatment planning.

The Problem

Is there a relationship between sense of belonging and parenting competency in mothers with mental illness?

Definitions

Mothers With Mental Illness are female biological parents, who currently, or at any time during the past five years have had a mental, behavioral, or emotional disorder of sufficient duration to meet diagnostic criteria of the Diagnostic and Statistical Manual of Psychiatric Disorders, 4th edition (American Psychiatric Association, 1994), excluding substance abuse and/or dependence. Included are Axis I Disorders, such as mood and anxiety disorders, schizophrenia and other psychotic disorders; and Axis II (Personality) Disorders, such as borderline, paranoid, schizoid, antisocial, histrionic, and narcissistic.
Other defining attributes of mental illness are current treatment or treatment in the past five years, by psychotherapy, case management, medication use and/or hospitalization. Researchers use these criteria for identification of mentally ill persons and also for measuring illness severity and chronicity. (McGlynn, 1992; Rogosh, Mowbray, & Bogat, 1992; Center for Mental Health Services, 1993).

In this study, participants were defined as:

1. Mothers with mental illness, MI, determined by:
   a. presence of a diagnosis of a mental illness and currently maintained on medication, or
   b. treatment in psychotherapy for a mental illness within the past five years, or
   c. hospitalization once or more for the illness in the past five years, or
   d. Enrolled in a program of psychiatric case management in the past five years (Center for Mental Health Services, 1993) and

2. Mothers without mental illness, NMI, that is, never diagnosed with a mental illness.

**Parenting Competency** is a multidimensional set of knowledge, skills, and abilities with regard to the rearing of a child. Child rearing, or parenting, involves taking responsibility for a child, for his/her survival, physical and mental growth, and eventual adaptation to community standards (Goldstein et al., 1973).
Parenting competency is a mother's own report of her agreement or disagreement on a number of matters that are of interest and concern to mothers, such as emotional responses (Nicholson & Blanch, 1994; Sands, 1995); child growth and development (Goldstein et al., 1973); discipline (Mowbray et al., 1995); and satisfaction with mothering (Mercer, Nichols, & Doyle, 1986). The extent to which a mother's report is consistent with standards of parenting competency reported in the literature is an indication of her parenting competency. Since no one instrument examines all the dimensions of parenting competency, four dimensions of parenting competency were evaluated: warmth, encouragement of independence, strictness, and degree of burden or aggravation with parenting.

Parenting competency was operationally defined by The Parental Attitudes Toward Childrearing Scale (PACR) (Easterbrooks & Goldberg, 1984).

Sense of Belonging is "the experience of personal involvement in a system or environment so that persons feel themselves to be an integral part of that system or environment" (Hagerty et al., 1992, p. 173).

Sense of Belonging was operationally defined by the Sense of Belonging Instrument (SOBI) (Hagerty & Patusky, 1995).

**Delimitations**

A study participant met the following criteria:

1. Was biological mother of a minor child,
2. Was the caretaker or regularly had contact with her minor child by visits, telephone contacts, letters or email at least twice a month,
3. Had no history of substance abuse within the past 5 years,
4. Was not mentally retarded,
5. Had no or severe medical illness that impairs cognitive functioning, since these co-occurring mental disorders would confound results.

Theoretical Rationale

This study was based on the Theory of Relatedness postulated by Hagerty, Lynch-Sauer, Patusky, and Bouwsema (1993). Sense of belonging, a concept of the theory of relatedness, “is personal involvement in a system or environment so that a person feels himself or herself to be an integral part of that system or environment” (p.294).

Humans are social beings; relatedness and sense of belonging are fundamental needs of people (Maslow, 1943), and are key concepts in nursing (Peplau, 1952). The defining characteristics of relatedness are involvement and comfort (Hagerty et al., 1993). Relatedness is defined as an individual’s level of involvement with self, others, objects, or natural and cultural environments, and feelings of comfort associated with that involvement. One of the features of Hagerty et al.’s (1993) theory of relatedness is its perspective that people experience relatedness to other people, to places, and to things. For example, a mother with mental illness may experience relatedness simultaneously in
reference to her child, herself, her social system, home, and other factors in her life.

Hagerty et al. (1993) posit that relatedness can be experienced as providing comfort, as well as being anxiety-producing. Sense of belonging is a simultaneous behavioral and affective experience. Since the affective experience of parenting has not been examined in mothers with mental illnesses (Mowbray et al., 1995; Nicholson et al., 1998a), the nature of relatedness in the parenting competency of mothers with mental illness is not completely understood. Such factors as the extent of comfort, anxiety about parenting and the ability to accommodate psychiatric symptoms while maintaining relatedness to a child are unknown.

Using the two defining characteristics of involvement and comfort, the theory of relatedness posits four states of relatedness: enmeshment, disconnectedness, connectedness, and parallelism, as illustrated in Figure 1A on page 11.

Hagerty et al. (1993) indicates that all four states of relatedness have the following characteristics:

1. Each state is experienced in relation to specific referents, i.e. people, environments or objects. For example, a person may feel involved and comforted by a spouse, pet, or favorite location.

2. Persons may experience varying states of relatedness with respect to several referents at any one time; i.e. a person may feel a state of parallelism with respect to his or her spouse, but connectedness to his or her garden.
3. Relatedness is a dynamic state, changing and moving through all the states over time with regard to the relational referents in a person's life.

Sense of Belonging emerges at the next level of Hagerty et al.'s (1993) theory of relatedness. Four processes were identified as contributing to, influencing, or determining a person's state of relatedness, as illustrated in Figure 1B on page 12. The processes were termed "social competencies" and specified as Reciprocity, Mutuality, Synchrony, and Sense of Belonging. Possession or lack of a certain social competency or combination of social competencies, is associated with experiencing a particular state of relatedness. For example, in the state of connectedness, high sense of belonging is linked through the literature, with high connectedness (Hagerty et al., 1993).

Exploration of a sense of belonging has the potential for revealing important data about the relatedness experience of mothers with mental illness and the potential effects of this experience for parenting competency. Hagerty et al., (1992) analyzed sense of belonging, consistent with methods posed by Madden (1990), and Walker and Avant (1988). Sense of belonging encompasses two attributes: valued involvement, where a person feels valued, needed and accepted by the relational referent; and fit, where a person experiences a congruence with the relational referent or perceives that his or her characteristics articulate with, are shared by, or complement the relational referent (Hagerty et al., 1992). The model for sense of belonging is illustrated in Figure 1C on page 13.
FIGURE 1A

THE FOUR STATES OF RELATEDNESS

IN Volvement WITH
PERSON, GROUP, OBJECT, ENVIRONMENT

**Enmeshment**
a person has a high level of involvement with a person, group, place or thing, and experiences anxiety and

**Connectedness**
one is actively involved with a person, object, group or environment and there is a feeling of comfort and well-being discomfort in this relationship

**Discomfort & LACK OF WELL-BEING**

**Disconnectedness**
a person feels distant from a relational referent and the lack of involvement is comfortable

**Parallelism**
a person has lack of involvement with a relational referent which is experienced as anxiety producing

COMFORT & SENSE OF WELL-BEING

LACK OF INVOLVEMENT WITH
PERSON, GROUP, OBJECT, ENVIRONMENT


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FIGURE 1B

PROCESSES INFLUENCING STATES OF RELATEDNESS

Reciprocity  Mutuality  Synchrony  Sense of Belonging

IN VolVEMENT WITf
PERSON, GROUP, OBJECT, ENVIRONMENT

ENMESHMENT  CONNECTEDNESS

DISCOMFORT & LACK OF WELL-BEING

COMFORT & SENSE OF WELL-BEING

DISCONNECTEDNESS  PARALLELISM

LACK OF INVOLVEMENT WITH PERSON, GROUP, OBJECT, ENVIRONMENT

Reciprocity
Perception of an equitable, alternating interchange with a relational referent that is accompanied by a sense of complementarity

Mutuality
Experience of real or symbolic shared commonalities of visions, goals and sentiments including shared acceptance of that validate the person’s world view

Synchrony
Experience of congruence between his or her own physiological psychological or spiritual rhythms and the relational referent; shared movement through space and time

Sense of Belonging
Feeling that one is an integral part of a relationship with a person, object, group or environment

Figure 1B: States of Relatedness and Processes involved in contributing to, or influencing or determining a person’s state of relatedness.
FIGURE 1C

SENSE OF BELONGING MODEL

Antecedents → Sense of Belonging → Consequences

Antecedents
1. Energy for involvement
2. Desire for meaningful involvement
3. Potential for shared or complementary characteristics

Attributes of Sense of Belonging
1. Valued Involvement
   Person feels needed, valued, accepted by the relational referent
2. Fit
   Person experiences a Congruence with the Relational referent

1. Involvement
2. Attribution of meaningfulness
3. Foundation for emotional and behavioral responses

Sense of belonging occurs in response to various relational referents. This notion has relevance to mothers with mental illness who may have experiences of relatedness that are not understood. For example, a mother who feels disconnected from the neighborhood where she lives might feel strongly connected to her role as a mother and may experience a high sense of belonging in spite of disconnection in other relationships.

While there are no direct linkages made in the literature between sense of belonging and parenting competency, mothers with mental illness demonstrate qualities or antecedents and attributes of sense of belonging that are related to parenting competency behaviors, such as desiring involvement, feeling motivated by their role as parents, valuing the parental role, and closeness, or fit, with their children (Apfel et al., 1993; Mohit, 1996; Mowbray et al., 1995; Nicholson et al., 1998a; Ritscher et al., 1997; Sands, 1995; Schwab et al., 1991; Wang et al., 1994).

Consistent with some components of Hagerty et al.'s (1993) concept of sense of belonging, sense of belonging can be assumed to be a foundation for emotional and behavioral responses of parenting competency as represented in Figure 1D on page 15.

There is no empirical data about the extent or lack of sense of belonging among mothers with mental illness. Since sense of belonging and parenting competency among mothers with mental illness has not yet been investigated, the proposed study sought to examine these relationships.
FIGURE 1D

THEORETICAL FRAMEWORK OF THE STUDY: SENSE OF BELONGING, IN CONTEXT, & RELATIVE TO PARENTING COMPETENCY

Reciprocity

Mutuality

Synchrony

Sense of Belonging

INVOLVEMENT WITH
PERSON, GROUP, OBJECT, ENVIRONMENT

HI SOB = Hi Connectedness (Hagerty et al. 1992)

ENMESHMENT

CONNECTEDNESS

DISCOMFORT

& LACK OF WELL-BEING

DISCONNECTEDNESS

PARALLELISM

COMFORT

& SENSE OF WELL-BEING

LACK OF INVOLVEMENT WITH
PERSON, GROUP, OBJECT, ENVIRONMENT

Reciprocity

Mutuality

Synchrony

Sense of Belonging

Antecedents

Attributes of SOB

Consequences

1. Energy for involvement
2. Desire for meaningful involvement
3. Potential for shared or complementary characteristics

1. Valued involvement—feel valued, needed, accepted
2. Fit—congruence w/ relational referent

1. Involvement
2. Meaning
3. Foundations for emot. & behavioral responses

PARENTING COMPETENCY

1. Parenting Competency in relation to the child
2. Parenting Competency in relation to the environment
3. Parenting Competency in relation to the self
Research Questions

1. What is the parenting competency of mothers with and without mental illness?
2. What is sense of belonging of mothers with and without mental illness?
3. Is there a relationship between parenting competency and sense of belonging in mothers with mental illness based on the total sample and the subsamples of mothers with mental illness (MI) and mothers without mental illness (NMI)?
4. Does the degree of Sense of Belonging influence the relationship between presence of mental illness and parenting competency?

Significance of the Study

The limited data about mothers with mental illness suggest that many are of low socioeconomic status, poorly educated, and have few social supports. (Zemencuk, Rogosch, & Mowbray, 1995). Approximately 70% of mothers with severe mental illness are unmarried, gave birth to a child at an early age, have a rate of unplanned pregnancy of about 61%, and have a greater number of children than average, as many as 6 (Zemencuk et al., 1995). Approximately 25% of intensively case managed female clients with children have custody of their children and more than 80% of mothers reported raising or helping to raise at least one of their children, or are in contact with at least one child (Ritsher et al., 1997).

Of mothers with mental illness who are caretakers, 52% have mood disorders, 38% have psychotic disorders, and in 10% diagnoses are evenly
divided between personality and anxiety disorders (White, Nicholson, Fisher, & Geller, 1995), sometimes requiring multiple hospitalizations (Zemencuk et al., 1995). The rate of loss of custody for mothers with mental illness is high (Coverdale et al., 1989; Apfel, et al., 1993; Mowbray, Oyserman, Zemencuk, & Ross 1995).

In one study, twenty nine percent of mothers with mental illness indicated that their illness made it more difficult to be a good parent (Ritscher et al., 1997), and 25% specified that disciplining their children was the hardest thing about being a parent. Data from the New York State Task Force of Mothers with Serious Mental Illness suggest that 21%, or 41,000 children receiving preventive services to keep them out of foster care have a parent with a mental illness; 16% of the 63,000 children in foster care have a parent with a mental illness; and of all seriously emotionally disturbed children receiving intensive case management services, 50% have a mentally ill parent (OMH News, 1994).

The cost of mental health services for a mother with mental illness and her children can be enormous and spans several service sectors involved in the care and protection of the children (Nicholson, Geller, & Fisher, 1996). The use of indirect and collateral resources is difficult to estimate. And, “It is impossible to attach a cost to the disruption of the parent child relationship or a value to the benefit of maintaining that relationship for the parent, child or society” (Nicholson et al., 1996, p. 499).

There is little accurate demographic information about parenting patterns of women with mental illness. Only sixteen states routinely collect data on
whether female psychiatric patients have young children (Nicholson, Geller, Fisher, & Dion, 1993). Thus, there is a need for systematic data collection and identification of the issues in parenting among women with mental illness.

Nicholson et al. (1993) suggest that one of the reasons for lack of interest in the study of women with mental illness is the attitudes of professionals about the capacity for social roles, competency, and potential for growth of women with mental illness, an issue which continues to surface in the literature (Deegan, 1993; Holstein & Harding, 1992; Nicholson & Blanch, 1994). Mowbray et al. (1995) conclude that findings are sparse to support an understanding of mothers with mental illness and the "importance they place on parenting in their conceptualization of who they are and what is possible for them"(Mowbray et al., 1995, p.189). There has been little investigation of the experience of the mother with mental illness in relation to her child, and specifically as it relates to the parenting competency of mothers with varying levels of mental illness.

The majority of studies among mothers with mental illness have been conducted on populations of women in treatment, providing little data to balance more "adjusted" parenting approaches. Results of such studies warrant further consideration of possible correlates among mothers with differing levels of mental illness.

The themes of relatedness and belonging with their children are characteristic of self-reports of mothers in general (Fitzmaurice, et al. 1990; Kaplan, Klein, & Gleason, 1991). These themes represent similarities that exist among women, with or without a mental illness. No study has examined the sense
of belonging and its relationship to parenting competency. If emotional themes common to mothers with and without mental illness could be identified, such recognition would support the current rehabilitative perspective on psychiatric care by identifying women’s strengths and protective factors, not just pathology (Nicholson et al., 1998a; Weise, Blehar, Maser, & Akiskal, 1996). Furthermore, data about a mother’s sense of belonging can inform nursing assessments and interventions to improve outcomes for the mother-child dyad.
CHAPTER II
RELATED LITERATURE

Parenting Competency

Parenting competency encompasses intrapersonal, interpersonal and environmental competencies. Intrinsic to the general notion of parenting is the performance of a set of motor, cognitive, and affective operations in order to achieve the outcomes of safety and growth for a child (Herman, 1990). There is an enormous range of acceptable performance of parenting skills. Herman (1990) emphasizes that when performing competency evaluations, “the expert must be concerned with evaluating parenting and not psychiatric illness” (p.969). For example, a psychiatric symptom of depression may be impoverished speech; an example of a parenting competency would be verbal responsiveness to a child. Distinctions must also be made regarding circumstances, such as poverty and stress, that impinge on parenting, but are not indicators of parenting competence (Mowbray et al., 2000).

The legal standard for parenting competency is satisfied by a parent’s ability to maintain a child’s physical well-being, the ability to obtain and prepare food, provide clothing, shelter, and a stable, safe, environment (Morrone, 1994). As both physical and psychological well beings are equally important (Goldstein et al., 1973), courts also take into account the necessity for safeguarding a child’s psychological well being, especially the need for a continuous relationship.
Parenting competency has been studied from various perspectives. Studies identify children of mothers with psychiatric illness as being “at risk” for psychopathology and other problems (Weissman, Warner, Wickramarante, Moreau, & Olfson, 1997). Parenting competencies needed for “at risk” children include ability to handle various difficulties that arise, and to make judgements regarding the care of children in order to control the development of either emotional or medical difficulties (Mrazek, Mrazek, & Klinnert, 1995).

Jacobsen, Miller, and Kirkwood (1997), in studying parents with mental illness, conceptualized parenting competency as an array of risk factors and protective factors with regard to potential abuse or neglect of a child. They considered severity of risk factors in parents and potential for change as important qualifying processes in parenting competency. Nicholson and Blanch (1994) and Mohit (1996) examined dimensions of parenting competency with particular reference to mothers with mental illness. They point out a mother’s responsibility to integrate management of her own illness into her role as parent. Examples of this dimension of competency would be planning for periods of symptom exacerbation or making choices to limit responsibilities, and accessing supportive resources.

In summary, various theoretical understandings of parenting competency include the following knowledge, skills and abilities in three categories:

1. Parenting Competency in relation to the child, involving caregiving skills (Goldstein, et al., 1973; Nicholson, et al., 1994); a knowledge base of child development (Goldstein et al., 1973; Jacobsen, Miller, & Kirkwood, 1997;
Mrazek, et al., 1995; emotional availability (Mrazek et al., 1995; Nicholson, et al., 1994); and responsiveness to cues and appropriateness of interactions (Jacobsen et al., 1997; Nicholson et al., 1994),

2. Parenting Competency in relation to the environment, specifically instrumental living skills (Morrone, 1994); ability to access supports and arrange for assistance (Jacobsen et al., 1997; Nicholson, et al., 1994), and

3. Parenting Competency in relation to the parent (self) demonstrated by commitment of time and energy (Mrazek et al., 1995); judgement and ability for decision-making (Mrazek et al., 1995; Nicholson et al., 1994); and management of own psychiatric illness (Mohit, 1996; Nicholson et al., 1994).

Although parenting competency is understood as a set of behaviors performed by the parent, there is empirical evidence that contextual issues such as infant temperament (Blank, Schroeder, & Flynn, 1995), chronic stress, and poverty (Gordon, et al., 1989) exert an influence on parenting competency.

Behavioral responses that comprise parenting competency, in general, derive from mutual interactions among the mother’s own internal state of being, the child’s characteristics, and the environment. Hagerty et al. (1992) posit that sense of belonging is a concept applicable to intrapersonal, interpersonal and environmental relationships, since relatedness can occur in all of these dimensions of a person’s life. Thus, sense of belonging has the potential to modify a person’s behavior in intrapersonal, interpersonal or environmental relationships. Since parenting competency involves behaviors directly related to the child, the mother and the environment, it is consistent with Hagerty et al’s. (1992) theory to
consider that sense of belonging has the potential to influence parenting behaviors in all of these dimensions.

**Parenting Competency among Mothers with Mental Illness**

Zuravin (1989) examined the relationship between maternal depression and mother-to-child aggression. This study tested the hypothesis that depressed mothers have similar behaviors to child-abusing mothers and found that there was a history of maternal depression in children who were abused. One of the objectives of the study was to determine whether severity of depressive symptoms influences the relationship between depression and any of three types of aggressive behavior: verbal/symbolic aggression; physical aggression limited to behavior that is not very likely to result in physical injury to the child; and child abuse, defined as non-accidental injury to a child.

The sample consisted of 424 single mothers from an urban population, all having at least one natural child under 12 years of age. Aggression was measured using the Conflict Tactics Scale, which was composed of indices that differentiate the three types of aggression: The Child Abuse Index (CAI), The Physical Aggression Index (PAI), and the Verbal/Symbolic Index (VSI). Respondents’ scores were categorized as not aggressive, low aggressive, or high aggressive.

Severity of depression was measured in two ways: 1) the Beck Depression Inventory (BDI), a 21 category self-report measure, by which respondents were categorized as: not depressed, moderately depressed, or severely depressed, and
2) 5 items from the Diagnostic Interview Schedule, which included each respondent's history of depression. Each instrument had reported reliability and validity.

Consistent with the objective of the study, the researcher analyzed the main effects between severity of depression and aggression. Results suggest that severity of depression influences the relationship between depression and each of the three types of aggression. Mothers with moderate depression were found to be at greater risk for the three types of mother to child aggression: severe child abuse (chi square = 7.89, p < 0.05,) were 1.5 times at greater risk as compared to non-depressed mothers, physical aggression (chi square = 6.34, p < 0.05, logit .341 p < .05,) 1.41 times greater risk as compared to non-depressed mothers; and Verbal/ Symbolic Aggression (chi square = 8.13, p < 0.05,) 1.5 times at greater risk as compared to non-depressed mothers. Severely depressed mothers also are at increased risk of a high frequency of verbal/ symbolic aggression (chi square = 12.32, p < .01), 1.69 times as likely to exhibit the behavior as compared to non-depressed mothers. Results are independent of education and race.

In terms of parenting competency, the results of Zuravin's study can be understood as congruent with the position of Jacobsen, et al., (1997), who in studying parents with mental illness, conceptualized parenting competency as a combination of risk factors and protective factors with regard to potential abuse or neglect of a child. They considered severity of risk factors in parents and potential for change as important qualifying processes in parenting competency. Severity of
intensity of depression was demonstrated by Zuravin to increase the risk of abuse of children by mothers with mental illness.

Grunebaum and Gammeltoft (1993) used a qualitative approach to study interventions by agencies working with children whose mothers were schizophrenic. The sample of 11 mother/child pairs was obtained from admissions to a residential facility for children. All 11 children had mothers with schizophrenia who experienced psychotic breakdowns after giving birth and had a hospital admission within 12 months after childbirth. Clinical narratives of the cases described the behaviors of the mothers with schizophrenia who were identified as presenting direct risk to children. Although the authors neither quantified nor synthesized the descriptions into thematic categories, the following characterizations of parenting were reported from the clinical records of subjects in this study: 1) lack of care of the child to the extent that the children were admitted to the hospital with dehydration and malnourishment; 2) inability to maintain housing, due to non-payment of rent; refusing to accept legal child financial benefits; 3) leaving the child in the care of an incompetent caregiver; 4) breaking health appointments; 5) inability to leave the child at day care; 6) refusal of medications; and 7) exhibition of bizarre irrational psychotic symptoms, such as speaking incomprehensibly, laughing without reason, and organizing activities around delusions that others are in a conspiracy against her or that others carry fatal illnesses.

Problems with parental competency, in terms of appropriate responsiveness to children, have been reported in mothers with post partum depression (Beck,
mothers with anxiety disorders (Beidel & Turner, 1997), and mothers with panic disorder, agoraphobia and co-morbid major depression (Beiderman et al., 1991). Emotional unavailability of mothers with mental illness as measured by observations of mothers’ engagement with their children during verbal interactions, was identified by Hammen, Burgee, and Adrian (1991), and Biringen and Robinson (1991).

One of the indicators of competency in managing her own psychiatric illness is a mother’s willingness to cooperate with a regimen of medications prescribed for her symptoms (Nicholson, et al., 1994). Paradoxically, the side effects associated with psychotropic medications may interfere with the skills needed for competent child care, given the common side effects of sedation or nervousness, blurry vision, and alterations in motor coordination (Gorman, 1990). There have been no studies examining the relationship of a mother’s own management of her illness and parenting competency. When under the influence of medication, an indicator of parenting competency would be that the mother uses appropriate judgement about her ability to maintain safety for her children. For example, she would refrain from driving and ask for assistance with this task, much as a blind mother would. It is in situations such as this that the availability of community supports is a key element in controlling risk for both mother and child. Mohit (1996) described a psychiatric case management program in an urban hospital that provided such supports as home visits, individualized education plans for mothers, medication management and integrated services with schools
for follow up of children’s’ progress. At this time, there are no outcome studies of these types of interventions.

**Retrospective Review of Parenting Competency of Mothers with Mental Illness from the Affected Child’s Perspective**

Parenting competency from the adult child’s point of view was reported in a retrospective qualitative study by Dunn (1993). The sample \( n = 18 \) was self-selected, solicited from classified ads, and was comprised of nine Caucasian adults, four men and five women, ranging in age from 21 to 41, and reared by psychotic mothers. A three part semi-structured interview was used to elicit family history, childhood relationships with their mothers, and current relationships with their mothers. From verbatim transcriptions, content analysis revealed five parenting themes: 1) abuse and neglect; 2) isolation; 3) guilt and loyalty; 4) grievances with mental health services; and 5) supports. Excerpts from the interviews described numerous impaired parenting competency behaviors: “I didn’t have clothes. I didn’t understand what bathing was;” “In the fourth grade we used to drink beer before school;” “We got evicted from our apartment because she would scream all night;” “She wouldn’t let us go to school. She used to lock us in our rooms because she was so scared people were gonna get us;” “I was abused with regularity;” (Dunn, 1993, p.180 - 181).

Dunn also reported that, “although all the participants clearly articulated pain-filled relationships with their psychotic mother, five recalled a special, if inconsistent, loving relationship with her,” (Dunn, 1993, p.184). This was
illustrated by the statements: "She was extremely indulgent in some ways, and
even though we were poor there was a way in which I was treated to think highly
of myself. What I learned to do was to connect real strongly with people. I learned
some of that from my mom who -- when she’s not crazy -- is a very connected
person. What I learned from her did me well" (Dunn, 1993, p.184).

The small size of Dunn’s sample limits the generalizability of its findings,
and the self-selected sample suggests that the participants may differ from non-
respondents. Similar experiences of being raised by a mother with mental illness
were reported in a first person account by Crosby (1989) who wrote, “I grew up
and matured in an environment where there was little or no nurturing due to the
disease process of paranoid schizophrenia”; “it is only recently, after
approximately 2 years of psychotherapy for myself, that I have come to realize
how very much I loved my mother while I was growing up and how much I still
really do” (Crosby (1989, p.507). Lyden (1997), in her memoir, recalls one of her
mother’s suicide attempts. “I frantically called the paramedics, who came and
took her away and pumped her stomach. I longed, for the thousandth time, to
recreate life as something other than this daughter and this mother” (p.38).

**Parenting Competency from the Perspectives of Mothers with Mental Illness**

Nicholson, et al., (1998a) conducted a qualitative study of severely
mentally ill mothers being cased managed in the community. Forty-two
participants, ages 19 to 59, living with or in custody proceedings with a biological
child under the age of 13, were recruited from psychosocial rehabilitation clubs or the Department of Mental Health.

Six focus groups of 6 to 14 participants met for one audiotaped session to discuss the problems facing mothers with mental illness, and to solicit recommendations from the women. Data analysis revealed the following themes: stigma of having a mental illness, day to day parenting, managing mental illness, and custody of or contact with the children.

The women stated that they believed that the pervasive stigma of mental illness gave rise to people assuming mothers’ incompetence in parenting, and of mothers’ abuse or neglect of their children. Their major problems with day to day parenting were characterized by a “role strain” (Nicholson et al., 1998a, p. 239) between parenting and managing their mental illnesses; for example, managing the challenging behaviors of children when experiencing symptoms of illness. Mothers reported that guilt accompanied the “role strain” since the mothers realized that their time was compromised by the dual responsibilities of parenting and managing their illnesses. Mothers also acknowledged that parenting can serve as a stressor or be a source of motivation. In managing their own illnesses, mothers were concerned about compromising their own long-term well-being for short-term needs of their children. For example, mothers are reluctant to accept hospitalization due to fear of losing their children while hospitalized. Mothers reported an omnipresent fear of losing contact, communication, and parental rights. The mothers reported that the child custody problems interfered with their concentrating on therapy and contributed to relapse. The study described the dual
demands of parenting and managing a mental illness as competing with each other and contributing to conflicts and anxiety on the part of the mother. Focus groups of case managers (n = 55) and key informants (n = 40) revealed that mothers faced problems of stigma, stress from symptoms, and worry that the children will get sick too. These additional findings expanded Nicholson’s data from the mothers themselves.

Sands (1995) found that mothers with mental illness were less self-disclosing about problems with parenting than about meaning of motherhood as central to their existence. Sands studied 10 single, low-income mothers with serious mental illness (MI mothers = mothers with serious mental illness) living in a supervised apartment. Five had children living with them; 5 had children in foster care. The five children living in the supervised apartment with their mothers were in a day care center, while the five mothers were mandated to volunteer to work at the day care center as part of their housing agreement and treatment plan. Other mothers with children in the day care center were selected as a control group (DCM = day care mothers, n = 8). Data collection was through participant observation, informal conversations with staff of supervised apartments and day care center, and semi-structured interviews with each of the 18 mothers on 12 topics about parenting experiences. Interviews were compared to staff interviews and field notes. Additionally, clinical records of the MI mothers were reviewed. Results fell into three categories: mental illness and parenting (MI mothers only), struggles with parenting (both groups), and motherhood as a central life experience (both groups). MI mothers vaguely
described the competing demands of mental illness and parenting. The term mental illness was avoided; symptoms were described in general terms such as nervousness.

The MI mothers criticized the residential program for its demands for conformity to program time schedules and rules, restrictions about such things as forbidding male visitors, and the imposition of tasks such as requiring volunteering. However, 7 MI mothers stated that they agreed to the program because maintaining stable housing was important to them. Detailed statements from the DCM group expressed ambivalence about being a mother, admitted to feeling stressed, reported problems with economic survival and child management, experienced irritability in relationship with their children, had difficulties disciplining children and juggling responsibilities. The MI mothers expressed anger and mistrust of mental health and child welfare systems, lived under the threat of scrutiny for their parenting and a threat of loss of their children. Some talked about the trauma of past experiences of loss. Sands' interpretation of the responses of the MI mothers was that these mothers were either unaware of or unable to articulate their needs for assistance in parenting. The two groups of mothers demonstrated commonality in the area of meaning of mothering and significance of having a child. Both groups of mothers felt that motherhood was central to their existence, and gave meaning and focus to life. Safety was a concern for all mothers. For MI mothers, the desire for a “normal” life for self and child was important.
Along with evidence of problems with parenting competency submitted in this review, studies focusing on the perspectives of the mothers themselves offer evidence that mothers with mental illness value parenting as a life role. They demonstrate the parenting competency of commitment of time and energy to parenting sometimes at a cost to their own desires or needs (Nicholson et al., 1998a). Mothers with mental illness express a desire to fit into the role of parent; they express connection with their children and experience personal fulfillment in the role of mother (Mowbray et al., 1995). Mothers with mental illness consider these connections as advantages and they say that although the responsibilities of parenting are great, the advantages are a source of motivation and pride (Sands, 1995).

Relationships are central to the mental health of women (Miller, 1986). In parenting a child, a woman realizes a relationship to a child, a connection with a valued social role and an involvement with her own potentials. These connections form the basis of a sense of belonging that may have relevance to attaining the behaviors that determine her parenting competency.

**Sense of Belonging**

The literature indicates that sense of belonging is one of a group of concepts of relatedness that are applicable to human experience (Anant, 1966; Hagerty et al., 1992, 1993; Maslow, 1943). Dasberg (1973) described loneliness as the opposite of belonging.
Maslow (1943) identified the importance of sense of belonging in the theory of human motivation. Love and belongingness were ranked third in the hierarchy of human needs, preceded only by safety and physiological needs. Anant (1966) examined the need to belong, differentiating it from related concepts such as affiliation and identification. Hagerty, et al., (1992) further explored sense of belonging. Sense of belonging was embedded in a theory of relatedness constructed around the two axes of connectedness and comfort, and included relational referents as objects and environments, as well as individuals and groups. The distinguishing feature of Hagerty et al.'s. (1992) perspective is its inclusive view of a person's possibilities for relatedness.

Hagerty et al. (1992) analyzed the concept of sense of belonging according to methods posed by Madden (1990) and Walker et al. (1988) and included reviews of the literature, fieldwork, and analysis. Sense of belonging was examined from physical, psychological, spiritual and sociological perspectives. Sense of belonging is "the experience of personal involvement in a system or environment so that persons feel themselves to be an integral part of that system or environment" (Hagerty et al., 1992, p. 173). Sense of belonging encompasses two attributes: valued involvement, where a person feels valued, needed and accepted by the relational referent, and fit, where a person experiences a congruence with the relational referent or perceives that his or her characteristics articulate with, are shared by or complement the relational referent. Sense of belonging can be experienced physically, as in nominal group membership or by possession; sociologically, as in various societal groups; spiritually, as in a
metaphysical relationship with a being or place; or psychologically, which involves an evaluative perception of one’s importance to another referent (valued involvement) and experiencing a fit between self and referent.

**Sense of Belonging and Parenting Competency**

No studies link the concepts “sense of belonging” and “parenting competency” directly. The proposed study seeks findings to contribute to the absence of such data in the literature.

Anant (1966) hypothesized a relationship among a sense of belongingness, self-sufficiency and anxiety. Self-sufficiency was defined as “responsibility, initiative and independence” (p. 389), measured by Bernreuter’s Self-Sufficiency Scale (p. 388). Anant’s (1966) study tested the hypothesis that either belongingness or self-sufficiency reduces anxiety. The relationships among the three variables were examined in a sample of 47 nursing students, 33 females and 14 males, with a mean age of 18.9. Anant found inverse relationships between belongingness and anxiety ($r = -.41$, $p = .01$) and between self-sufficiency and anxiety ($r = -.28$, $p = .05$). That is, the higher the sense of belonging, the lower one’s anxiety. And, higher self-sufficiency indicates lower anxiety. Ancillary analysis indicated that the relationship between belongingness and self-sufficiency was not significant although the result was in a positive direction. This is the first indication in the literature that sense of belonging might be linked to qualities of competency.
In a qualitative study of soldiers who experienced mental breakdown in battle, it was found that soldiers felt deep and utter solitude and loneliness. Soldiers felt rejected and rootless, that all threads connecting them with other persons were severed and life became meaningless. According to Dasberg (1973) soldiers who had breakdown in battle have one thing in common, an early obstruction in the development of a sense of belonging in the military group. This study indicates the devastating consequences caused by a weakness in the relationship between the soldier and his environment, suggesting that sense of belonging may influence competency for combat. Soldiers who experienced mental breakdown were not competent to perform the work of combat (Dasberg, 1973).

Miller's (1986) theoretical orientation to the psychology of women, Self-in-Relation, or Relational theory, posits that relationships play a primary role in a woman's self-concept and self-esteem. Relational theory states that when a woman experiences mutual, validating relationships, she has more relational zest, a more complex sense of self-worth and a greater range of competencies.

In field studies of the concept of sense of belonging, Hagerty et al. (1992) reported psychiatric nurses' observations of patients' feelings of isolation, disenfranchisement and alienation in such terms as "I don't fit in anywhere...I feel so unimportant to anyone...I'm not a part of anything" (p. 172). Psychiatric nurses also reported connectedness behaviors of psychiatric clients that are not well understood. "For example, a psychotic, hallucinating client who could not interact with people suddenly attended to and cared for a pet" (Hagerty et al.,
1993). Thus, individuals with varying levels of mental illness appear to respond to their experiences of connectedness in their daily functioning. It is not known whether feelings of connectedness in mothers with mental illness relate to functioning as parents.

Hagerty, et al. (1992) concluded that a consequence of sense of belonging is “the foundation for emotional and behavioral responses,” which can be interpreted, for the proposed study, as referring to a potential for competency.

Nicholson, et al.’s. (1998b) study about family relationships within the context of parenting provides some insight regarding the feelings of valued involvement and fit as perceived by mothers with mental illness. In a qualitative study of 42 mothers with mental illness in 6 focus groups, corroborated by 2 focus groups of case managers, mothers with mental illness indicated that spouses and other family members sometimes undermine maternal parenting.

Well-meaning family members may overfunction in an effort to relieve the mother of the burdens of childcare. According to the respondents, family members inadvertently reinforce the sick role by making decisions about the children in opposition to, or without consulting the mothers. A case manager states, “It’s confusing for the child if the mom tries to set limits and the grandmother would come in and tell the child, subtly, that the mother didn’t know what she was doing and that she – the grandmother – was the better parent” (p.647). Although partners and extended family members are considered to be natural supports for the mother with mental illness, sharing of parenting, in the case of a mother’s psychiatric disability, is a complex situation that can be
stressful and conflicted. According to the researchers, outcomes for mothers, children and family can be jeopardized without careful assessment of the attitudes and behaviors of family members. "How to start? Listen to the mothers. Our research indicates they have much to tell us" (Nicholson, et al., 1998b; p.649).
CHAPTER III

METHOD

Design of the Study

This exploratory, correlational study was designed to evaluate the relationships of parenting competency, measured by the Parental Attitudes Toward Child Rearing (PACR) scale (Easterbrooks & Goldberg, 1984), and Sense Of Belonging, measured by the Sense of Belonging Instrument (SOBI) (Hagerty & Patusky, 1995) among mothers with and without mental illness.

A survey design was used because it has several advantages. A survey allows data to be gathered on a large number of people. The survey format is easy for participants to answer questions that are sensitive, such as questions about one's mental illness.

Using sense of belonging and mental illness as independent variables, the relationships between parenting competency and sense of belonging were investigated. Additionally, sense of belonging was examined as a possible intervening or interacting variable between presence of mental illness and parenting competency. The research questions were answered using multivariate analyses. Ancillary analyses of the relationships among demographic data and the study variables were conducted using Pearson product-moment correlations and one-way analyses of variance (ANOVA).
Sample

A sample of mothers who were caring for, or regularly involved with their biological children by visits, telephone conversations, letter or email at least twice a month, were recruited for the study. Mental illness was defined by presence of diagnosis, current treatment, use of medications, and level of care needed to manage the illness, as described in the “definitions” section. Due to the sensitive nature of questioning a woman about her mental illness, the survey questions were limited to recent treatment, use of medications, number of hospitalizations and self-management of illness.

A purposive, convenience sample was used to obtain 155 women, who are mothers of minor children. It was determined that a sample size of 155 mothers would have a power of at least .80, that is, have an 80% chance of uncovering a statistically significant, medium correlation of .30 between two variables. This is a basic standard in the field (Bornstein, Rothstein, & Cohen, 1997).

A sub-sample of mothers with mental illness, MI, represented a wide range of diagnoses, including depression, bipolar disorder, anxiety disorders, schizophrenia, and personality disorders. A wide variety of diagnoses were allowed because the study examined presence of mental illness generally, not particular psychiatric diagnoses. Moreover, the difficulty of obtaining the cooperation of a statistically sufficient number of mothers with specific diagnoses would have made sample selection almost impossible.

Although the use of diagnostic categories facilitates communication, study, and treatment, it may be irrelevant to legal judgments that consider
individual responsibility, disability determination, and competency (DSM-IV p. xxvii). The functional impairments of mothers diagnosed with mental illnesses and how these impairments affect the specified measure of sense of belonging and parenting competency are the issues of primary concern in The Mothers’ Study. Although common diagnoses may be broadly understood as anxiety disorders, mood disorders and thought or psychotic disorders, the designation of a particular diagnosis does not necessarily indicate level of impairment on a specific characteristic. Hagerty et al. (1992) referred to this phenomenon when reporting that nurses on inpatient psychiatric units were observed to have relationship behaviors. Nurses observed these behaviors and acknowledged that sometimes the specific relational referents such as people, places, and things, were only sometimes apparent to the observers.

Mothers with mental illnesses related to substance abuse were excluded from the study. It was felt that responses from a participant who was under the influence of alcohol or other drugs of abuse might be less reliable for the instruments being used. Furthermore dually diagnosed persons present even more complex clinical profiles Mothers with mental retardation and severe medical illnesses such as AIDS that impair cognitive functioning were not used in the study since these disorders would also confound measurement and hence, the study’s results. A question in the demographics section of the survey screened participants for medical illnesses with implications for cognitive functioning.
Data Collection

Recruitment of the sample took place at sites that serve both private and public sector clients, in order obtain a sample with subjects representing a range of socioeconomic circumstances. A variety of sites, urban and suburban, described later in this chapter were approached for participant recruitment with the objective of obtaining a culturally diverse sample of mothers, with and without mental illness.

Data collection took place over a period of one year in four phases: spring 2001, fall 2001, winter 2002 and spring 2002. Due to issues of confidentiality and safety for researching the vulnerable population of persons with mental illness, no identifying data or tracking numbers were placed on the surveys. Since the survey packets had no tracking numbers or identifying data, distribution in phases allowed the researcher to make general inferences about which sites returned the surveys and the number doing so.

The researcher’s approach to obtaining participants followed a general plan. Approximately one week after a distribution of surveys at particular sites, mail return would peak at a rate of 2-3 per day and then dwindle to 1 per week over the following two weeks. During the fourth week, follow up visits, or phone calls were made to the sites to remind the potential participants or contact persons about completing and returning the surveys. In the next several weeks, additional surveys were left at the sites and returned at the rate of 1 every two weeks. Data collection in phases also allowed to researcher keep track of the numbers of mothers without mental illness and mothers with mental illness and then to
increase the number of participants who were mothers with mental illness, by focusing on sites where these mothers were found.

During the first phase of data collection, (spring, 2001), one hundred flyers were posted in public places such as supermarkets, community bulletin boards in banks and train stations and, with permission, at various community sites, such as libraries. This method yielded a total of three participants contacting the researcher by phone, and returning the survey. In addition, during phase 1, the study was introduced at two meetings of professional nurses, and a church mothers’ group; sites where the researcher personally distributed surveys. At a local YWCA, the director of the agency was the contact person and was oriented to the study including the protocol. The staff was then trained and authorized to distribute the flyers and introduce the study to YWCA members. A box of surveys was kept in the common area for participants to take. A similar process took place at an urban shelter for homeless families. During phase 1, spring 2001, a total of one hundred surveys were distributed to participants who volunteered at one of the above sites. Some participants took more than one survey, to give to a friend or relative. In the next six weeks, the researcher received completed surveys from 28 mothers without mental illness and 5 mothers with mental illness.

During phase 2 (fall 2001), the study was introduced, including protocol, to contact persons who were home care nurses and, a nurse clinician at a suburban counseling center. A nurse administrator at a community treatment center introduced the study to the clinical staff as potential participants. Two private psychiatrists agreed to post flyers and keep a supply of surveys in the waiting
rooms. A focus group was conducted among twelve mothers in a housing relocation program in an urban area. Two hundred surveys were distributed during phase 2. At the end of fall, 2001, completed surveys from 57 mothers without mental illness and 24 mothers with mental illness had been returned by mail. At this point in data collection, the number of mothers without mental illness totaled 86, and with mental illness totaled 29. It was clear that a process targeting mothers with mental illness should be used to increase the sample size of this group of mothers.

During phase 3, (winter 2002), recruitment among the home care nurses continued, focusing on the women with psychiatric illnesses in the homecare caseload. A large urban social service agency that had mental health treatment for mothers with both acute and chronic psychiatric illness was used with caseworkers, trained in the protocol of the study, as contact persons. One hundred surveys were distributed to mothers who expressed an interest in participating in the study. The mothers mailed the surveys back to the researcher. Four mothers with serious mental illness (mental health consumers in a program of intensive case management) wished to participate in the study but needed assistance reading the questions. Contact persons at the sites reported that the three participants needed extra time to do the survey, so it was done in two sessions and then mailed back to the researcher by the contact person.

Three mental health websites were contacted about posting information on discussion boards about the study including contact information. One website accepted a posting. The posting got 45 “hits” but no follow-up inquiries. Two
websites did not take postings seeking study participants. At the end of phase 3, nineteen more participants returned completed surveys, bringing the total of mothers with mental illness to 48.

In phase 4, (spring 2002), mental health consumer advocacy organizations were contacted. The study was introduced to members of local chapters of the National Alliance of the Mentally Ill (NAMI), National Mental Health Association, and a psychosocial rehabilitation clubhouse. A poster about the study and a table with survey packets were displayed in the exhibition areas at two consumer advocacy conferences. The researcher was present to answer questions about the survey. One hundred surveys were distributed by trained contact persons or personally by the researcher in this phase. Surveys were mailed back or returned to the researcher in sealed envelopes. During phase 4, another 21 completed surveys were returned from mothers with mental illness, for a total of 69 mothers.

In all, 400 surveys were distributed and 155 were returned, giving a return rate of 35%. Of the 155 participants, 86 were mothers without mental illness (NMI) and 69 were mothers with mental illness (MI). A summary of data collection by time period reported is contained in Table 1.
Table 1

Frequencies and percentages of returned surveys by time period returned and reported mental illness 
(N=155)

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Mothers With Mental Illness (MI)</th>
<th>Mothers Without Mental Illness (NMI)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Spring 2001</td>
<td>5</td>
<td>7%</td>
</tr>
<tr>
<td>Fall 2001</td>
<td>24</td>
<td>35%</td>
</tr>
<tr>
<td>Winter 2002</td>
<td>19</td>
<td>28%</td>
</tr>
<tr>
<td>Spring 2002</td>
<td>21</td>
<td>30%</td>
</tr>
<tr>
<td>Total Returned</td>
<td>86</td>
<td>100%</td>
</tr>
</tbody>
</table>

Note: Percentages may vary from 100% because of rounding. Total number of subjects for any characteristic may be less than 155 because of missing information.

Participants received a survey packet that contained:

1. A cover letter (APPENDIX F), describing the study and explaining the voluntary nature of the study, confidentiality, contact persons and other information to protect human subjects participating in research;

2. A self-administered survey, in booklet form, entitled “The Mothers Study” (APPENDIX G) that included the Sense of Belonging Instrument (SOBI) (Hagerty & Patusky, 1995) (APPENDIX A), Parental Attitudes Toward Child Rearing (PACR) scale (Easterbrooks & Goldberg, 1984) (APPENDIX B), and a demographic questionnaire (APPENDIX G) with questions about personal and family characteristics and screening for presence of mental illness.
3. An incentive packet (APPENDIX H) containing a pencil to fill out the booklet, a mint candy to enjoy while filling out the survey and a refrigerator magnet as a token of appreciation from the researcher and;

4. An addressed envelope with first-class postage to facilitate the return of the questionnaire booklet.

As participation involved the anonymous completion of a questionnaire booklet in which the responses could in no way be used to identify the participant, consent was considered to be understood by the return of the completed booklet.

The Psychometric Instruments

Parenting Competency

The Parental Attitudes Toward Childrearing (PACR) (Easterbrooks & Goldberg, 1984) (APPENDIX B), was selected according to criteria for self-report instruments recommended by Grotevant and Carlson (1989), such as reasonable item length, appropriate reading level, clear response format, adequate range of responses, and items that differentiate individual attitudes from dyadic or whole family attitudes.

Researchers agree that parenting competency is a multidimensional process; its essence is usually captured by measuring more than one dimension. Self-report instruments with adequate reliability and validity are used in clinical research involving patients with diagnoses of both psychiatric (Campbell, 1989) and medical disorders (Pincus & Wolfe, 1997), and have been judged by researchers as “integral to good clinical practice” (DeRoy, 1997).
The Parental Attitudes Toward Childrearing (PACR) scale is designed to measure parental attitudes in four areas: warmth (PACR-W) indicating expression of affection; encouragement of independence (PACR-I) referring to autonomous behavior of the child; strictness (PACR-S) pertaining to parents' ability to maintain discipline; and aggravation (PACR-A) regarding parents ability to manage being annoyed or upset about a child's behavior. Each subscale is scored separately; the instrument does not use a total PACR score.

Cronbach's alpha for the four subscales ranges from .58 to .78. Internal validity was achieved by conducting cluster analysis from items drawn from standardized instruments. (Easterbrooks & Goldberg, 1984). The PACR was originally used with middle class parents. McGuire and Earls (1993) later evaluated its use among economically disadvantaged, minority parents. In a sample of 40 mothers recruited from a neighborhood school, the researchers found an internal consistency for the PACR subscales, Cronbach's alpha, ranging from .51 to .71. Reliability coefficients on self-report instruments of .50 to .60 are considered modest but acceptable (Grotevant et al., 1989). In the choice of instruments, it was concluded that the PACR was more understandable, less intimidating and with reasonable face validity for persons with mental illness. It yielded further information regarding parenting competency in the sample under study. Further testing of the PACR took place based on the sample of 155 mothers in the present study. As designed, subscale scores PACR-W, PACR-I, PACR-S and PACR-A were calculated separately for the entire sample and the two groups
of MI and NMI mothers. Cronbach's alpha, item to item, and item to subscale correlations were examined.

The entire PACR is scored on a 4-point scale of strongly agree to strongly disagree. Strongly agree is scored as 4 points and strongly disagree is scored as 1 point. Given the direction of scoring of the scales, it would be expected that some of the inter-correlations among the four would be positive and some negative. The range of scores, depending on the number of items on each of the subscales, is summarized in Table 2

<table>
<thead>
<tr>
<th></th>
<th>Range</th>
<th>Number of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Total PACR Scale</td>
<td>51</td>
<td>204</td>
</tr>
<tr>
<td>Warmth</td>
<td>10</td>
<td>40</td>
</tr>
<tr>
<td>Encouragement of Independence</td>
<td>9</td>
<td>36</td>
</tr>
<tr>
<td>strictness</td>
<td>13</td>
<td>52</td>
</tr>
<tr>
<td>Aggravation</td>
<td>19</td>
<td>76</td>
</tr>
</tbody>
</table>

**Sense Of Belonging**

The Sense of Belonging Instrument, SOBI, (Hagerty & Patusky, 1995) (APPENDIX A) is a self-administered paper and pencil instrument with a total of 49 items. The SOBI is comprised of two Likert-type scales: SOBI-P, measuring the psychological experiences of fit and valued involvement, and SOBI-A,
measuring a single factor of the antecedents of sense of belonging: desire and ability for developing a sense of belonging.

Content validity of the entire SOBI, a 49 item instrument is .83 using the content validity index (CVI) (Lynn, 1986). Construct validity was established for the SOBI through factor analysis, contrasted groups and comparison with other measures. Two factors: antecedents of sense of belonging, and psychological state of sense of belonging, that is, "fit" and "valued involvement," explained 36.8% of the variance inherent in the set of items, with an interfactor correlation of .36. In contrasted groups of community college students, depressed patients, and nuns from a local convent, significant differences in the means of the group scores were found in the expected direction: SOBI-P (F = 38.6, p = .001) and SOBI-A (F = 5.69, p = .001) (Hagerty et al., 1995). When comparing the total SOBI with other related concepts such as loneliness, reciprocity, and social support, positive correlations were found with measures of reciprocity and social support and a negative correlation was found with a measure of the concept of loneliness (Hagerty et al., 1995). Correlation coefficients (r) were not reported. Interscale correlation for the SOBI-P AND SOBI-A is .45. Cronbach's alpha was used to evaluate reliability. The scales were tested on three groups: 379 community college students, 31 people being treated for depression, and 37 retired Catholic nuns living in a local convent. Alpha coefficients were .93, .93, and .91 respectively for the SOBI-P, and .72, .63 and .76 for the SOBI-A for each of the three groups respectively (Hagerty et al., 1995). Test re-test stability is .84 for the
SOBI-P and .66 for the SOBI-A over an 8-week period (Hagerty et al., 1995), indicating adequate reliability.

One of the contrasted groups originally included in developing the SOBI was a group of people being treated for depression, who scored significantly lower on both scales of the SOBI as compared to both the community college students and the nuns. Since participants of the study were an equivalent group with regard to mental status, some having been treated for depression, anxiety or other psychiatric diagnoses, and some being without mental illness, the instrument was appropriate for use in the study population.

The SOBI-P and the SOBI-A are scored separately and yield scores indicating presence of the psychological experience of sense of belonging (SOBI-P), and the presence of the antecedents of sense of belonging (SOBI-A). Both scales are scored on a 4-point scale of strongly agree to strongly disagree.

The SOBI-P (Sense of Belonging Instrument – Psychological Experience) scale consists of 18 items on the 4-point scale of strongly agree to strongly disagree. Strongly agree is 1 point and strongly disagree is scored as 4 points for every item except #4 which is reverse scored. The range of scores on the SOBI-P is from 21 (high) to 69 (low). In analyzing the results, the SOBI-P scores were reversed to ease interpretation, so the study scores for the SOBI-P ranged from 21 (low) to 69 (high).

The SOBI-A (Sense of Belonging Instrument – Antecedents) scale consists of 15 items on the 4-point scale of strongly agree to strongly disagree. Strongly agree is scored as 4 points in 12 items, and as 1 point in 3 items.
Strongly disagree is scored as 1 point in 12 items, as 4 points in 3 items. Thus the range of scores is from 24 (low) to 51 (high). A copy of the SOBI is included in Appendix B. The SOBI is scored as two separate subscales only and has not yet been tested as a total score (Hagerty, 2002).

Demographic Questionnaire

This is a self-administered pencil and paper instrument used to obtain a profile of the participants including personal characteristics, family characteristics, to identify level of mental illness, and to obtain information about a mother’s management of her illness. The questionnaire took approximately 10 minutes to complete and was field tested by the researcher in a sample of 8 mothers in order to assess its ease of use and clarity. The Demographic Questionnaire can be found in Part 3 of the survey booklet (Appendix H).

Data Analyses

Each survey was hand scored on a coding sheet. Accuracy of coding sheets was checked randomly to insure the absence of data transference errors. The data from the coding sheets was then entered into the computer program SPSS for Windows, Version 11. Data were double entered and reviewed for accuracy and missing data and adherence to the assumptions of normality, linearity and homoscedasticity. Univariate descriptive analyses were completed for each of the study variables including mean, mode, range, normality of the distributions, skew, and kurtosis in order to determine the normality of the
distribution and identify outliers. If variables were not normally distributed, the need for square root transformation was determined to meet the assumptions of correlation and regression analysis. Descriptive statistics were calculated on all demographic variables, the dependent variable, PACR, and independent variables, SOB and presence or absence of mental illness (PAMI) in mothers (MI and NMI). Cronbach’s alpha coefficients for internal consistency were computed on the four subscales of the PACR. Cronbach’s alpha coefficients were also computed on the two subscales of the SOBI. A correlation matrix identifying the correlations between all variables for the entire sample of 155 mothers and the two separate groups of 69 MI mothers and 86 NMI mothers was generated. Correlations were determined significant at a level of $p<.05$.

To answer research questions 1 and 2, regarding the degree of parenting competency and sense of belonging, univariate descriptive statistics were calculated for the two groups of mothers. One way ANOVAs were computed with presence or absence of mental illness as the independent variable and the 4 PACR subscale scores and 2 SOBI subscale scores as dependent variables.

To answer research question 3, regarding the relationship between parenting competency and sense of belonging, bivariate correlations were conducted on the each of the PACR and SOBI subscale, based on the total sample and subsamples of MI and NMI mothers.

To answer research question 4, which examined whether sense of belonging influences the relationship between presence of mental illness and parenting competency, sense of belonging as either a moderating or mediating
variable was examined, using multiple linear regression analysis according to the
guidelines of Baron and Kenny (1986). The predictor variable is represented by
PAMI, signifying presence or absence of mental illness.

The role of sense of belonging as a moderating, or interacting, variable
was tested first. Moderation implies a change in direction or strength of a
relationship when the scores of the moderator change. A total of eight moderation
analyses were conducted, testing both SOBI-P and SOBI-A as possible
moderators for the four PACR subscales.

In the moderation analysis procedure, three linear regressions were
conducted. In the first regression the predictor variable, PAMI, was regressed on
the dependent variable PACR. In the second regression, the hypothesized
moderating variable, SOBI, was regressed on PACR. In the third regression, the
interaction of PAMI x SOBI was regressed on PACR. The moderator hypothesis
is supported when the interaction of the predictor and the moderator is significant;
support for the moderator is achieved when the unstandardized regression
coefficient is significant, represented by the statistical notation, B. Example 1
illustrates the procedure for testing a moderating hypothesis.

In the first regression, shown in Example 1, PAMI was used to predict
SOBI-A. In the second regression, PAMI was used to predict PACR-W. In the
third regression, the interaction of PAMI x SOBI-A was regressed on PACR-W.
The moderator hypothesis is supported when the interaction of the predictor and
the moderator is significant in accounting for the variance in parenting
competency; support for the moderator is achieved when the unstandardized regression coefficient (B) is significant.

Example 1

Procedure to test the hypothesis of the moderating effect of SOBI-A on the relationship of PAMI and PACR-W

Hypothesis:

\[ \text{PAMI} \rightarrow \text{SOBI-A} \rightarrow \text{SOBI-A} \rightarrow \text{PACR-W} \]

Procedure:

Regression 1: PAMI \rightarrow SOBI-A
Regression 2: PAMI \rightarrow PACR-W
Regression 3: PAMI \times SOBI-A \rightarrow PACR-W (interaction must be significant)

The role of sense of belonging as a mediating or intervening variable was tested next. Mediation implies a causal path between the predictor variable and criterion variable. A total of eight mediational analyses were conducted. As in the moderation analyses, the first four analyses examined the role of SOBI-P as an intervening variable for each of the four PACR subscales. The next four analyses examined the role of SOBI-A as an intervening variable for each of the four PACR subscales. For each mediation analysis, Baron and Kenny's (1986)
procedure entails three sequential regressions as illustrated in Example 2 shown below.

Example 2

Procedure to test the hypothesis of the mediational effect of SOBI-A on the relationship of PAMI and PACR-W

Hypothesis:

\[ \text{PAMI} \rightarrow \text{SOBI-A} \text{ (as possible mediator)} \rightarrow \text{PACR-W} \]

Procedure:

Regression 1: PAMI \rightarrow \text{SOBI-A} \text{ (must be significant)}

Regression 2: PAMI \rightarrow \text{PACR-W} \text{ (must be significant)}

Regression 3: PAMI \times \text{SOBI-A} \rightarrow \text{PACR-W} \text{ (significant reduction from regression 2)}

In the first regression, PAMI was used to predict SOBI-A. In the second regression, PAMI was used to predict PACR-W. In the third regression, the interaction of PAMI \times SOBI-A was regressed on PACR-W. For successful mediation to hold, several conditions must be met. PAMI must separately influence SOBI-A and PACR-W (the first two regression equations), and SOBI-A must show a unique influence on PACR-W while accounting for PAMI (the third regression equation). Full mediation holds if these conditions are met and if there is a significant reduction in the effect of PAMI on PACR-W when SOBI-A is included in the model, compared to when it is excluded (tested by comparing the second and third regression equations). Partial mediation holds if
all the conditions are met, and there is a reduction in the effect of PAMI on PACR-W, but the reduction is non-significant.

Additional data analyses provided further description of parenting competency and sense of belonging among mothers with mental illness (MI) and mothers with out mental illness (NMI). Demographic data of personal, family and health characteristics were analyzed using one way ANOVAs.

Protection of Human Subjects

Approval for the study was obtained from the University Committee on Activities Involving Human Subjects and from agencies approached as sites for recruiting participants. Participants were informed in the cover letter (APPENDIX F) that the survey was anonymous and completely voluntary. Participants were allowed ample time to decide about participating and were informed that the survey would take about 30 minutes to complete, and that they could withdraw from the study at any time.

Forty-six percent of the participants in The Mothers Study were mothers with mental illness. Persons with mental illness are a vulnerable population and often subject to exploitation and stigmatization. The researcher took safeguards for the protection of participants who had mental illnesses. Contact persons received a detailed orientation to the study, (APPENDIX C) with emphasis on awareness of concerns about mothers with mental illness, and procedures to guarantee voluntary participation and anonymity. For clinical settings, a special section of the protocol (APPENDIX C, pages 2 and 3) included measures
designed to protect participants against feelings of coercion or fear that they would lose services or benefits if they declined participation, as suggested by Dworkin (1992). The protocol also contained procedures for the contact persons to screen potential participants for comprehension of the process.

Assessing parenting among mothers with mental illness is a particularly sensitive subject because mental illness is so misunderstood and parenting skills are subject to numerous interpretations. With an interest in addressing this concern, the researcher took additional safeguards in the design of the survey. Questions in the instruments and demographic section were objective, asked about number of hospitalizations and frequency of medications and treatment. Questions did not probe into symptoms. Survey envelopes and booklets had no identifying data on them and the researcher had no way of associating a particular survey with a participant. There was no way of identifying a particular respondent as being mentally ill until the survey was read at the office of the researcher. The researcher was the only data collector who opened and read the survey responses. The survey envelopes were opened privately at the office of the researcher and are kept in a locked file cabinet.

There were no expected benefits or risks to the participants. Filling out the survey took some time and effort. When distributing the surveys, the researcher received a great deal of positive feedback from participants who were pleased to be able to express opinions and feelings about being a mother. Participants were encouraged to contact the researcher to assist them with any concerns they had related to instruments and data collection. The phone numbers of two no-cost
community referral sources to call in the event that answering the survey brought about emotional distress were provided by the researcher. Appropriate contact phone numbers at New York University were printed in the survey packet cover letter to give additional assurance of the researcher's efforts to protect the human subjects in the study.
CHAPTER IV
ANALYSES OF DATA

Description of the Sample

The study examined parenting competency and sense of belonging in mothers with mental illness and without mental illness. Pertinent descriptive data was also collected on the mothers' personal characteristics, family and relational characteristics help with parenting, and health status.

Personal characteristics: Age, ethnicity, income, and education

Sample size was 155 mothers: 69 mentally ill (MI) mothers and 86 non-mentally ill (NMI) mothers. The demographics gave information about mothers' living circumstances, families and relationships. Items in the following tables are pertinent to understanding parenting competency and sense of belonging in both groups.

Information about age, ethnicity, income and education are shown in Table 3. When the two groups of mothers were compared, as illustrated in Table 3, 26% of MI mothers were under 30 years of age, as compared to 13% of NMI mothers. With regard to ethnicity, both groups of mothers were Caucasian: 71% of MI mothers and 68% of NMI mothers, Hispanic: MI mothers 15%, NMI mothers 6%, African-American: 9% MI mothers, 21% NMI mothers, Asian-
American: 1% MI mothers, 1% NMI mothers, Native-American: 3% MI mothers, 2% NMI mothers, and Other: 1% MI and 2% NMI.

The descriptive statistics showed that MI mothers were lower in socioeconomic status: 45% of MI had incomes above $35,000, as compared to 79% of NMI mothers. Fewer MI mothers completed college with 33% having a bachelor’s degree or higher, as compared to 47% of NMI mothers.

Table 3
Personal characteristics: Age, ethnicity, income and education
Frequencies and percentages of the total sample of mothers
and in the two subsamples of MI mothers and NMI mothers
(N=155)

<table>
<thead>
<tr>
<th>Personal Characteristic</th>
<th>Total Sample (N=155)</th>
<th>MI Mothers (n=69)</th>
<th>NMI Mothers (n=86)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
</tr>
<tr>
<td>Age:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 and under</td>
<td>29</td>
<td>19%</td>
<td>18</td>
</tr>
<tr>
<td>Over 30</td>
<td>126</td>
<td>81%</td>
<td>51</td>
</tr>
<tr>
<td>Ethnicity:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African-American</td>
<td>24</td>
<td>16%</td>
<td>5</td>
</tr>
<tr>
<td>Asian-American</td>
<td>2</td>
<td>1%</td>
<td>1</td>
</tr>
<tr>
<td>Caucasian</td>
<td>107</td>
<td>69%</td>
<td>49</td>
</tr>
<tr>
<td>Hispanic</td>
<td>15</td>
<td>10%</td>
<td>10</td>
</tr>
<tr>
<td>Native-American</td>
<td>4</td>
<td>2%</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>2%</td>
<td>1</td>
</tr>
<tr>
<td>Income:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10,000 or less</td>
<td>20</td>
<td>13%</td>
<td>18</td>
</tr>
<tr>
<td>10,001 - 20,000</td>
<td>11</td>
<td>7%</td>
<td>9</td>
</tr>
<tr>
<td>20,001 - 35,000</td>
<td>25</td>
<td>16%</td>
<td>11</td>
</tr>
<tr>
<td>Over 35,000</td>
<td>99</td>
<td>64%</td>
<td>31</td>
</tr>
<tr>
<td>Education:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HS or less</td>
<td>41</td>
<td>26%</td>
<td>27</td>
</tr>
<tr>
<td>Some College</td>
<td>41</td>
<td>26%</td>
<td>19</td>
</tr>
<tr>
<td>Bach. degree or higher</td>
<td>65</td>
<td>42%</td>
<td>23</td>
</tr>
</tbody>
</table>

Note: Percentages may vary from 100% because of rounding. Total number of participants for any characteristic may be less than 155 because of missing information.
Personal characteristics: Marital status and membership in groups

Marital status differed among the two groups of mothers, as illustrated in Table 4. Among MI mothers, 12% were married and living with a spouse, and 51% married, but living separate from a spouse. In comparison, 73% of NMI mothers were married, but living with a spouse; 6% were married and living separate from a spouse.

Membership in religious, community or professional groups was the one characteristic on which all mothers in the sample were most similar, as shown in Table 5. All MI mothers (100%) belonged to one or more groups. Similarly, 98% of NMI mothers belonged to one or more groups.

<table>
<thead>
<tr>
<th>Personal Characteristic</th>
<th>Total Sample (N=155)</th>
<th>MI Mothers (n=89)</th>
<th>NMI Mothers (n=86)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
</tr>
<tr>
<td>Marital Status:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never married</td>
<td>16</td>
<td>11%</td>
<td>1</td>
</tr>
<tr>
<td>Married, living with spouse</td>
<td>98</td>
<td>63%</td>
<td>8</td>
</tr>
<tr>
<td>Married, sep. from spouse</td>
<td>9</td>
<td>6%</td>
<td>35</td>
</tr>
<tr>
<td>Living w/significant other</td>
<td>9</td>
<td>6%</td>
<td>4</td>
</tr>
<tr>
<td>Divorced</td>
<td>19</td>
<td>12%</td>
<td>6</td>
</tr>
<tr>
<td>Legally separated</td>
<td>1</td>
<td>1%</td>
<td>12</td>
</tr>
<tr>
<td>Widowed</td>
<td>1</td>
<td>1%</td>
<td>1</td>
</tr>
<tr>
<td>Membership in Groups:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Groups</td>
<td>2</td>
<td>1%</td>
<td>0</td>
</tr>
<tr>
<td>One or more groups</td>
<td>153</td>
<td>99%</td>
<td>69</td>
</tr>
</tbody>
</table>

Note: Percentages may vary from 100% because of rounding. Total number of participants for any characteristic may be less than 155 because of missing information.
Family characteristics: Presence of siblings in family of origin

When the mothers were asked about their families of origin, 72% of the entire sample reported having at least one sibling, as shown in Table 5. The subsamples showed negligible differences on this characteristic. Seventy-four percent of MI and 71% of NMI had one or two siblings.

Table 5
Family characteristic: Presence of siblings in family of origin
Frequencies and percentages of the total Sample of mothers and in the two subsamples of MI mothers and NMI mothers

(N=155)

<table>
<thead>
<tr>
<th>Family Characteristic: Family of Origin, Siblings</th>
<th>Total Sample (N=155) Frequency</th>
<th>Percent</th>
<th>MI Mothers (n=69) Frequency</th>
<th>Percent</th>
<th>NMI Mothers - (n=80) Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Brothers:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No brothers</td>
<td>35</td>
<td>23%</td>
<td>15</td>
<td>22%</td>
<td>20</td>
<td>23%</td>
</tr>
<tr>
<td>One brother</td>
<td>52</td>
<td>34%</td>
<td>24</td>
<td>35%</td>
<td>28</td>
<td>32%</td>
</tr>
<tr>
<td>More than one brother</td>
<td>68</td>
<td>43%</td>
<td>30</td>
<td>43%</td>
<td>38</td>
<td>45%</td>
</tr>
<tr>
<td>One or more brothers</td>
<td>120</td>
<td>77%</td>
<td>54</td>
<td>78%</td>
<td>66</td>
<td>75%</td>
</tr>
</tbody>
</table>

| Number of Sisters:                               |                               |         |                           |         |                               |         |
| No sisters                                       | 43                            | 28%     | 18                        | 26%     | 25                            | 29%     |
| One sister                                       | 47                            | 30%     | 27                        | 39%     | 20                            | 23%     |
| More than one sister                             | 65                            | 42%     | 24                        | 33%     | 41                            | 48%     |
| One or more sisters                              | 112                           | 72%     | 51                        | 74%     | 61                            | 71%     |

*Number of brothers range = 0 – 5
*Number of sisters range = 0 – 7

Note: Percentages may vary from 100% because of rounding. Total number of participants for any characteristic may be less than 155 because of missing information.

Family characteristics: children

Table 6 indicates that, in the entire sample, most mothers had at least two children (68%); had one child aged under 12 years (60%); had the youngest child living at home (85%), and were the primary caregiver for the youngest child (85%). The two subsamples were similar in the number of children. Further comparison of age groups of the children of mothers in the subsamples revealed
that MI mothers had younger children, 25% having children under 6 years of age, compared with 11% of NMI mothers. Eighty-two percent of MI mothers and 95% of NMI mothers reported that their youngest child lived at home. Seventy-one percent of MI mothers and 97% of NMI mothers reported being in the role of primary caregiver for their youngest child.

<table>
<thead>
<tr>
<th>Table 6</th>
<th>Family characteristics: children</th>
<th>Frequencies and percentages of the total sample of mothers and in the two subsamples of MI mothers and NMI mothers</th>
</tr>
</thead>
<tbody>
<tr>
<td>(N = 155)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Family Characteristic: Children</th>
<th>Total Sample (N=155)</th>
<th>MI Mothers (n=69)</th>
<th>NMI Mothers (n=86)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
</tr>
<tr>
<td>Number of children: One</td>
<td>52</td>
<td>32%</td>
<td>24</td>
</tr>
<tr>
<td>More than one</td>
<td>103</td>
<td>68%</td>
<td>45</td>
</tr>
<tr>
<td>Age of youngest child:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 5 years</td>
<td>36</td>
<td>23%</td>
<td>17</td>
</tr>
<tr>
<td>5 years - 11 years</td>
<td>58</td>
<td>38%</td>
<td>21</td>
</tr>
<tr>
<td>12 years and over</td>
<td>61</td>
<td>40%</td>
<td>28</td>
</tr>
<tr>
<td>Youngest child living at home:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>132</td>
<td>85%</td>
<td>50</td>
</tr>
<tr>
<td>No</td>
<td>23</td>
<td>15%</td>
<td>19</td>
</tr>
<tr>
<td>Mother as caregiver of</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>youngest child: Yes</td>
<td>132</td>
<td>85%</td>
<td>49</td>
</tr>
<tr>
<td>No</td>
<td>23</td>
<td>15%</td>
<td>20</td>
</tr>
</tbody>
</table>

*Range 6mos – 23 years. Note: Percentages may vary from 100% because of rounding. Total number of subjects for any characteristic may be less than 155 because of missing information.
Family characteristics: Relationships other than with children

Demographic information was collected in inquiring about mothers' relationships other than with her children, about other adults at home, other parenting helpers and the presence of a pet in the home, as illustrated in Table 7. Spouses were most frequently identified as being the other adult in the home (62% of the total sample). However, only 52% of MI mothers had a spouse at home, compared with 73% of NMI mothers. More mothers with mental illness lived alone (10%) than mothers without mental illness (2%). In the entire sample, 91% of mothers had at least two other helpers with parenting: spouses, other relatives, friend, neighbors or health care professionals. Other than spouses, mothers with mental illness were more likely to have fewer helpers than mothers without mental illness (21% as compared to 30%, respectively). Exactly one half the sample, and one half of each subsample had a pet.

Table 7

<table>
<thead>
<tr>
<th>Family Characteristics</th>
<th>Total Sample (N=155)</th>
<th>MI Mothers (n=69)</th>
<th>NMI Mothers (n=86)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
</tr>
<tr>
<td>Other adults at home:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spouse</td>
<td>96</td>
<td>62%</td>
<td>36</td>
</tr>
<tr>
<td>Sex Partner</td>
<td>14</td>
<td>10%</td>
<td>8</td>
</tr>
<tr>
<td>Other relatives</td>
<td>15</td>
<td>9%</td>
<td>8</td>
</tr>
<tr>
<td>Roommate/ Friend</td>
<td>4</td>
<td>3%</td>
<td>1</td>
</tr>
<tr>
<td>Lives alone</td>
<td>9</td>
<td>6%</td>
<td>7</td>
</tr>
<tr>
<td>Lives with children only</td>
<td>26</td>
<td>17%</td>
<td>13</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Family Characteristics</th>
<th>Total Sample (N=155)</th>
<th>MI Mothers (n=69)</th>
<th>NMI Mothers (n=86)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
</tr>
<tr>
<td>Helpers: spouses, friends, relatives, neighbors, health care professionals:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No helpers</td>
<td>3</td>
<td>2%</td>
<td>3</td>
</tr>
<tr>
<td>One</td>
<td>109</td>
<td>70%</td>
<td>49</td>
</tr>
<tr>
<td>Two</td>
<td>33</td>
<td>21%</td>
<td>10</td>
</tr>
<tr>
<td>Three</td>
<td>9</td>
<td>6%</td>
<td>6</td>
</tr>
<tr>
<td>Four</td>
<td>1</td>
<td>1%</td>
<td>1</td>
</tr>
<tr>
<td>Own a pet:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>77</td>
<td>50%</td>
<td>35</td>
</tr>
<tr>
<td>No</td>
<td>77</td>
<td>50%</td>
<td>34</td>
</tr>
</tbody>
</table>

Note: Percentages may vary from 100% because of rounding. Total number of subjects for any characteristic may be less than 155 because of missing information.

Since the study was concerned with evaluating the relationships of sense of belonging and parenting competency among mothers with mental illness and mothers without mental illness, data was collected about mental illness and other health characteristics that might affect a mother's mental status.

**Health characteristics: Mental illness**

Table 8 illustrates presence or absence of a mental illness in the sample, as well as details about psychotropic medications and frequency of hospitalizations.

Mothers with mental illness comprised 46% of the sample. Having a mental illness was defined as: being treated with psychotherapy for a mental illness, having taken medications for a mental illness or having been hospitalized for a mental illness within the last five years. Of the mentally ill mothers, 88% were being treated with psychotherapy regularly or occasionally, 86% took
psychotropic medications and 41% were hospitalized for the mental illness one or more times.

<table>
<thead>
<tr>
<th>Health Characteristic: Mental Illness (M1)</th>
<th>Total Sample (N=155)</th>
<th>MI Mothers (n=69)</th>
<th>NMI Mothers (n=86)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental Illness: Yes</td>
<td>69 46%</td>
<td>69 100%</td>
<td>0 0%</td>
</tr>
<tr>
<td>No</td>
<td>86 55%</td>
<td>0 0%</td>
<td>86 100%</td>
</tr>
<tr>
<td>Treatment for M1 Last 5 years:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regularly</td>
<td>45 29%</td>
<td>45 65%</td>
<td>0 0%</td>
</tr>
<tr>
<td>Occasionally</td>
<td>20 13%</td>
<td>16 23%</td>
<td>3 4%</td>
</tr>
<tr>
<td>None</td>
<td>90 56%</td>
<td>8 12%</td>
<td>83 96%</td>
</tr>
<tr>
<td>Medications for M1 Last 5 years:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regularly</td>
<td>55 36%</td>
<td>55 80%</td>
<td>0 0%</td>
</tr>
<tr>
<td>As needed</td>
<td>4 3%</td>
<td>4 6%</td>
<td>0 0%</td>
</tr>
<tr>
<td>No</td>
<td>96 61%</td>
<td>10 14%</td>
<td>86 100%</td>
</tr>
</tbody>
</table>

Note: Percentages may vary from 100% because of rounding. Total number of subjects for any characteristic may be less than 155 because of missing information.

Health Characteristics: Medical Illness, Managing Responsibilities and Managing Stress

Aspects of health with regard to co-occurrence of a medical illness, feelings about managing the dual responsibilities of home and child care, and amount of stress experienced on a daily basis are reported in Table 9. Having a co-occurring medical illness was reported by 36% of MI mothers compared to
16% of NMI mothers. Trouble managing the dual responsibility of home and childcare occurred in slightly more than half (52%) of all the mothers. 70% of MI mothers and 37% of the NMI mothers reported trouble managing. Similarly, daily stress of a moderate or greater degree was experienced by nearly half the total sample (44%). Both groups of mothers reported the daily experience of stress to a moderate or greater degree at about the same rate: 52% of MI mothers and 46% of NMI mothers.

<table>
<thead>
<tr>
<th>Health Characteristic</th>
<th>Total Sample (N=155)</th>
<th>MI Mothers (n=69)</th>
<th>NMI Mothers (n=86)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
</tr>
<tr>
<td>Have co-occurring Medical illness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>39</td>
<td>25%</td>
<td>25</td>
</tr>
<tr>
<td>No</td>
<td>116</td>
<td>75%</td>
<td>44</td>
</tr>
<tr>
<td>Amount of stress Experienced daily:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None or mild stress</td>
<td>87</td>
<td>56%</td>
<td>33</td>
</tr>
<tr>
<td>Moderate or greater stress</td>
<td>68</td>
<td>44%</td>
<td>36</td>
</tr>
<tr>
<td>Feelings about managing Dual responsibilities of Home and child care:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manage well</td>
<td>75</td>
<td>48%</td>
<td>21</td>
</tr>
<tr>
<td>Trouble managing</td>
<td>80</td>
<td>52%</td>
<td>48</td>
</tr>
</tbody>
</table>

Note: Percentages may vary from 100% because of rounding. Total number of subjects for any characteristic may be less than 155 because of missing information.
The Psychometric Instruments

The means, range and standard deviations of the PACR subscales and SOBI subscales are reported in Table 10.

Skew and Kurtosis for each of the subscales were examined, as indicated in Table 11. They were found to be in acceptable ranges for all the subscales, between $-1$ and $1$ for skewness and between $-1.96$ and $1.96$ for kurtosis (Munro, 1997). Thus, the distributions were sufficiently normal.

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Scale Mean</th>
<th>Standard Deviation</th>
<th>Possible Range</th>
<th>Actual Range</th>
<th>Number Of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>PACR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PACR – W</td>
<td>34.1</td>
<td>3.49</td>
<td>10 – 40</td>
<td>24 – 40</td>
<td>10</td>
</tr>
<tr>
<td>Warmth</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PACR – I</td>
<td>28.8</td>
<td>3.0</td>
<td>9 – 36</td>
<td>21 – 36</td>
<td>9</td>
</tr>
<tr>
<td>Independence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PACR – S</td>
<td>20.1</td>
<td>3.6</td>
<td>13 – 52</td>
<td>13 – 30</td>
<td>7</td>
</tr>
<tr>
<td>Strictness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PACR – A</td>
<td>40.4</td>
<td>6.6</td>
<td>19 – 78</td>
<td>22 – 56</td>
<td>19</td>
</tr>
<tr>
<td>Aggravation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOBI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOBI – P</td>
<td>59.0</td>
<td>10.0</td>
<td>21 – 69</td>
<td>28 – 69</td>
<td>18</td>
</tr>
<tr>
<td>Psych. Exp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOBI – A</td>
<td>27.0</td>
<td>4.8</td>
<td>15 – 51</td>
<td>17 – 44</td>
<td>15</td>
</tr>
<tr>
<td>Antecedents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For the PACR-W scale, the distribution of scores was skewed negatively, indicating that most mothers in the sample scored in a high range on Warmth. On
PACR-I, PACR-S, and PACR-A, the skew scores were closer to 0, indicating that most of the mothers scored near the middle.

For the SOBI scales, SOBI-P was negatively skewed, indicating that most of the mothers scored in a high range of psychological experience of sense of belonging. In contrast, SOBI-A demonstrated a positive skew signifying a trend toward lower scores on antecedents of sense of belonging.

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Skew</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>PACR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PACR - W Warmth</td>
<td>-.571</td>
<td>-.188</td>
</tr>
<tr>
<td>PACR - I Independence</td>
<td>-.113</td>
<td>-.389</td>
</tr>
<tr>
<td>PACR - S Strictness</td>
<td>.191</td>
<td>.088</td>
</tr>
<tr>
<td>PACR - A Aggravation</td>
<td>.016</td>
<td>-.123</td>
</tr>
<tr>
<td>SOBI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOBI - P Psych. Exp.</td>
<td>-.542</td>
<td>-.203</td>
</tr>
<tr>
<td>SOBI - A Antecedents</td>
<td>.623</td>
<td>1.576</td>
</tr>
</tbody>
</table>

In order to determine the internal consistency reliability of the SOBI, and the PACR, Cronbach’s alpha coefficients were computed on the total scale scores and subscales, as reported in Table 12.
Table 12

Alpha reliability coefficients of the scales of the psychometric instruments
(N = 155)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Alpha Reliability</th>
<th>Number of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>PACR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PACR-W (Warmth)</td>
<td>.71</td>
<td>10</td>
</tr>
<tr>
<td>PACR-I (Independence)</td>
<td>.68</td>
<td>9</td>
</tr>
<tr>
<td>PACR-S (Strictness)</td>
<td>.85</td>
<td>13</td>
</tr>
<tr>
<td>PACR-A (Aggravation)</td>
<td>.78</td>
<td>17</td>
</tr>
<tr>
<td>SOBI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOBI-P (Psych. Experience)</td>
<td>.95</td>
<td>18</td>
</tr>
<tr>
<td>SOBI-A (Antecedents)</td>
<td>.71</td>
<td>15</td>
</tr>
</tbody>
</table>

The alpha coefficients of the PACR scales were as follows: .71 for Warmth, .68 for Independence, .65 for Strictness and .78 for Aggravation. These coefficients are consistent with the alpha coefficients found by the original authors testing the full instrument on middle class parents: a range of .58 - .78. In the sample of participants in The Mother’s Study, over 60% were Caucasian, had incomes over thirty five thousand dollars and were married and living with a spouse, so the sample was primarily middle class. In contrast, McGuire & Earls (1993) evaluated its use among economically disadvantaged, minority parents, finding Cronbach’s alphas in the range of .51 to .71, somewhat lower than the internal consistency found in the use of this instrument among middle class parents.

The alpha for the SOBI-P was .95 in the sample of participants in The Mothers Study. This was slightly higher than that found by Hagerty and Patusky (1995) when it was tested among college students (.93), people with depression (.93) and retired nuns (.91). The SOBI-A alpha reached .71. This alpha coefficient is in the same range as that found in its original test groups: college students, .72;
people with depression, .63; and retired nuns, .76. A correlation matrix was created to determine if the scales of the PACR and the scales of the SOBI were related within scales and between scales. Results are shown in Table 13.

All four scales of the PACR showed statistically significant Pearson correlations with each other. The correlations varied in size, with most being weak to moderate. Characterization of correlation sizes throughout this discussion follows the conventions proposed originally by Cohen (Light, Singer, & Willett, 1990, pp. 194-95) where a statistically significant correlation of .10 is considered “small,” one of .30 is considered “medium,” and one of .50 or more is considered “large.”

<table>
<thead>
<tr>
<th>Warmth</th>
<th>Independence</th>
<th>Strictness</th>
<th>Aggravation</th>
<th>SOBI-P</th>
<th>SOBI-A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warmth</td>
<td>R</td>
<td>.617***</td>
<td>-.240**</td>
<td>-257**</td>
<td>.214**</td>
</tr>
<tr>
<td>R</td>
<td>.000</td>
<td>1</td>
<td>-.175*</td>
<td>-214**</td>
<td>.218**</td>
</tr>
<tr>
<td>Independence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>.900</td>
<td>1</td>
<td>-.240**</td>
<td>-257**</td>
<td>.214**</td>
</tr>
<tr>
<td>R</td>
<td>.000</td>
<td>1</td>
<td>-.175*</td>
<td>-214**</td>
<td>.218**</td>
</tr>
<tr>
<td>Strictness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>.357**</td>
<td>.000</td>
<td>1</td>
<td>-295**</td>
<td>-280***</td>
</tr>
<tr>
<td>R</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aggravation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>.357**</td>
<td>.000</td>
<td>1</td>
<td>-295**</td>
<td>-280***</td>
</tr>
<tr>
<td>R</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOBI-P</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>.214**</td>
<td>.218**</td>
<td>-.295***</td>
<td>-559***</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>.008</td>
<td>.008</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOBI-A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>.149</td>
<td>.065</td>
<td>-.280***</td>
<td>-566***</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>.063</td>
<td>.424</td>
<td>.000</td>
<td>.628***</td>
<td></td>
</tr>
</tbody>
</table>

The largest correlation among the four PACR scales was between Warmth and Independence ($r = .62, p < .001$). Warmth also had a nearly medium,
negative correlation with Aggravation, \((r = -.26, p < .01)\) and a small correlation with strictness \((r = -.24, p < .01)\). In addition, Table 12 shows that Strictness had a medium correlation with Aggravation \((r = .36, p < .001)\). Strictness, in addition, had a small correlation with Warmth \((r = .24, p < .01)\). Independence had somewhat weaker, negative correlations with both Strictness \((r = -.18, p < .05)\) and Aggravation \((r = -.21, p < .01)\).

The correlation matrix contained in Table 13 illustrates a moderately or larger statistically significant correlation between SOBI-P and SOBI-A \((r = .63, p < .001)\). The inter-correlations of the SOBI scales with the PACR scales were also calculated and reported in Table 13.

SOBI-P had moderate correlations with PACR-W \((r = .21, p < .01)\) and PACR-I \((r = .22, p < .01)\), indicating that mothers who were higher on the psychological experience of sense of belonging were slightly more likely to exhibit warmth and encourage independence. This table also reports a medium negative Pearson correlation between SOBI-P and PACR-S \((r = -.30, p < .001)\) and a large negative correlation of SOBI-P and PACR-A \((r = -.56, p < .001)\), indicating that mothers who had higher scores on the psychological experience of sense of belonging were slightly more likely to be lower on strictness and much more likely to be lower on aggravation.

The correlations of SOBI-A with Warmth and Independence did not reach statistical significance \((r = .149, p > .05)\) and \((r = .065, p > .05)\), respectively. However, SOBI-A indicated a nearly medium correlation with Strictness \((r = -.28, p < .001)\) and a large correlation with Aggravation \((r = -.57, p < .001)\). Mothers
reporting higher scores on the antecedents of Sense of Belonging were somewhat lower on strictness and much lower on aggravation.

The Research Questions

Research Question 1

The first research question asked, "What is the Parenting Competency among mothers with mental illness and mothers without mental illness?"

Parenting Competency Scores for the mothers with mental illness are shown in Table 14. The PACR is not scored as a total, but in terms of the scales for each cluster of indicators: Warmth (PACR-W), Independence (PACR-I), Strictness (PACR-S), and Aggravation (PACR-A). Table 14 also illustrates scores for non-mentally ill mothers and for the total sample. Items on the scales that were reverse scored were transformed in order to combine items for the total scale score.

<table>
<thead>
<tr>
<th>PACR Scale</th>
<th>Total Sample</th>
<th>Mentally Ill Mothers (MI)</th>
<th>Non-Mentally Ill Mothers (NMI)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Warmth</td>
<td>34.0</td>
<td>3.49</td>
<td>33.6</td>
</tr>
<tr>
<td>Encouragement of Independence</td>
<td>28.8</td>
<td>2.10</td>
<td>28.1</td>
</tr>
<tr>
<td>Strictness</td>
<td>20.1</td>
<td>3.62</td>
<td>20.6</td>
</tr>
<tr>
<td>Aggravation</td>
<td>40.4</td>
<td>6.64</td>
<td>43.4</td>
</tr>
</tbody>
</table>
In general, the MI mothers scored lower on warmth or encouragement of independence compared with the NMI mothers and scored higher on strictness and aggravation than the NMI mothers.

T-tests were performed to compare the means of the MI and NMI mothers on the parenting competency scales. The t-test is recommended to compare means when there are two independent groups (Polit & Hungler, 1995). Results are shown in Table 15.

<table>
<thead>
<tr>
<th>PACR Scale</th>
<th>t</th>
<th>p</th>
<th>Df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warmth</td>
<td>1.62</td>
<td>.108</td>
<td>153</td>
</tr>
<tr>
<td>Independence</td>
<td>2.63</td>
<td>.009</td>
<td>153</td>
</tr>
<tr>
<td>Strictness</td>
<td>-1.42</td>
<td>.158</td>
<td>153</td>
</tr>
<tr>
<td>Aggravation</td>
<td>-5.44</td>
<td>.000</td>
<td>153</td>
</tr>
</tbody>
</table>

The MI mothers had statistically significant lower mean scores on the Independence scale than the NMI mothers (t = 2.63, p = .009). A significant difference was found on the Aggravation scale, showing a higher mean score of \( t = -5.44, p = .000 \) among MI mothers as compared to NMI mothers. There was no statistically significant difference between groups on Warmth or Strictness.
Research Question 2

The second research question asked, “What is the Sense of Belonging among mothers with mental illness and mothers without mental illness?”

Two scales measured sense of belonging: Psychological Experience of Sense of Belonging, SOBI-P and Antecedents of Sense of Belonging, SOBI-A. Table 16 illustrates the results for the mothers in the sample.

<table>
<thead>
<tr>
<th>Table 16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Means and standard deviations of scores on the SOBI scales for the total sample, and the two subsamples of MI mothers and NMI mothers</td>
</tr>
<tr>
<td>(N=155)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>SOBI Scale</td>
</tr>
<tr>
<td>SOBI-P Psychological Experience</td>
</tr>
<tr>
<td>SOBI-A Antecedents</td>
</tr>
</tbody>
</table>

Table 16 shows that the means of scores of the MI mothers were lower than the NMI mothers on the SOBI-P and SOBI-A. When scores were compared by t-test, it was found that among mentally ill mothers, both SOBI-P and SOBI-A were lower and statistically significant: $t = 7.2, p = .000$ and $t = 6.4, p = .000$ respectively. T-test results for comparing the means of the SOBI are reported in Table 17.
Table 17
Comparison of the means of MI mothers and NMI mothers
On the SOBI subscales using two-tailed t-tests of independent samples

<table>
<thead>
<tr>
<th>SOBI Scale</th>
<th>t</th>
<th>p</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOBI-P Psychological Experience</td>
<td>7.2</td>
<td>.000</td>
<td>153</td>
</tr>
<tr>
<td>SOBI-A Antecedents</td>
<td>6.4</td>
<td>.000</td>
<td>153</td>
</tr>
</tbody>
</table>

Research Question 3

The third research question asked, "Is there a relationship between Parenting Competency and Sense of Belonging in mothers with and without mental illness based on the total sample, as well as among only mothers with mental illness and only mothers without mental illness?"

To examine the relationship of Parenting Competency to Sense of Belonging, Pearson’s Product-Moment Correlations were performed on the total sample of mothers, as well as the separate groups of mentally ill and non-mentally ill mothers. Tables 18, 19, and 20 are shown together below in order to compare how the relationships differed between the groups.

The correlation matrix for the total sample ($N = 155$) determined that Parenting Competency was significantly related to SOBI – P on all four Parenting Competency scales: Warmth ($r = .214, p = .008$), Independence ($r = .218, p = .006$), Strictness ($r = .295, p = .000$), and Aggravation ($r = -.55, p = .000$) as illustrated in Table 18.
Table 18
The relationship of parenting competency and sense of belonging, showing significant correlations using Pearson product-moment correlations between the subscales of the PACR and the SOBI in the total sample of mothers
(N = 155)

<table>
<thead>
<tr>
<th></th>
<th>Warmth</th>
<th>Independence</th>
<th>Strictness</th>
<th>Aggravation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOBI - P</td>
<td>.214***</td>
<td>.218**</td>
<td>-.295***</td>
<td>-.559***</td>
</tr>
<tr>
<td></td>
<td>p = .008</td>
<td>p = .006</td>
<td>p = .000</td>
<td>p = .000</td>
</tr>
<tr>
<td>SOBI - A</td>
<td>.149 ns</td>
<td>.065 ns</td>
<td>-.282***</td>
<td>-.566***</td>
</tr>
<tr>
<td></td>
<td>p = .003</td>
<td>p = .000</td>
<td>p = .000</td>
<td>p = .000</td>
</tr>
</tbody>
</table>

*** Correlation is significant at the 0.001 level
** Correlation is significant at the 0.01 level

Table 19
The relationship of parenting competency and sense of belonging, showing significant correlations using Pearson product-moment correlations between the subscales of the PACR and the SOBI in the sample of mentally ill mothers
(n = 89)

<table>
<thead>
<tr>
<th></th>
<th>Warmth</th>
<th>Independence</th>
<th>Strictness</th>
<th>Aggravation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOBI - P</td>
<td>.206 ns</td>
<td>.113 ns</td>
<td>-.314*</td>
<td>-.514***</td>
</tr>
<tr>
<td></td>
<td>p = .043</td>
<td>p = .004</td>
<td>p = .000</td>
<td>p = .000</td>
</tr>
<tr>
<td>SOBI - A</td>
<td>.044 ns</td>
<td>-.069 ns</td>
<td>-.352**</td>
<td>-.547***</td>
</tr>
<tr>
<td></td>
<td>p = .003</td>
<td>p = .000</td>
<td>p = .000</td>
<td>p = .000</td>
</tr>
</tbody>
</table>

*** Correlation is significant at the 0.001 level
** Correlation is significant at the 0.01 level
* Correlation is significant at the 0.05 level

Table 20
The relationship of parenting competency and sense of belonging, showing significant correlations using Pearson product-moment correlations between the subscales in the sample of non-mentally ill mothers
(n = 86)

<table>
<thead>
<tr>
<th></th>
<th>Warmth</th>
<th>Independence</th>
<th>Strictness</th>
<th>Aggravation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOBI - P</td>
<td>.143 ns</td>
<td>.154 ns</td>
<td>-.196 ns</td>
<td>-.398***</td>
</tr>
<tr>
<td></td>
<td>p = .000</td>
<td>p = .000</td>
<td>p = .000</td>
<td>p = .000</td>
</tr>
<tr>
<td>SOBI - A</td>
<td>.148 ns</td>
<td>-.008 ns</td>
<td>-.162 ns</td>
<td>-.409***</td>
</tr>
<tr>
<td></td>
<td>p = .000</td>
<td>p = .000</td>
<td>p = .000</td>
<td>p = .000</td>
</tr>
</tbody>
</table>

*** Correlation is significant at the 0.001 level

In the total sample, as shown in Table 18, SOBI – P was weak to nearly moderately correlated with Warmth and Independence, and strongly correlated, in a negative direction, with Strictness and Aggravation. Thus, mothers with higher
scores on the Psychological Experience of Sense of Belonging tend to score higher both on warmth and in encouragement of independence. In contrast, mothers with higher scores on the Psychological Experience of Sense of Belonging tend to score lower in strictness and feel less aggravation.

Calculations of Pearson’s r on the total sample (N = 155) also indicated that Parenting Competency and SOBI – A were significantly correlated on only the Strictness (r = -.280, p = .00) and Aggravation scales (r = -.566, p = .000). SOBI – A is nearly moderate and negative in its correlation to Strictness and strongly and negatively correlated to Aggravation. Those mothers with higher scores on the Antecedents of Sense of Belonging also are less strict and feel less aggravation than mothers with low scores on this measure. There was no significant correlation between SOBI – A and warmth and encouragement of independence.

When the scores of the MI and the NMI mothers were examined separately, using Pearson Product-moment correlations, the strength of some of the relationships between Parenting Competency and Sense of Belonging changed among some of the scales, as illustrated in Tables 19 and 20.

The relationships of SOBI – P and the PACR-Warmth and PACR-Independence scales were no longer significant when the MI mothers and NMI mothers were examined separately. On the PACR-Strictness scale, the correlation with SOBI – P remained significant only for the MI mothers, but increased from a nearly moderate correlation in the total sample (r = -.295, p = .000) to moderately correlated (r = -.314, p = .004), indicating that as scores on SOBI – P increased
among MI mothers, they showed a slightly lower level of strictness. The negative correlation of SOBI – P and PACR – Aggravation was strong for the total sample, \( r = -.559, p = .000 \) and remained strong or nearly strong among both MI mothers \( r = -.514, p = .000 \) and NMI mothers \( r = -.398, p = .000 \), showing a small decrease in the correlations. The decrease was greater for the NMI mothers, even though the correlation remained strong, indicating a slightly less level of aggravation among NMI mothers as their scores increased on the on SOBI – P.

When the correlations of SOBI – A and the PACR subscales were compared between the MI and NMI groups, the correlation of SOBI-A and PACR-Warmth and PACR Independence remained non-significant as in the total sample. Among MI mothers, the negative correlation of SOBI – A and strictness increased in direction, but decreased in strength from strongly correlated \( r = -.280, p = .000 \) in the total sample to moderately correlated \( r = -.352, p = .003 \) in the MI sample. The correlation between SOBI – A and PACR – Strictness became insignificant when the scores of NMI mothers only were tested. When the two groups were examined separately, the PACR – Aggravation Scale remained strongly negatively correlated with SOBI – A for MI mothers \( r = -.547, p = .000 \) and moderately correlated for the NMI mothers \( r = -.398, p = .000 \), compared to the total sample \( r = -.566, p = .000 \). Thus, the relationships between Sense of Belonging and Parenting Competency overall showed small differences between the two groups of mothers.
Research Question 4

The fourth research question asked, "Does Sense of Belonging influence the relationship between mental illness and parenting competency?"

Two ways that Sense of Belonging could influence the relationship between mental illness and parenting competency are as a moderating, or interacting variable, and as a mediating, or intervening variable. Regression analyses in two different procedures as described by Baron and Kenny (1986) were performed to test Sense of Belonging as moderator or mediator of the relationship between Mental Illness and Parenting Competency.

Tests for Moderation

Moderation hypothesis analyses were conducted following the guidelines by Baron and Kenny (1986). Regression analyses were conducted to examine if Sense of Belonging (the hypothesized moderator) moderates the relationship between mental illness (the predictor) and Parenting Competency (the outcome variable). The moderator hypothesis is supported when the interaction of the predictor and moderator is significant; support for the moderator is achieved when the unstandardized regression coefficients are significant. The predictor, Mental Illness was dichotomized and dummy coded as MI = 1 and NMI = -1. Eight separate moderation analysis regressions were conducted. The first four regressions analyzed for hypothesized moderation of SOBI-P on the four PACR scales, Warmth, Independence, Strictness and Aggravation. The fifth through
eighth analyses tested for hypothesized moderation of SOBI – A on the four PACR scales.

SOBI-P as Hypothesized Moderator of the Relationship of PACR and Mental Illness

In the first analysis, Mental Illness (MI, the predictor), Sense of Belonging—Psychological Experience (SOBI- P, the moderator) and the mental illness - sense of belonging (MI x SOBI- P) interaction was regressed on PACR-Warmth. The interaction was not significant (B = 0.00), as illustrated in Table 21. Therefore, the moderator hypothesis was not supported. Sense of Belonging – Psychological Experience does not moderate the relationship between Mental Illness and Warmth.

<table>
<thead>
<tr>
<th>Predictors</th>
<th>B (unstan. Reg. Coeff)</th>
<th>SE B</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental Illness</td>
<td>0.39</td>
<td>1.93</td>
<td>0.11</td>
</tr>
<tr>
<td>SOBI-P</td>
<td>0.07*</td>
<td>0.03</td>
<td>0.20</td>
</tr>
<tr>
<td>Mental Illness x SOBI-P</td>
<td>0.00</td>
<td>0.03</td>
<td>-0.08</td>
</tr>
</tbody>
</table>

*p < .05

In the second analysis, Mental Illness (MI, the predictor), Sense of Belonging—Psychological Experience (SOBI- P, the moderator) and the mental illness - sense of belonging (MI x SOBI- P) interaction was regressed on PACR-Independence. The interaction was not significant (B = 0.01). Therefore, the moderator hypothesis was not supported. Sense of Belonging – Psychological
Experience does not moderate the relationship between Mental Illness and Encouragement of Independence. Results of the second moderation analysis are shown in Table 22.

<table>
<thead>
<tr>
<th>Predictors</th>
<th>B (unstan. Reg. Coeff)</th>
<th>SE B</th>
<th>( \beta )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental Illness</td>
<td>-0.27</td>
<td>1.85</td>
<td>-0.09</td>
</tr>
<tr>
<td>SOBI-P</td>
<td>0.05</td>
<td>0.03</td>
<td>0.15</td>
</tr>
<tr>
<td>Mental Illness X SOBI-P</td>
<td>0.01</td>
<td>0.03</td>
<td>0.22</td>
</tr>
</tbody>
</table>

In the third analysis, Mental Illness (MI, the predictor), Sense of Belonging—Psychological Experience (SOBI- P, the moderator) and the mental illness - sense of belonging (MI x SOBI- P) interaction was regressed on PACR-Strictness. The interaction was not significant (\( \beta = 0.04 \)), shown in Table 23. Therefore, the moderator hypothesis was not supported; Sense of Belonging — Psychological Experience does not moderate the relationship between Mental Illness and Strictness.

In the fourth analysis, Mental Illness (MI, the predictor), Sense of Belonging—Psychological Experience (SOBI- P, the moderator) and the mental illness - sense of belonging (MI x SOBI- P) interaction was regressed on PACR-Aggravation.
Table 23
Summary of regression analysis for testing moderating function of SOBI-P on the relationship between mental illness and PACR-Strictness
(B= unstandardized regression coefficient)

<table>
<thead>
<tr>
<th>Predictors</th>
<th>B (unstan. Reg. Coeff)</th>
<th>SE B</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental Illness</td>
<td>-1.92</td>
<td>1.55</td>
<td>-0.53</td>
</tr>
<tr>
<td>SOBI-P</td>
<td>-0.11***</td>
<td>0.03</td>
<td>-0.31</td>
</tr>
<tr>
<td>Mental Illness X SOBI-P</td>
<td>0.04</td>
<td>0.03</td>
<td>0.58</td>
</tr>
</tbody>
</table>

***p < .001

As illustrated in Table 24, the interaction, (B = 0.00), was not significant. Therefore, the moderator hypothesis was not supported; Sense of Belonging – Psychological Experience does not moderate the relationship between Mental Illness and Aggravation.

Table 24
Summary of regression analysis for testing moderating function of SOBI-P on the relationship between mental illness and PACR-Aggravation
(B= unstandardized regression coefficient)

<table>
<thead>
<tr>
<th>Predictors</th>
<th>B (unstan. Reg. Coeff)</th>
<th>SE B</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental Illness</td>
<td>-1.09</td>
<td>3.08</td>
<td>-0.16</td>
</tr>
<tr>
<td>SOBI-P</td>
<td>-0.32***</td>
<td>0.05</td>
<td>-0.48</td>
</tr>
<tr>
<td>Mental Illness X SOBI-P</td>
<td>0.00</td>
<td>0.05</td>
<td>0.00</td>
</tr>
</tbody>
</table>

***p < .001

SOBI—A as Hypothesized Moderator of the Relationship of PACR and Mental Illness

In the fifth analysis, Mental Illness (MI; the predictor), Sense of Belonging—Antecedents (SOBI-A; the moderator) and the mental illness—sense of belonging (MI x SOBI-A) interaction was regressed on Parenting Competency—Warmth (PACR-Warmth). The interaction, shown in Table 25,
was not significant ($B = 0.04$); therefore, the moderator hypothesis was not supported. Sense of Belonging - Antecedents does not moderate the relationship between Mental Illness and Warmth.

<table>
<thead>
<tr>
<th>Predictors</th>
<th>B (unstan. Reg. Coef)</th>
<th>SE B</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental Illness</td>
<td>-0.88</td>
<td>1.79</td>
<td>-0.5</td>
</tr>
<tr>
<td>SOBI-A</td>
<td>0.08</td>
<td>0.07</td>
<td>0.11</td>
</tr>
<tr>
<td>Mental Illness X SOBI-A</td>
<td>0.04</td>
<td>0.07</td>
<td>0.33</td>
</tr>
</tbody>
</table>

In the sixth analysis, Mental Illness (MI; the predictor), Sense of Belonging—Antecedents (SOBI-A; the moderator) and the mental illness—sense of belonging (MI x SOBI-A) interaction was regressed on PACR-Independence. Table 26 illustrates that the interaction was not significant ($B = 0.02$); therefore, the moderator hypothesis was not supported. Sense of Belonging - Antecedents does not moderate the relationship between Mental Illness and Encouragement of Independence.

<table>
<thead>
<tr>
<th>Predictors</th>
<th>B (unstan. Reg. Coef)</th>
<th>SE B</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental Illness</td>
<td>0.11</td>
<td>1.52</td>
<td>0.04</td>
</tr>
<tr>
<td>SOBI-A</td>
<td>-0.03</td>
<td>0.06</td>
<td>-0.04</td>
</tr>
<tr>
<td>Mental Illness X SOBI-A</td>
<td>0.02</td>
<td>0.06</td>
<td>0.19</td>
</tr>
</tbody>
</table>
In the seventh analysis, shown in Table 27, Mental Illness (MI; the predictor), Sense of Belonging—Antecedents (SOBI-A; the moderator) and the mental illness—sense of belonging (MI x SOBI-A) interaction was regressed on PACR-Strictness. The interaction was not significant ($B = 0.11$); therefore, the moderator hypothesis was not supported. Sense of Belonging - Antecedents does not moderate the relationship between Mental Illness and Strictness.

Table 27

<table>
<thead>
<tr>
<th>Predictors</th>
<th>$B$ (unstan. Reg. Coeff)</th>
<th>$SE_B$</th>
<th>$t$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental Illness</td>
<td>-2.91</td>
<td>1.79</td>
<td>-1.66</td>
</tr>
<tr>
<td>SOBI-A</td>
<td>-0.23</td>
<td>0.07</td>
<td>-3.00</td>
</tr>
<tr>
<td>Mental Illness X SOBI-A</td>
<td>0.11</td>
<td>0.07</td>
<td>1.73</td>
</tr>
</tbody>
</table>

In the eighth analysis, Table 28, Mental Illness (MI; the predictor), Sense of Belonging—Antecedents (SOBI-A; the moderator) and the mental illness—sense of belonging (MI x SOBI-A) interaction was regressed on PACR-Aggravation. The interaction was not significant ($B = 0.09$); therefore, the moderator hypothesis was not supported. Sense of Belonging - Antecedents does not moderate the relationship between Mental Illness and Aggravation.
Table 28
Summary of regression analysis for testing moderating function of SOBI-A on the relationship between mental illness and PACR-Aggravation
(B= unstandardized regression coefficient)

<table>
<thead>
<tr>
<th>Predictors</th>
<th>B (unstan. Reg. Coeff)</th>
<th>SE B</th>
<th>( \beta )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental Illness</td>
<td>-3.28</td>
<td>2.79</td>
<td>-0.49</td>
</tr>
<tr>
<td>SOBI-A</td>
<td>-0.68***</td>
<td>0.10</td>
<td>-0.49</td>
</tr>
<tr>
<td>Mental Illness X SOBI-A</td>
<td>0.09</td>
<td>0.10</td>
<td>0.32</td>
</tr>
</tbody>
</table>

***p < .001

Tests for Mediation

Mediation analyses were conducted following the guidelines by Baron and Kenny (1986). Similar to the moderation analyses, the predictor variable, mental illness was dummy coded into MI = 1 and NMI = -1. Testing mediation is a procedure of three simultaneous regressions for each analysis as described in the methods section. Eight different mediational analyses examined whether Sense of Belonging mediated the relationship between the independent variable, Mental Illness and the dependent variable, Parenting Competency. The first four mediational analyses tested for hypothesized mediation of SOBI-P on the four PACR scales, Warmth, Independence, Strictness and Aggravation. The fifth through eighth analyses tested for hypothesized mediation of SOBI – A on the four PACR scales.

SOBI-P as hypothesized mediator of the relationship of mental illness and PACR
In the first mediation test, Sense of Belonging—Psychological Experience (SOBI-P) was thought to mediate the relationship between independent variable Mental Illness (MI) and dependent variable Parenting Competency—Warmth (PACR-W). To test this, as illustrated in Table 29, three regressions were conducted. First, Mental Illness was used to predict SOBI-P; second, mental illness was used to predict PACR-W; third, both MI and SOBI-P were used to predict PACR-W. For successful mediation to hold, several conditions must have been met. Mental Illness must separately have influenced SOBI-P and PACR-W (this was tested in two separate regression equations), and SOBI-P must have shown a unique influence on PACR-W while accounting for Mental Illness (this was tested in the third equation). Mediation would hold if these three preliminary conditions were met, and if there was a reduction in the effect of Mental Illness on PACR-W when SOBI-P was included in the model, compared to when it was excluded (this was tested by comparing the second and third regression equations). For perfect mediation to hold, Mental Illness must no longer have a significant influence on PACR-Warmth once SOBI-P is added in the regression equations. For partial mediation to hold, Mental Illness will have a reduced significant difference on PACR-W once SOBI-P is added in the regression equations. The calculations according to this procedure showed that Mental Illness does not influence PACR-Warmth (equation 2) \((B = 0.45)\); thus, SOBI-P mediating Mental Illness and PACR-Warmth was not supported.
Table 29
Summary of simultaneous regression analyses for testing mediating function of SOBI-P on the relationship between mental illness and PACR-Warmth
(B= unstandardized regression coefficient)

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Predictors</th>
<th>B (unstan. Reg. Coeff.)</th>
<th>SE B</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equation 1:</td>
<td>SOBI-P</td>
<td>Mental Illness</td>
<td>5.06***</td>
<td>0.70</td>
</tr>
<tr>
<td>Equation 2:</td>
<td>PACR-Warmth</td>
<td>Mental Illness</td>
<td>0.45</td>
<td>0.28</td>
</tr>
<tr>
<td>Equation 3:</td>
<td>PACR-Warmth</td>
<td>First enter Mental Illness Then enter SOBI-P</td>
<td>0.10</td>
<td>0.32</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.07*</td>
<td>0.03</td>
</tr>
</tbody>
</table>

***p < .001
*p < .05

In the second mediation test, SOBI-P was thought to mediate the relationship between independent variable, Mental Illness (MI) and the dependent variable PACR-Independence. To test this, three regressions were conducted. First, Mental Illness was used to predict SOBI-P; second, Mental Illness was used to predict PACR-I; third, both Mental Illness and SOBI-P were used to predict PACR-I. The procedure and results are shown in Table 30. For successful mediation to hold, several conditions must have been met. Mental Illness must have separately influenced SOBI-P and PACR-I (this was tested in the first two separate regression equations), and SOBI-P must have shown a unique influence on PACR-I while accounting for Mental Illness (this was tested in the third equation). Mediation holds if these three preliminary conditions are met, and if there is a reduction in the effect in Mental Illness on PACR-I when SOBI-P is included in the model, compared to when it is excluded (this is tested by
comparing the second and third regression equations). In this analysis, Equation 3 showed that SOBI-P did not have a unique influence on PACR-Independence while accounting for Mental Illness (B = 0.05). Therefore, Sense of Belonging does not have a role as a mediator in the relationship between Mental Illness and Encouragement of Independence.

| Table 30 |
|-----------------|-----------------|-----------------|-----------------|
| **Summary of simultaneous regression analyses for testing mediating function of SOBI-P on the relationship between mental illness and PACR-Independence (B= unstandardized regression coefficient)** | **Criterion** | **Predictors** | **B (unstan. Reg. Coeff)** | **SE B** | **B** |
| **Equation 1:** SOBI-P | Mental Illness | 5.06*** | 0.70 | 0.51 |
| **Equation 2:** PACR-Independence | Mental Illness | 0.63** | 0.24 | 0.21 |
| **Equation 3:** PACR-Independence | First enter Mental Illness Then enter SOBI-P | 0.40 | 0.27 | 0.13 |
| First enter Mental Illness Then enter SOBI-P | 0.05 | 0.03 | 0.15 |

\*p < .01, \*\*p < .001

In the third mediation test, SOBI-P was thought to mediate the relationship between independent variable Mental Illness (MI) and the dependent variable PACR—Strictness. To test this, three simultaneous regressions were conducted, as illustrated in Table 31. First, MI was used to predict SOBI-P; second, MI was used to predict PACR- S; third, both MI and SOBI-P were used to predict PACR- S. For successful mediation to hold, several conditions must have been met. Mental Illness must have separately influenced SOBI-P and PACR- S (this was tested in the first two separate regression equations), and SOBI-P must have shown a unique influence on PACR- S while accounting for MI (this was tested in the third equation). Mediation would hold if these three preliminary conditions
were met, and if there was a reduction in the effect of MI on PACR- S when SOBI-P was included in the model, compared to when it was excluded (this was tested by comparing the second and third regression equations). In this analysis, shown in Table 31, Equation 2 showed that Mental Illness did not influence PACR- Strictness ($B = -0.41$); thus mediation did not hold. Sense of Belonging does not mediate the relationship between Mental Illness and Strictness.

| Equation 1: SOBI-P | Mental Illness | 5.06*** | 0.70 | 0.51 |
| Equation 2: PACR-Strictness | Mental Illness | -0.41 | 0.29 | -0.13 |
| Equation 3: PACR-Strictness | First enter Mental Illness Then enter SOBI-P | 0.18 | 0.33 | 0.05 |
| **p < .001** | First enter Mental Illness Then enter SOBI-P | -0.12*** | 0.03 | -0.32 |

In the fourth mediation test, SOBI-P was thought to mediate the relationship between independent variable, Mental Illness (MI) and dependent variable, PACR-Aggravation. To test this, three simultaneous regressions were conducted. First, MI was used to predict SOBI-P; second, MI was used to predict PACR-A; third, both MI and SOBI-P were used to predict PACR-A. For successful mediation to hold, several conditions must have been met. Mental Illness must have separately influenced SOBI-P and PACR-A (this was tested in the first two regression equations), and SOBI-P must have shown a unique
influence on PACR-A while accounting for MI (this was tested in the third equation). Mediation would hold if these three preliminary conditions were met, and if there was a reduction in the effect of MI on PACR-A when SOBI-P was included in the model (tested by comparing the second and third regression equations). In this analysis, Equation 3 showed that perfect mediation held; Mental Illness no longer had a significant influence on PACR-Aggravation once SOBI-P was added in the regression equations. This is shown in the way $B$ declined from $-2.68^{***}$ to $-1.07$, and that SOBI-P, at $B = -0.32^{***}$ remained significantly related to Aggravation. Table 32 shows the mediational analysis of SOBI-P on the relationship of Mental Illness and Level of Aggravation. Equation 1 shows that the unstandardized regression coefficient, $B$, is significant ($B = 5.06^{***}$, $p < .001$) for Mental Illness on SOBI-P. Equation 2 shows that the unstandardized regression coefficient, $B$, is significant ($B = -2.68$, $p < .001$) for Mental Illness on PACR-Aggravation. Equation 3 shows that the influence of Mental Illness on PACR-Aggravation declines ($B = -1.07$, ns) when SOBI-P is added to the equation and is still significantly related to Aggravation ($B = -0.32$, $p < .001$).

| Table 32 |
|------------------|------------------|------------------|------------------|
| **Criterion** | **Predictors** | **$B$ (unstan. Reg. Coeff)** | **SE** | **$B$** |
| Equation 1: SOBI-P | Mental Illness | $5.06^{***}$ | 0.70 | 0.51 |
| Equation 2: PACR-Aggravation | Mental Illness | $-2.68^{***}$ | 0.49 | 0.40 |
| Equation 3: PACR-Aggravation | First enter Mental Illness Then enter SOBI-P | $-1.07$ | 0.51 | -0.16 |
| | SOBI-P | $-0.32^{***}$ | 0.03 | -0.46 |

*p < .0  ***p < .001
SOBI-A as Hypothesized Mediator of the Relationship of Mental Illness and PACR

In the fifth mediation test, SOBI-A was thought to mediate the relationship between independent variable Mental Illness (MI) and dependent variable PACR-Warmth. To test this, three simultaneous regressions were conducted. First, MI was used to predict SOBI-A; second, MI was used to predict PACR-Warmth; third, both MI and SOBI-A were used to predict PACR-W. For successful mediation to hold, MI must separately influence SOBI-A and PACR-W. This was tested in the first two regression equations. And SOBI-A must show a unique influence on PACR-W while accounting for MI. This was tested in the third equation. The mediational analysis is shown in Table 33. Mediation would hold if these three preliminary conditions are met, and if there is a reduction in the effect of MI on PACR-W when SOBI-A is included in the model, (this is tested by comparing the second and third regression equations). For perfect mediation to hold, MI must no longer have a significant influence on PACR-W once SOBI-A is added in the regression equations. In this analysis equation 2 was non-significant ($B = 0.45$). MI did not influence PACR-Warmth; thus the mediation requirement was not met.

In the sixth mediation test, SOBI-A was thought to mediate the relationship between independent variable MI and dependent variable PACR—Independence. To test this, three simultaneous regressions were conducted. First, MI was used to predict SOBI-A; second, MI was used to predict PACR-I; third, both MI and SOBI-A were used to predict PACR-I.
For successful mediation to hold, MI must separately have influenced SOBI-A and PACR-I in the first two equations. And SOBI-A must have shown a unique influence on PACR-I while accounting for Mental Illness in the third equation. Mediation would hold if these three preliminary conditions were met, and if there was a reduction in the effect of MI on PACR-I when SOBI-A was included in the model, tested by comparing the second and third regression equations. For perfect mediation to hold, MI must no longer have significant influence on PACR-I once SOBI-A is added in the regression equations. When the three equations were examined, as shown in Table 34, the influence of Mental Illness in equation 3 did not decrease (B = 0.68) when SOBI-A was added to the equation. The hypothesis of SOBI-A mediating Mental Illness and PACR-I was not supported.
Table 34
Summary of simultaneous regression analyses for testing mediating function of SOBI-A on the relationship between mental illness and PACR-Independence
(B= unstandardized regression coefficient)

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Predictors</th>
<th>B (unstan. Reg. Coef)</th>
<th>SE B</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equation 1: SOBI-A</td>
<td>Mental Illness</td>
<td>2.10***</td>
<td>0.34</td>
<td>0.46</td>
</tr>
<tr>
<td>Equation 2: PACR-Independence</td>
<td>Mental Illness</td>
<td>0.63**</td>
<td>0.24</td>
<td>0.21</td>
</tr>
<tr>
<td>Equation 3: PACR-Independence</td>
<td>First enter Mental Illness, Then enter SOBI-A</td>
<td>0.68***</td>
<td>0.27</td>
<td>0.23</td>
</tr>
<tr>
<td>*p &lt; .05</td>
<td>**p &lt; .01</td>
<td>***p &lt; .001</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the seventh mediation test, SOBI-A was thought to mediate the relationship between independent variable MI and PACR-Strictness. To test this, three simultaneous regressions were conducted. First, MI was used to predict SOBI-A; second, MI was used to predict PACR- S; third, both MI and SOBI-A were used to predict PACR-S. For successful mediation to hold, MI must have influenced SOBI-A and PACR-S in the first two equations. And SOBI-A must have shown a unique influence on PACR-S while accounting for MI in the third equation. Mediation would hold if these three preliminary conditions were met, and if there was a reduction in the effect of MI on PACR- S when SOBI-A was included in the model, (this is tested by comparing the second and third regression equations). For perfect mediation to hold, MI must no longer have had a significant influence on PACR-S once SOBI-A is added in the regression equations. As illustrated in Table 35, the analysis showed that MI did not influence

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PACR-S in equation 2 ($B = -0.41$). Thus, SOBI-A as a mediator of the relationship of Mental Illness and PACR-S was not supported.

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Predictors</th>
<th>B (unst. Reg. Coeff)</th>
<th>SE B</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equation 1:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOBI-A</td>
<td>Mental Illness</td>
<td>2.19***</td>
<td>0.34</td>
<td>0.46</td>
</tr>
<tr>
<td>Equation 2:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PACR-Strictness</td>
<td>Mental Illness</td>
<td>-0.41</td>
<td>0.29</td>
<td>-0.11</td>
</tr>
<tr>
<td>Equation 3:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PACR-Strictness</td>
<td>First enter Mental Illness Then enter SOBI-A</td>
<td>0.07</td>
<td>0.32</td>
<td>0.02</td>
</tr>
</tbody>
</table>

* $p < .05$
** $p < .01$
*** $p < .001$

In the eighth mediation test, SOBI-A was thought to mediate the relationship between independent variable MI and dependent variable PACR-Aggravation. To test this, three simultaneous regressions were conducted, as shown in Table 36. First, MI was used to predict SOBI-A; second, MI was used to predict PACR-A; third, both MI and SOBI-A were used to predict PACR-A. For successful mediation to hold, MI must have separately influenced SOBI-A and PACR-A, tested in the first two regression equations. And SOBI-A must have shown a unique influence on PACR-A while accounting for MI, tested in the third equation. Mediation would hold if these three preliminary conditions were met, and if there was a reduction in the effect of MI on PACR-A when SOBI-A was included in the model, (tested by comparing the second and third regression equations). For perfect mediation to hold, MI must no longer have had significant
influence on PACR-A once SOBI-A was added in the regression equations. The influence of Mental Illness (equation 3) decreased when SOBI-A was added to the equation; thus SOBI-A mediates Mental Illness and PACR-A Aggravation.

Table 36 illustrates the mediational analysis of SOBI-A on the relationship of Mental Illness and Level of Aggravation. Equation 1 shows that the unstandardized regression coefficient, B, is significant ($B = 2.19, p < .001$) for Mental Illness on SOBI-A. Equation 2 shows that the unstandardized regression coefficient, B, is significant ($B = -2.68, p < .001$) for Mental Illness on PACR-A. Equation 3 shows that the influence of Mental Illness on PACR-A Aggravation declines in significance ($B = -1.21$, ns) when SOBI-A is added to the equation and the relationship between SOBI-A and PACR-A Aggravation is still significant.

<table>
<thead>
<tr>
<th>Table 36</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary of simultaneous regression analyses for testing mediating function of SOBI-A on the relationship between mental illness and PACR-A Aggravation (B= unstandardized regression coefficient)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Predictors</th>
<th>B (unstan. Reg. Coeff)</th>
<th>SE B</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equation 1: SOBI-A</td>
<td>Mental Illness</td>
<td>$2.19^{***}$</td>
<td>0.34</td>
<td>0.46</td>
</tr>
<tr>
<td>Equation 2: PACR-A Aggravation</td>
<td>Mental Illness</td>
<td>$-2.68^{***}$</td>
<td>0.49</td>
<td>-0.40</td>
</tr>
<tr>
<td>Equation 3: PACR-A Aggravation</td>
<td>First enter Mental Illness Then enter SOBI-A</td>
<td>$-1.21^*$</td>
<td>0.49</td>
<td>-0.18</td>
</tr>
</tbody>
</table>

* $p < .05$, $^{***}p < .001$

The answers to research question number 4 are summarized by the following points: Sense of Belonging does not act as moderator or interaction variable in the relationship between MI and Parenting Competency on either the SOBI-P scale or the SOBI-A scale. With regard to a mediating role, Sense of Belonging does not mediate, or intervene in the relationship of Mental Illness on
three of the Parenting Competency Scales: Warmth, Independence and Strictness. Mediational analyses showed that both SOBI-P and SOBI-A do mediate, that is, intervene in the relationship between Mental Illness and PACR-Aggravation. Figure 1 illustrates the change in the unstandardized regression coefficient from $B = -2.68^{***}$ to $B = -1.07$, indicating that Mental Illness is no longer a significant predictor of Aggravation if Sense of Belonging - P is taken into account.

FIGURE 2
UNSTANDARDIZED REGRESSION COEFFICIENTS (B) BETWEEN MENTAL ILLNESS AND PACR-A WITHOUT AND WITH SOBI-P AS A MEDIATOR

1A. Without Sense of Belonging - P as a Mediator:

\[
\text{Mental Illness} \quad \rightarrow \quad \text{PACR-Aggravation} \quad \rightarrow \quad \text{SOBI-P} \quad \rightarrow \quad \text{PACR-Aggravation}
\]

Presence of mental illness has a strong negative relationship with PACR-Aggravation.

1B. With Sense of Belonging - P as a Mediator:

\[
\text{Mental Illness} \quad \rightarrow \quad \text{SOBI-P} \quad \rightarrow \quad \text{PACR-Aggravation}
\]

The influence of Mental Illness on PACR-Aggravation declines when SOBI-P is added to the equation.

Similarly, Figure 2 illustrates the change in the unstandardized regression coefficient from $B = -2.68^{***}$ to $B = -1.21$. indicating that Mental Illness is no longer a significant predictor of Aggravation if Sense of Belonging - A is taken into account.
FIGURE 3
UNSTANDARDIZED REGRESSION COEFFICIENTS (B) BETWEEN MENTAL ILLNESS AND PACR-A WITHOUT AND WITH SOBI-A AS A MEDIATOR

A. Without Sense of Belonging – Antecedents (A) as a Mediator

Mental Illness \( \rightarrow \) -2.68*** PACR—Aggravation

B. With Sense of Belonging as a Mediator

Mental Illness \( \rightarrow \) -1.21 SOB—A PACR—Aggravation

SOB—A \( \rightarrow \) -0.67***

Ancillary Findings

The differences in scores of the study variables, Parenting Competency and Sense of Belonging were examined with regard to various personal, family, and health characteristics. Comparisons of means and one way ANOVAS were performed on the total sample and on the two different samples of mothers with and without mental illness (MI, NMI) in order to assess whether or not a particular characteristic had an effect on the score of the study variable.

Personal characteristics

Age

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With regard to age, comparison of means and one-way ANOVA, illustrated in Tables 37 and 38, revealed that in the total sample, age of under 30 years or over 30 years was statistically significant in relation to Sense of Belonging on both the SOBI-P \((F = 12.9, p = .000)\) and SOBI-A \((F = 9.5, p = .002)\) scales. Mothers under 30 years of age scored significantly lower on the SOBI-P \((m = 53.4, SD = 9.6)\) than mothers over 30 years \((m = 60.4, SD = 9.6)\). In terms of the SOBI-A, younger mothers in the total sample also scored lower than older mothers, \((m = 24.7, SD = 4.7)\) and \(m = 27.6, SD = 4.5)\), respectively.

In the total sample, a significant difference was found on the PACR - Aggravation scale. A comparison of means of the two age groups of mothers \((F = 5.3, p = .023)\) indicated that younger mothers \((m = 42.9, S.D. = 6.6)\) experienced more aggravation in association with parenting, than older mothers \((m = 39.9, S.D. = 6.6)\). Tables 37 and 38 illustrate the analysis of the effect of age on scale scores in the Total Sample and in the MI and NMI subsamples.

In the subsample of MI mothers \((n = 69)\), age was statistically significant on both Sense of Belonging scales \((SOBI-P, F = 5.3, p = .025; SOBI-A, F = 4.1, p = .047)\). Mothers with mental illness (MI mothers) under 30 years of age scored lower \((m = 49.3, S.D. = 7.7)\) on the SOBI-P than mothers over 30 years of age \((m = 54.9, S.D. = 9.8)\), indicating that younger MI mothers had a significantly lowers psychological experience of sense of belonging than older MI mothers.

Among MI mothers, there were no significant differences on the Parenting competency scales according to age.
Table 37  
Means and standard deviations of scores on SOBI and PACR subscales  
For mothers in the total sample and MI, NMI subsamples according to age dichotomized into younger (Under 30 Years of Age) and older (Over 30 Years of Age)

<table>
<thead>
<tr>
<th></th>
<th>Total Sample</th>
<th>MI Mothers</th>
<th>NMI Mothers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N = 155</td>
<td>n = 69</td>
<td>n = 86</td>
</tr>
<tr>
<td></td>
<td>Under 30</td>
<td>Over 30</td>
<td>Under 30</td>
</tr>
<tr>
<td>SOBI-P</td>
<td>Mean</td>
<td>53.4</td>
<td>60.4</td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>9.7</td>
<td>9.6</td>
</tr>
<tr>
<td>SOBI-A</td>
<td>Mean</td>
<td>24.7</td>
<td>27.6</td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>4.7</td>
<td>4.5</td>
</tr>
<tr>
<td>PACR-W</td>
<td>Mean</td>
<td>34.0</td>
<td>34.1</td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>3.0</td>
<td>3.6</td>
</tr>
<tr>
<td>PACR-I</td>
<td>Mean</td>
<td>28.7</td>
<td>28.9</td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>2.9</td>
<td>3.0</td>
</tr>
<tr>
<td>PACR-S</td>
<td>Mean</td>
<td>20.9</td>
<td>19.9</td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>3.1</td>
<td>3.7</td>
</tr>
<tr>
<td>PACR-A</td>
<td>Mean</td>
<td>42.9</td>
<td>39.9</td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>6.6</td>
<td>6.6</td>
</tr>
</tbody>
</table>

Table 38  
ANOVA: Personal characteristic: Age  
dichotomized into younger (under 40yrs) and older (40 years and over)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Entire Sample</th>
<th>MI mothers</th>
<th>NMI mothers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N = 155</td>
<td>n = 69</td>
<td>n = 86</td>
</tr>
<tr>
<td>SOBI-P</td>
<td>12.9 .000***</td>
<td>5.3 .025*</td>
<td>1.2 .270</td>
</tr>
<tr>
<td>SOBI-A</td>
<td>9.5 .002***</td>
<td>4.1 .047**</td>
<td>0.7 .392</td>
</tr>
<tr>
<td>PACR-W</td>
<td>0.0 .864</td>
<td>0.0 .852</td>
<td>0.0 .930</td>
</tr>
<tr>
<td>PACR-I</td>
<td>0.1 .760</td>
<td>0.0 .896</td>
<td>0.0 .933</td>
</tr>
<tr>
<td>PACR-S</td>
<td>2.2 .143</td>
<td>3.9 .052</td>
<td>0.8 .385</td>
</tr>
<tr>
<td>PACR-A</td>
<td>5.3 .023*</td>
<td>3.0 .090</td>
<td>0.0 .861</td>
</tr>
</tbody>
</table>

*p < .05  
**p < .01  
***p < .001

The subsample of mothers without mental illness demonstrated a similar, but non-significant pattern of lower SOBI-P and SOBI-A scores among the younger mothers. And, there were no significant differences, according to age, on the PACR subscales among the NMI mothers.
The results of examining the effect of age on the scale scores must be considered in light of the frequencies of each age group. The number of mothers under 40 years of age represented only 19% of the total sample, as compared to 81% over 40 years of age. Therefore results were influenced by this inequality.

Income

In the total sample, comparison of means and one-way ANOVA, illustrated in Tables 39 and 40, showed that the influence of level of income under $35,000 or over $35,000 was statistically significant in relation to Sense of Belonging on both the SOBI-P ($F = 13.3, p = .000$) and SOBI-A ($F = 4.5, p = .036$) scales. Mothers with lower incomes scored significantly lower on the SOBI-P ($m = 55.3, SD = 10.6$) than mothers of higher income ($m = 61.1, SD = 9.2$). In terms of the SOBI-A, mothers with lower incomes in the total sample also scored lower than mothers with higher incomes, ($m = 26.0, SD 5.9, and m = 27.6, SD = 3.6$, respectively). With regard to Parenting Competency in the total sample, level of income made a significant difference on PACR-Independence ($F = 7.5, p = .007$), Strictness ($F = 7.6, p = .007$) and Aggravation ($F = 5.3, p = .023$). Mean scores indicated that mothers with lower incomes were less likely to encourage independence, were stricter and experienced more aggravation associated with parenting.

Among MI mothers, one-way ANOVA indicated that only SOBI-A was influenced by income ($F = 4.8, p = .033$), with mothers in the lower income group having lower scores on the antecedents of Sense of Belonging. The Parenting
Competency of mothers with mental illness (MI) was significantly influenced by income on PACR-Independence ($F = 5.4$, $p = .023$) and PACR-Strictness ($F = 6.9$, $p = .010$). Mean scale scores in the MI group indicated that mothers with lower incomes had significantly lower mean scores on encouragement of independence and significantly higher mean scores on strictness than MI mothers with higher incomes.

Among NMI mothers, the influence of level of income on Sense of Belonging was significant on the SOBI-A only ($F = 4.6$, $p = .036$). However, unlike MI mothers or the Total Sample, NMI mothers with lower incomes had higher mean scores on SOBI-A than NMI mothers with higher incomes. No significant differences in Parenting Competency according to income level were demonstrated among NMI mothers.

Table 39
Means and standard deviations of scores on SOBI and PACR subscales for mothers in the total sample and MI, NMI subsamples according to income dichotomized into under $35,000 and over $35,000

<table>
<thead>
<tr>
<th></th>
<th>Total Sample N = 159</th>
<th>MI Mothers n = 69</th>
<th>NMI Mothers n = 86</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Under $35,000</td>
<td>Over $35,000</td>
<td>Under $35,000</td>
</tr>
<tr>
<td>SOBI-P Mean</td>
<td>55.3</td>
<td>61.1</td>
<td>51.4</td>
</tr>
<tr>
<td>S.D.</td>
<td>10.3</td>
<td>9.2</td>
<td>9.3</td>
</tr>
<tr>
<td>SOBI-A Mean</td>
<td>26.0</td>
<td>27.6</td>
<td>23.9</td>
</tr>
<tr>
<td>S.D.</td>
<td>5.9</td>
<td>3.6</td>
<td>4.2</td>
</tr>
<tr>
<td>PACR-W Mean</td>
<td>33.5</td>
<td>34.4</td>
<td>33.3</td>
</tr>
<tr>
<td>S.D.</td>
<td>3.1</td>
<td>3.6</td>
<td>3.0</td>
</tr>
<tr>
<td>PACR-I Mean</td>
<td>28.0</td>
<td>29.3</td>
<td>27.4</td>
</tr>
<tr>
<td>S.D.</td>
<td>3.0</td>
<td>2.9</td>
<td>3.1</td>
</tr>
<tr>
<td>PACR-S Mean</td>
<td>21.2</td>
<td>19.5</td>
<td>21.7</td>
</tr>
<tr>
<td>S.D.</td>
<td>3.7</td>
<td>3.4</td>
<td>4.0</td>
</tr>
<tr>
<td>PACR-A Mean</td>
<td>42.1</td>
<td>39.5</td>
<td>44.0</td>
</tr>
<tr>
<td>S.D.</td>
<td>7.2</td>
<td>5.9</td>
<td>6.1</td>
</tr>
</tbody>
</table>
Table 40
ANOVA: Personal characteristic: Income
dichotomized into Under $35,000 and Over $35,000

<table>
<thead>
<tr>
<th>Variable</th>
<th>Entire Sample N = 155</th>
<th>MI mothers n = 69</th>
<th>NM mothers n = 86</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOBI-P</td>
<td>F 13.3, Sig .000***</td>
<td>F 0.0952</td>
<td>F 0.0952</td>
</tr>
<tr>
<td>SOBI-A</td>
<td>4.8 .036*</td>
<td>4.6 .036*</td>
<td>4.6 .036*</td>
</tr>
<tr>
<td>PACR-W</td>
<td>2.4 .121</td>
<td>3.7 .057</td>
<td>0.6 .453</td>
</tr>
<tr>
<td>PACR-I</td>
<td>7.5 .007**</td>
<td>5.4 .023*</td>
<td>0.1 .712</td>
</tr>
<tr>
<td>PACR-S</td>
<td>7.6 .007**</td>
<td>6.9 .010**</td>
<td>0.1 .722</td>
</tr>
<tr>
<td>PACR-A</td>
<td>5.3 .023*</td>
<td>0.0 .968</td>
<td>0.0 .968</td>
</tr>
</tbody>
</table>

* p < 0.05  ** p < 0.01  *** p < 0.001

Education

Based on the Total Sample there was no significant influence of level of education on SOBI-P or SOBI-A, as illustrated in Table 42. With regard to Parenting Competency in the Total Sample (N=155), level of education significantly influenced PACR – Encouragement of Independence (F = 5.2, p = .024), PACR-Strictness (F = 8.1, p = .005), PACR – Aggravation (F = 7.0, p = .009).

In the MI subsample, Sense of Belonging (SOBI-A) was significantly affected by level of education (F = 4.1, p = .046). MI mothers with a higher level of education had significantly higher mean scores on SOBI-A than MI mothers with a lower level of education. Parenting Competency among MI mothers was influenced significantly by level of education with respect to Encouragement of Independence (F = 6.2, p = .016) and Strictness (F = 5.4, p = .023). Similar to scores of mothers in the total Sample, MI mothers with a higher level of education had higher mean scores on Encouragement of Independence and lower mean scores on Strictness.
Table 41
Means and standard deviations of scores on SOBI and PACR subscales for mothers in the total sample and MI, NMI subsamples according to level of education dichotomized into less than bachelors and bachelors or higher

<table>
<thead>
<tr>
<th></th>
<th>Total Sample N = 155</th>
<th>MI Mothers n = 69</th>
<th>NMI Mothers n = 86</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Less than Bachelors</td>
<td>Bachelors Or higher</td>
<td>Less than Bachelors</td>
</tr>
<tr>
<td>SOBI-P</td>
<td>Mean 57.9</td>
<td>60.5</td>
<td>Mean 51.9</td>
</tr>
<tr>
<td></td>
<td>S.D. 10.0</td>
<td>9.7</td>
<td>S.D. 8.6</td>
</tr>
<tr>
<td>SOBI-A</td>
<td>Mean 27.0</td>
<td>27.1</td>
<td>Mean 23.9</td>
</tr>
<tr>
<td></td>
<td>S.D. 5.1</td>
<td>4.1</td>
<td>S.D. 3.9</td>
</tr>
<tr>
<td>PACR-W</td>
<td>Mean 33.7</td>
<td>34.7</td>
<td>Mean 33.2</td>
</tr>
<tr>
<td></td>
<td>S.D. 3.6</td>
<td>3.3</td>
<td>S.D. 3.3</td>
</tr>
<tr>
<td>PACR-I</td>
<td>Mean 28.4</td>
<td>29.5</td>
<td>Mean 27.5</td>
</tr>
<tr>
<td></td>
<td>S.D. 3.1</td>
<td>2.7</td>
<td>S.D. 3.1</td>
</tr>
<tr>
<td>PACR-S</td>
<td>Mean 20.8</td>
<td>19.5</td>
<td>Mean 21.4</td>
</tr>
<tr>
<td></td>
<td>S.D. 3.6</td>
<td>3.4</td>
<td>S.D. 4.0</td>
</tr>
<tr>
<td>PACR-A</td>
<td>Mean 41.6</td>
<td>38.8</td>
<td>Mean 44.1</td>
</tr>
<tr>
<td></td>
<td>S.D. 6.6</td>
<td>6.4</td>
<td>S.D. 5.7</td>
</tr>
</tbody>
</table>

A one-way ANOVA indicated a significant effect of level of education in the NMI subsample on SOBI-A ($F = 7.1, p = .009$). However, the mean scores of NMI mothers with higher levels of education were lower on the SOBI-A than NMI mothers with lower levels of education. This was inconsistent with the findings of the MI group or the Total Sample. There was no significant effect on Parenting Competency among NMI mothers according to level of education.
Table 42
ANOVA: Personal characteristic: Education
dichotomized into less than bachelor's degree
and bachelor's degree or higher

<table>
<thead>
<tr>
<th>Variable</th>
<th>Entire Sample N = 155</th>
<th>MI mothers n = 69</th>
<th>NMI mothers n = 86</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F  Sig</td>
<td>F  Sig</td>
<td>F  Sig</td>
</tr>
<tr>
<td>SOBI-P</td>
<td>2.6 .108</td>
<td>3.4 .07</td>
<td>0.5 .462</td>
</tr>
<tr>
<td>SOBI-A</td>
<td>0.0 .873</td>
<td>4.1 .046*</td>
<td>7.1 .009**</td>
</tr>
<tr>
<td>PACR-W</td>
<td>3.2 .007</td>
<td>1.9 .173</td>
<td>0.8 .375</td>
</tr>
<tr>
<td>PACR-I</td>
<td>5.2 .024*</td>
<td>6.2 .016*</td>
<td>0.2 .619</td>
</tr>
<tr>
<td>PACR-S</td>
<td>8.1 .005**</td>
<td>5.4 .023*</td>
<td>2.1 .155</td>
</tr>
<tr>
<td>PACR-A</td>
<td>7.0 .008**</td>
<td>1.9 .173</td>
<td>2.4 .126</td>
</tr>
</tbody>
</table>

*p < .05
**p < .01
***p < .001

Ethnicity

Because there was not enough diversity in the numbers of various ethnic
groups who responded to the survey, categories were collapsed and ethnicity was
dichotomized into Caucasian or Other Than Caucasian. In evaluating the
relationship of ethnicity to each of the study variables, comparison of means and
one way ANOVAs were performed, as illustrated in Tables 43 and 44.

In the Total Sample, ethnicity had no effect on Sense of Belonging P or A.
Ethnicity had significant influence on one Parenting Competency, PACR-S (F =
17.8, p = .000). Mean scores indicated that mothers of Caucasian ethnicity had
significantly lower scores on Strictness as compared to Other than Caucasian
mothers in the Total Sample.

Among MI mothers, significant differences were found on the SOBI-P
scale, with Caucasian mothers having lower scores on SOBI-P (F = 5.3, p = .024)
and showing lower scores than Other than Caucasian mothers on strictness (F =
9.8, p = .003).
Table 43
Means and standard deviations of scores on SOBI and PACR subscales for mothers in the total sample and MI, NMI subsamples according to ethnicity dichotomized into other than caucasian and caucasian

<table>
<thead>
<tr>
<th></th>
<th>Total Sample N = 155</th>
<th>MI Mothers n = 69</th>
<th>NMI Mothers n = 86</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Other</td>
<td>Caucasian</td>
<td>Other</td>
</tr>
<tr>
<td>SOBI-P</td>
<td>Mean 56.7</td>
<td>59.1</td>
<td>49.4</td>
</tr>
<tr>
<td></td>
<td>S.D. 11.5</td>
<td>9.2</td>
<td>9.4</td>
</tr>
<tr>
<td>SOBI-A</td>
<td>Mean 27.2</td>
<td>26.9</td>
<td>23.9</td>
</tr>
<tr>
<td></td>
<td>S.D. 5.3</td>
<td>4.4</td>
<td>3.9</td>
</tr>
<tr>
<td>PACR-W</td>
<td>Mean 33.7</td>
<td>34.3</td>
<td>32.9</td>
</tr>
<tr>
<td></td>
<td>S.D. 3.7</td>
<td>3.4</td>
<td>2.7</td>
</tr>
<tr>
<td>PACR-I</td>
<td>Mean 28.6</td>
<td>28.9</td>
<td>27.0</td>
</tr>
<tr>
<td></td>
<td>S.D. 2.9</td>
<td>3.0</td>
<td>2.4</td>
</tr>
<tr>
<td>PACR-S</td>
<td>Mean 21.9</td>
<td>19.4</td>
<td>22.9</td>
</tr>
<tr>
<td></td>
<td>S.D. 3.1</td>
<td>3.6</td>
<td>3.2</td>
</tr>
<tr>
<td>PACR-A</td>
<td>Mean 41.2</td>
<td>40.1</td>
<td>45.1</td>
</tr>
<tr>
<td></td>
<td>S.D. 7.8</td>
<td>6.1</td>
<td>5.8</td>
</tr>
</tbody>
</table>

Table 44
ANOVA: Personal characteristic: Ethnicity dichotomized into other than Caucasian and Caucasian

<table>
<thead>
<tr>
<th>Variable</th>
<th>Entire Sample N = 155</th>
<th>MI mothers n = 69</th>
<th>NMI mothers n = 86</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F Sig</td>
<td>F Sig</td>
<td>F Sig</td>
</tr>
<tr>
<td>SOBI-P</td>
<td>0.1 .794</td>
<td>5.3 .024**</td>
<td>2.3 .13</td>
</tr>
<tr>
<td>SOBI-A</td>
<td>0.1 .720</td>
<td>1.0 .317</td>
<td>1.2 .298</td>
</tr>
<tr>
<td>PACR-W</td>
<td>0.8 .381</td>
<td>1.3 .251</td>
<td>0.1 .765</td>
</tr>
<tr>
<td>PACR-I</td>
<td>0.4 .515</td>
<td>4.5 .039**</td>
<td>0.6 .438</td>
</tr>
<tr>
<td>PACR-S</td>
<td>17.8 .000***</td>
<td>9.8 .003**</td>
<td>9.0 .004***</td>
</tr>
<tr>
<td>PACR-A</td>
<td>0.9 .353</td>
<td>2.3 .133</td>
<td>0.1 .732</td>
</tr>
</tbody>
</table>

*p < .05  
**p < .01  
***p < .001

Among NMI mothers, ethnicity did not have an influence on Sense of Belonging. With regard to Parenting competency, similar to the Total Sample and MI subsample, a significant difference was found among NMI mothers on
strictness ($F = 9.0, p = .003$). Mean scores of Caucasian NMI mothers were significantly lower than on strictness than Other than Caucasian NMI mothers.

Marital status

Due to the small numbers of respondents in some of the categories of the Marital Status question of the survey, this characteristic was dichotomized into married and other than married. Findings from the ANOVA on the Total Sample indicated statistically significant differences between the mothers who were married and mothers who were other than married on the SOBI-P ($F = 17.4, p = .000$) and SOBI-A ($F = 7.5 p = .007$). This is illustrated in Tables 45 and 46. The mean scores indicated that married mothers had significantly lower scores on both Sense of Belonging scales.

Parenting Competency Scores in the Total Sample differed significantly according to marital status on PACR- Strictness ($F = 6.2, p = .000$) and PACR-Aggravation ($F = 20.4, p = .000$). Married mothers scored significantly higher on both scales.

Mothers in the MI subsample yielded a difference only on the SOBI-P ($F = 9.6, p = .003$), with married MI mothers scoring significantly lower on Psychological Experience of Sense of Belonging. Marital status also showed a significant influence on the PACR-Aggravation scale ($F = 4.1, p = .046$). Married MI mothers had higher mean scores on Aggravation than unmarried MI mothers.

There were no significant differences in NMI mothers between the married and other than married groups in Sense of Belonging.
The NMI mothers did differ significantly on the PACR-Aggravation scale, with married NMI mothers having higher mean scores, consistent with the Total Sample and the MI subsample. Marital status had a consistent influence on the PACR-A in all three groups.

Table 45

Means and standard deviations of scores on SOBI and PACR subscales
For mothers in the total sample and MI, NMI subsamples according to Marital Status
dichotomized into Married and Other Than Married

<table>
<thead>
<tr>
<th></th>
<th>Total Sample N = 155</th>
<th>MI Mothers n = 69</th>
<th>NMI Mothers n = 86</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Married</td>
<td>Other</td>
<td>Married</td>
</tr>
<tr>
<td>SOBI-P</td>
<td>Mean</td>
<td>54.8</td>
<td>61.4</td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>11.0</td>
<td>8.4</td>
</tr>
<tr>
<td>SOBI-A</td>
<td>Mean</td>
<td>25.7</td>
<td>27.3</td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>5.0</td>
<td>4.3</td>
</tr>
<tr>
<td>PACR-W</td>
<td>Mean</td>
<td>33.6</td>
<td>34.4</td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>3.7</td>
<td>3.4</td>
</tr>
<tr>
<td>PACR-I</td>
<td>Mean</td>
<td>28.6</td>
<td>29.0</td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>2.8</td>
<td>3.1</td>
</tr>
<tr>
<td>PACR-S</td>
<td>Mean</td>
<td>21.1</td>
<td>19.6</td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>3.6</td>
<td>3.6</td>
</tr>
<tr>
<td>PACR-A</td>
<td>Mean</td>
<td>43.4</td>
<td>38.7</td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>6.6</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Table 46

ANOVA: Personal characteristic: Marital status
dichotomized into Married and Other Than Married

<table>
<thead>
<tr>
<th>Variable</th>
<th>Entire Sample N = 155</th>
<th>MI mothers n = 69</th>
<th>NMI mothers n = 86</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOBI-P</td>
<td>F 17.4, .000***</td>
<td>F 9.6, .003**</td>
<td>F 1.1, .288</td>
</tr>
<tr>
<td>SOBI-A</td>
<td>F 7.5, .007***</td>
<td>F 3.5, .065</td>
<td>F 0.2, .684</td>
</tr>
<tr>
<td>PACR-W</td>
<td>F 1.7, .190</td>
<td>F 0.1, .824</td>
<td>F 1.3, .254</td>
</tr>
<tr>
<td>PACR-I</td>
<td>F 0.6, .444</td>
<td>F 0.2, .691</td>
<td>F 0.0, .875</td>
</tr>
<tr>
<td>PACR-S</td>
<td>F 8.2, .014*</td>
<td>F 3.5, .065</td>
<td>F 1.3, .261</td>
</tr>
<tr>
<td>PACR-A</td>
<td>F 20.4, .000***</td>
<td>F 4.1, .048*</td>
<td>F 9.3, .003**</td>
</tr>
</tbody>
</table>

*p < .05
**p < .01
***p < .001

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Family Characteristics

With an interest in exploring the relationship of family characteristics and the main variables, one way ANOVAs were conducted.

Number of children

With regard to family size, the differences in means (Table 47) of the main variables, between mothers with one child or more than one child, were examined using ANOVAs with results illustrated in Table 48.

In the Total Sample, statistically significant differences between the groups were found on both SOBI-P ($F = 9.2$, $p = .000$) and SOBI-A ($F = 5.9$, $p = .003$), with mothers with more than one child demonstrating higher mean scores on Sense of Belonging than mothers with only one child. The Total Sample also showed significant differences on the PACR-S scale ($F = 5.1$, $p = .007$), with mothers having one child scoring higher on Strictness than mothers with more than one child.

No differences among MI mothers based on number of children were found on either of the SOBI scales. The PACR-Strictness scale, however, showed that MI mothers with only one child had higher mean scores on Strictness. than was significantly influenced by number of children found

In the NMI subsample, no significant differences were found on the main variables according to the number of children for each mother.
Table 47
Means and standard deviations of scores on SOBI and PACR subscales for mothers in the total sample and MI, NMI subsamples according to number of children dichotomized into One or More than One

<table>
<thead>
<tr>
<th></th>
<th>Total Sample N = 155</th>
<th>MII Mothers n = 69</th>
<th>NMI Mothers n = 86</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>One Child More than One</td>
<td>One Child More than One</td>
<td>One Child More than One</td>
</tr>
<tr>
<td>SOBI-P</td>
<td>Mean: 57.7 61.7</td>
<td>Mean: 51.4 55.9</td>
<td>Mean: 62.5 64.2</td>
</tr>
<tr>
<td>S.D.</td>
<td>10.1 9.1</td>
<td>9.7 8.7</td>
<td>8.4 7.4</td>
</tr>
<tr>
<td>SOBI-A</td>
<td>Mean: 26.0 27.9</td>
<td>Mean: 23.9 25.6</td>
<td>Mean: 28.4 29.8</td>
</tr>
<tr>
<td>S.D.</td>
<td>4.8 4.7</td>
<td>4.2 3.8</td>
<td>3.5 4.7</td>
</tr>
<tr>
<td>PACR-W</td>
<td>Mean: 33.8 34.4</td>
<td>Mean: 33.1 34.2</td>
<td>Mean: 34.5 34.5</td>
</tr>
<tr>
<td>S.D.</td>
<td>3.4 3.5</td>
<td>3.4 3.4</td>
<td>3.4 3.6</td>
</tr>
<tr>
<td>PACR-I</td>
<td>Mean: 28.4 29.2</td>
<td>Mean: 27.7 28.7</td>
<td>Mean: 29.2 29.5</td>
</tr>
<tr>
<td>S.D.</td>
<td>3.1 2.8</td>
<td>3.1 2.7</td>
<td>3.0 2.9</td>
</tr>
<tr>
<td>PACR-S</td>
<td>Mean: 20.8 19.7</td>
<td>Mean: 21.4 19.6</td>
<td>Mean: 19.7 19.8</td>
</tr>
<tr>
<td>S.D.</td>
<td>3.9 3.3</td>
<td>4.2 4.0</td>
<td>3.3 2.9</td>
</tr>
<tr>
<td>PACR-A</td>
<td>Mean: 43.4 38.7</td>
<td>Mean: 44.0 42.0</td>
<td>Mean: 41.3 36.9</td>
</tr>
<tr>
<td>S.D.</td>
<td>6.8 6.0</td>
<td>6.3 5.7</td>
<td>7.3 5.4</td>
</tr>
</tbody>
</table>

Table 48
ANOVA: Family characteristic: Number of children dichotomized into One and More Than One

<table>
<thead>
<tr>
<th>Variable</th>
<th>Entire Sample N = 155</th>
<th>MII mothers n = 69</th>
<th>NMI mothers n = 86</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOBI-P</td>
<td>F: 9.2 Sig: .000***</td>
<td>F: 2.4 Sig: .102</td>
<td>F: 1.6 Sig: .209</td>
</tr>
<tr>
<td>SOBI-A</td>
<td>5.9 Sig: .003**</td>
<td>1.7 Sig: .192</td>
<td>0.5 Sig: .618</td>
</tr>
<tr>
<td>PACR-W</td>
<td>1.3 Sig: .279</td>
<td>0.8 Sig: .433</td>
<td>1.8 Sig: .169</td>
</tr>
<tr>
<td>PACR-I</td>
<td>1.7 Sig: .186</td>
<td>0.9 Sig: .421</td>
<td>0.5 Sig: .619</td>
</tr>
<tr>
<td>PACR-S</td>
<td>5.1 Sig: .007**</td>
<td>4.3 Sig: .017*</td>
<td>0.1 Sig: .920</td>
</tr>
<tr>
<td>PACR-A</td>
<td>2.8 Sig: .063</td>
<td>0.4 Sig: .703</td>
<td>1.3 Sig: .280</td>
</tr>
</tbody>
</table>

*p < .05  
**p < .01  
***p < .001

Number of helpers with parenting

The number of parenting helpers, be they friends, extended family members, neighbors or health care professionals, showed no influence on Sense...
of Belonging or Parenting Competency in the study populations. Tables 49 and 50 display the data supporting this finding.

Table 49
Means and standard deviations of scores on SOBI and PACR subscales for mothers in the total sample, MI, and NMI subsamples according to number of helpers with parenting dichotomized into One and More than One

<table>
<thead>
<tr>
<th></th>
<th>Total Sample N = 155</th>
<th>MI Mothers n = 69</th>
<th>NMI Mothers n = 86</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>One Helper</td>
<td>More Than One</td>
<td>One Helper</td>
</tr>
<tr>
<td>SOBI-P</td>
<td>Mean</td>
<td>58.6</td>
<td>59.8</td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>10.6</td>
<td>9.7</td>
</tr>
<tr>
<td>SOBI-A</td>
<td>Mean</td>
<td>27.2</td>
<td>28.5</td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>5.0</td>
<td>3.6</td>
</tr>
<tr>
<td>PACR-W</td>
<td>Mean</td>
<td>34.2</td>
<td>33.8</td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>3.5</td>
<td>3.4</td>
</tr>
<tr>
<td>PACR-I</td>
<td>Mean</td>
<td>26.9</td>
<td>28.8</td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>3.0</td>
<td>3.0</td>
</tr>
<tr>
<td>PACR-S</td>
<td>Mean</td>
<td>20.1</td>
<td>20.3</td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>3.6</td>
<td>3.1</td>
</tr>
<tr>
<td>PACR-A</td>
<td>Mean</td>
<td>40.7</td>
<td>39.7</td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>6.8</td>
<td>6.1</td>
</tr>
</tbody>
</table>

Table 50
ANOVA: Family characteristic: Number of helpers with parenting dichotomized into One and More Than One

<table>
<thead>
<tr>
<th>Variable</th>
<th>Entire Sample N = 155</th>
<th>MI mothers n = 69</th>
<th>NMI mothers n = 86</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOBI-P</td>
<td>F .211</td>
<td>F .278</td>
<td>F .663</td>
</tr>
<tr>
<td>SOBI-A</td>
<td>0.9 .465</td>
<td>0.2 .944</td>
<td>1.0 .356</td>
</tr>
<tr>
<td>PACR-W</td>
<td>0.8 .542</td>
<td>1.0 .403</td>
<td>0.8 .444</td>
</tr>
<tr>
<td>PACR-I</td>
<td>0.1 .966</td>
<td>0.7 .584</td>
<td>1.2 .294</td>
</tr>
<tr>
<td>PACR-S</td>
<td>0.9 .473</td>
<td>1.0 .414</td>
<td>0.3 .750</td>
</tr>
<tr>
<td>PACR-A</td>
<td>1.1 .336</td>
<td>0.2 .817</td>
<td>0.6 .534</td>
</tr>
</tbody>
</table>
Health Characteristics

As the final area of interest, ANOVAs were conducted to examine the influence of health characteristics such as co-occurring medical illnesses, stress and trouble managing the dual roles of parenting and maintaining a household.

Co-occurring Medical Illness

There was no difference in the mean scores on Sense of Belonging or Parenting Competency based on whether or not mothers had a co-occurring medical illness in the Total Sample, MI mothers and NMI mothers. Means and standard deviations on the main variables are illustrated in Table 51; ANOVAs are reported in Table 52.

<table>
<thead>
<tr>
<th></th>
<th>Total Sample N = 155</th>
<th>MI Sample n = 68</th>
<th>NMI Sample n = 88</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No Illness</td>
<td>Illness</td>
<td>No Illness</td>
</tr>
<tr>
<td>SOBI-P Mean</td>
<td>59.5</td>
<td>56.5</td>
<td>53.3</td>
</tr>
<tr>
<td>S.D.</td>
<td></td>
<td></td>
<td>9.5</td>
</tr>
<tr>
<td>SOBI-A Mean</td>
<td>27.1</td>
<td>25.6</td>
<td>24.7</td>
</tr>
<tr>
<td>S.D.</td>
<td></td>
<td></td>
<td>4.7</td>
</tr>
<tr>
<td>PACR-W Mean</td>
<td>34.1</td>
<td>34.3</td>
<td>33.5</td>
</tr>
<tr>
<td>S.D.</td>
<td>3.5</td>
<td>3.3</td>
<td>3.4</td>
</tr>
<tr>
<td>PACR-I Mean</td>
<td>28.9</td>
<td>28.7</td>
<td>28.2</td>
</tr>
<tr>
<td>S.D.</td>
<td>2.6</td>
<td>3.7</td>
<td>2.7</td>
</tr>
<tr>
<td>PACR-S Mean</td>
<td>19.9</td>
<td>21.1</td>
<td>20.4</td>
</tr>
<tr>
<td>S.D.</td>
<td>3.6</td>
<td>3.8</td>
<td>4.1</td>
</tr>
<tr>
<td>PACR-A Mean</td>
<td>40.6</td>
<td>39.9</td>
<td>44.3</td>
</tr>
<tr>
<td>S.D.</td>
<td>6.7</td>
<td>6.5</td>
<td>5.7</td>
</tr>
</tbody>
</table>
Table 52
ANOVA: Health characteristic: Co-occurring medical illness
dichotomized into No illness and Yes illness

<table>
<thead>
<tr>
<th>Variable</th>
<th>Entire Sample n = 155</th>
<th>MII mothers n = 69</th>
<th>NMI mothers n = 86</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F  Sig</td>
<td>F  Sig</td>
<td>F  Sig</td>
</tr>
<tr>
<td>SOBI-P</td>
<td>1.5 .211</td>
<td>1.3 .278</td>
<td>0.4 .663</td>
</tr>
<tr>
<td>SOBI-A</td>
<td>0.9 .465</td>
<td>0.2 .944</td>
<td>1.0 .356</td>
</tr>
<tr>
<td>PACR-W</td>
<td>0.8 .542</td>
<td>1.0 .403</td>
<td>0.8 .444</td>
</tr>
<tr>
<td>PACR-I</td>
<td>0.1 .966</td>
<td>0.7 .584</td>
<td>1.2 .294</td>
</tr>
<tr>
<td>PACR-S</td>
<td>0.9 .473</td>
<td>1.0 .414</td>
<td>0.3 .750</td>
</tr>
<tr>
<td>PACR-A</td>
<td>1.1 .336</td>
<td>0.2 .917</td>
<td>0.6 .534</td>
</tr>
</tbody>
</table>

Amount of Stress on a Daily Basis

The mothers in the sample were placed in two groups, based on the amount of stress experienced on a daily basis. The first group was no to mild stress, and the second group was moderate to severe stress. Results of ANOVAs on Sense of Belonging revealed a significant difference in the Total Sample between mothers who reported no to mild stress and mothers who reported moderate to severe. Both SOBI-P scores ($F = 10.4 \ p = .002$) and SOBI-A scores ($F = 10.6, \ p = .001$) were significantly influenced by the amount of stress experienced on a daily basis, with mean scores of mothers reporting lower stress having higher levels of Sense of Belonging P and A. With respect to Parenting Competency, ANOVAs revealed a significant difference on the PACR-Aggravation subscale between mothers, based on stress, in the Total Sample ($F = 24.5 \ p = .000$). Mothers reporting higher stress also reported significantly higher Aggravation. Amount of stress did not influence Parenting Competency in the areas of Warmth, Encouragement of Independence, and Strictness.
Mothers in the MI subsample demonstrated significant differences according to stress level on the SOBI-P only ($F = 5.1, p = .027$), with MI mothers reporting lower stress levels reporting higher mean SOBI-P scores. Similar to the Total Sample, an ANOVA performed on the mean scores of the Parenting Competency subscales of MI mothers indicated that MI mothers reporting lower stress experienced significantly less Aggravation than mothers higher stress ($F = 5.9, p = .018$). There were no significant differences, according to stress level, MI mothers' scores of Warmth, Encouragement of Independence or Strictness.

Mothers in the NMI subsample demonstrated no significant differences in Sense of Belonging with respect to level of stress. Mean Parenting Competency-Aggravation scores showed a significant difference ($F = 6.9, p = .010$) with lower stress NMI mothers reporting a lower mean level of Aggravation. Level of stress consistently influenced level of aggravation in the same way in the Total Sample, MI and NMI subsamples. There was no significant effect of stress on other subscales of Parenting Competency.

Table 53
Means and standard deviations of scores on SOBI and PACR subscales for mothers in the total sample MI, and NMI subsamples according to amount of daily stress dichotomized into No or Mild Stress and Moderate or Severe Stress

<table>
<thead>
<tr>
<th></th>
<th>Total Sample N = 155</th>
<th>MI Mothers n = 89</th>
<th>NMI Mothers n = 86</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No or mild stress</td>
<td>Moderate Or severe</td>
<td>No or mild stress</td>
</tr>
<tr>
<td>SOBI-P</td>
<td>Mean</td>
<td>61.3</td>
<td>56.3</td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>9.2</td>
<td>10.4</td>
</tr>
<tr>
<td>SOBI-A</td>
<td>Mean</td>
<td>28.1</td>
<td>25.7</td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>4.6</td>
<td>4.5</td>
</tr>
<tr>
<td>PACR-W</td>
<td>Mean</td>
<td>34.4</td>
<td>33.7</td>
</tr>
<tr>
<td>--------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>3.5</td>
<td>3.5</td>
</tr>
<tr>
<td>PACR-I</td>
<td>Mean</td>
<td>29.2</td>
<td>28.3</td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>2.8</td>
<td>3.1</td>
</tr>
<tr>
<td>PACR-S</td>
<td>Mean</td>
<td>19.7</td>
<td>20.7</td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>3.6</td>
<td>3.8</td>
</tr>
<tr>
<td>PACR-A</td>
<td>Mean</td>
<td>38.7</td>
<td>42.7</td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>6.2</td>
<td>6.5</td>
</tr>
</tbody>
</table>

Table 54
ANOVA: Health characteristic: Amount of stress on a daily basis
dichotomized into None to Mild Stress and Moderate to Severe Stress

<table>
<thead>
<tr>
<th>Variable</th>
<th>Entire Sample N = 155</th>
<th>MI mothers n = 69</th>
<th>NMI mothers n = 86</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOBI-P</td>
<td>10.4 .002**</td>
<td>5.1 .027*</td>
<td>1.4 .239</td>
</tr>
<tr>
<td>SOBI-A</td>
<td>10.5 .001**</td>
<td>3.2 .076</td>
<td>3.2 .076</td>
</tr>
<tr>
<td>PACR-W</td>
<td>1.4 .237</td>
<td>0.0 .935</td>
<td>1.4 .238</td>
</tr>
<tr>
<td>PACR-I</td>
<td>3.6 .053</td>
<td>0.6 .463</td>
<td>2.0 .163</td>
</tr>
<tr>
<td>PACR-S</td>
<td>2.9 .061</td>
<td>1.9 .174</td>
<td>0.4 .507</td>
</tr>
<tr>
<td>PACR-A</td>
<td>15.1 .000***</td>
<td>5.7 .019*</td>
<td>5.1 .027*</td>
</tr>
</tbody>
</table>

*p < .05
**p < .01
***p < .001

Trouble Managing the Dual Roles of Parenting and Maintaining a Household

As a final health characteristic, the mothers in the study were divided into two groups according to the level of Trouble Managing the Dual Roles of Parenting and Maintaining a Household. Groups were designated as Little or No Trouble Managing and Moderate or Great Trouble Managing. Means and Standard Deviations for scores on the main variables according to level of Trouble managing for the Total Sample and the MI and NMI subsamples are illustrated in Table 55. ANOVAs are reported in Table 56.

In the Total Sample, level of Trouble Managing significantly influenced both SOBI-P (F = 21.4, p = .000) and SOBI-A (F = 17.5, p = .000), with mothers
reporting no or little trouble having higher mean scores on both Sense of Belonging subscales. Parenting Competency in the Total Sample was then examined by conducting ANOVAs on the means of the two levels of trouble managing. Mothers with No or Little Trouble Managing reported significantly higher Warmth ($F = 6.6$, $p = .011$), greater Encouragement of Independence ($F = 5.0$, $p = .027$) and less Aggravation ($F = 24.5$, $p = .000$), than mothers reporting Moderate or Great Trouble Managing.

ANOVAs conducted on the mean scores of Mothers in the MI subsample also indicated significant differences on SOBI-P ($F = 9.2$, $p = .003$) and SOBI-A ($F = 5.7$, $p = .020$). MI Mothers reporting No or Little Trouble Managing had significantly higher scores in both the Psychological Experience of Sense of Belonging and the Antecedents of Sense of Belonging. ANOVAs also indicated that amount of Trouble Managing reported by MI mothers significantly influenced Parenting Competency on PACR- Warmth ($F = 5.8$, $p = .018$) showing that MI mothers reporting No or Little Trouble Managing had a higher mean score on Warmth. Similar to results on the Total Sample, scores on PACR- Aggravation among MI mothers differed significantly ($F = 5.9$, $p = .018$), with mothers having No or Little Trouble Managing having a lower mean Aggravation score than mothers reporting Moderate or Great Trouble Managing.

Mothers in the NMI subsample demonstrated no significant differences in Sense of Belonging with respect to amount of Trouble Managing, as shown in Table 56. Parenting Competency-Aggravation mean scores based on mothers' reports of amount of Trouble Managing showed a significant difference ($F = 6.9$,}
$p = .010$), with mothers reporting No or Little Trouble having a lower mean score on Aggravation than mothers with Moderate or Great Trouble Managing. Similar to levels of stress, amount of Trouble Managing the dual responsibilities of Parenting and Maintaining a Household consistently influenced level of PACR-Aggravation in the same way in the Total Sample, MI and NMI subsamples. No significant differences in Parenting Competencies of Warmth, Encouragement of Independence or Strictness were revealed based on Trouble Managing in the subsample of NMI mothers.

Since the ancillary data was pertinent to the Total Sample and to variables under study and the nature of the study populations.

### Table 55

Means and standard deviations of scores on SOBI and PACR subscales for mothers in the total sample, MI and NMI subsamples according to trouble managing dual responsibilities of parenting and maintaining a household dichotomized into No or Little Trouble Managing and Moderate or Great Trouble Managing

<table>
<thead>
<tr>
<th></th>
<th>Total Sample</th>
<th></th>
<th>MI Mothers</th>
<th></th>
<th>NMI Mothers</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N = 155</td>
<td>N = 69</td>
<td>N = 86</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No or little Trouble</td>
<td>Moderate or Great</td>
<td>No or little Trouble</td>
<td>Moderate or Great</td>
<td>No or little Trouble</td>
<td>Moderate or Great</td>
</tr>
<tr>
<td>SOBI-P Mean</td>
<td>62.6</td>
<td>55.6</td>
<td>58.3</td>
<td>51.2</td>
<td>64.2</td>
<td>62.3</td>
</tr>
<tr>
<td>S.D.</td>
<td>7.9</td>
<td>10.5</td>
<td>7.9</td>
<td>9.4</td>
<td>7.4</td>
<td>8.5</td>
</tr>
<tr>
<td>SOBI-A Mean</td>
<td>28.5</td>
<td>25.6</td>
<td>26.3</td>
<td>23.9</td>
<td>28.4</td>
<td>26.0</td>
</tr>
<tr>
<td>S.D.</td>
<td>4.4</td>
<td>4.5</td>
<td>3.9</td>
<td>3.9</td>
<td>4.3</td>
<td>4.1</td>
</tr>
<tr>
<td>PACR-W Mean</td>
<td>34.9</td>
<td>33.4</td>
<td>35.0</td>
<td>33.0</td>
<td>34.8</td>
<td>34.1</td>
</tr>
<tr>
<td>S.D.</td>
<td>3.5</td>
<td>3.3</td>
<td>2.6</td>
<td>3.8</td>
<td>3.8</td>
<td>2.9</td>
</tr>
<tr>
<td>PACR-I Mean</td>
<td>28.4</td>
<td>28.3</td>
<td>28.1</td>
<td>27.7</td>
<td>28.5</td>
<td>29.3</td>
</tr>
<tr>
<td>S.D.</td>
<td>3.0</td>
<td>2.9</td>
<td>3.0</td>
<td>2.9</td>
<td>3.0</td>
<td>2.8</td>
</tr>
<tr>
<td>PACR-S Mean</td>
<td>19.8</td>
<td>20.5</td>
<td>19.4</td>
<td>21.1</td>
<td>20.0</td>
<td>19.5</td>
</tr>
<tr>
<td>S.D.</td>
<td>3.5</td>
<td>3.7</td>
<td>4.4</td>
<td>4.0</td>
<td>3.2</td>
<td>3.0</td>
</tr>
<tr>
<td>PACR-A Mean</td>
<td>37.9</td>
<td>42.8</td>
<td>41.0</td>
<td>44.5</td>
<td>36.7</td>
<td>40.3</td>
</tr>
<tr>
<td>S.D.</td>
<td>6.0</td>
<td>6.3</td>
<td>6.1</td>
<td>5.5</td>
<td>5.6</td>
<td>6.7</td>
</tr>
</tbody>
</table>
Table 56
ANOVA: Health characteristic: Trouble managing dual responsibilities of parenting and maintaining a household dichotomized into No or Little Trouble Managing and Moderate or Great Trouble Managing

<table>
<thead>
<tr>
<th>Variable</th>
<th>Entire Sample N = 155</th>
<th>MI mothers n = 69</th>
<th>NMI mothers n = 86</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F Sig</td>
<td>F Sig</td>
<td>F Sig</td>
</tr>
<tr>
<td>SOBI-P</td>
<td>21.4 .000***</td>
<td>9.2 .003**</td>
<td>1.3 .280</td>
</tr>
<tr>
<td>SOBI-A</td>
<td>17.5 .000***</td>
<td>5.7 .020*</td>
<td>2.0 .168</td>
</tr>
<tr>
<td>PACR-W</td>
<td>6.6 .011*</td>
<td>5.8 .018*</td>
<td>0.7 .411</td>
</tr>
<tr>
<td>PACR-I</td>
<td>5.0 .027*</td>
<td>3.6 .063</td>
<td>0.1 .725</td>
</tr>
<tr>
<td>PACR-S</td>
<td>1.5 .229</td>
<td>2.4 .125</td>
<td>0.3 .589</td>
</tr>
<tr>
<td>PACR-A</td>
<td>24.5 .000***</td>
<td>5.9 .018*</td>
<td>6.9 .010*</td>
</tr>
</tbody>
</table>

*p < .05
**p < .01
***p < .001

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CHAPTER V
DISCUSSION OF THE FINDINGS

Parenting Competency and Sense of Belonging were studied in a sample of mothers with and without mental illness to identify similarities or differences between the groups. In addition, the researcher examined the relationship of Parenting Competency and Sense of Belonging. Finally, the role of Sense of Belonging as a moderator or mediator of the relationship between presence or absence of mental illness and parenting competency was explored. A discussion of the findings provides insights into the experiences of mothers with and without mental illness. The title of the research project is The Mothers’ Study and will be referred to as such in the discussion of the findings.

Research Question 1

What is the Parenting Competency of the Mothers in the Sample and in the Subsamples of MI and NMI mothers?

Parenting Competency, as measured by dimensions of Warmth, Encouragement of Independence, Strictness and Experience of Aggravation, was evaluated in order describe these dimensions in the whole sample and in the subsamples of MI mothers and NMI mothers. The researcher was also interested in comparing the two groups.
Warmth

No significant difference between the MI and NMI mothers was found on the Warmth dimension ($t = 1.62, p = .108$). This is a noteworthy finding in the context of past findings about MI mothers. Parenting experts point out that an essential dimension of parenting competency is appropriate emotional responses to one's child. Further, in the assessment of parenting, clinicians must evaluate for both risk and protective factors (Jacobsen et al., 1995). Mothers with mental illness have been shown to be less emotionally available, especially among depressed mothers (Beck, 1996; Gordon et al., 1989; Hammen et al., 1991; Biringen & Robinson, 1991). Zuravin (1989) found that level of depression is related to the type of aggression a mother with mental illness shows toward her child. Adult children of mothers with mental illness report bizarre behavior and neglect in their first person accounts (Dunn, 1993; Crosby, 1989; Lyden, 1997). Grunebaum and Gammeltoft (1993) reviewed the records of 11 mothers with schizophrenia. Problems were found in mother child interactions during mothers' psychotic episodes, including inappropriate affect, such as laughing without reason, disorientation in time and space, withholding food due to mothers' claims that food was poisonous.

In contrast, in studies where mothers report their own experiences (Mowbray et al., 1995a; Ritscher et al., 1997; Sands, 1995; Sweat, 1994), there is evidence of feelings of affection and fondness of their children. They express connection with their children and experience personal fulfillment in the role of mother (Mowbray et al., 1995). The finding from The Mothers' Study gives some
insight into potential similarities among MI and NMI in this sample of mothers in
the feelings of warmth toward their children.

**Encouragement of Independence**

On the Encouragement of Independence dimension, a significant
difference was found between the MI mothers and NMI mothers. The MI mothers
had statistically significant lower mean scores on the Independence scale than the
NMI mothers \((t = 1.62, p = .009)\).

There are a number of issues in the research with regard to women’s
attitudes toward independence. Historically, the attitudes and behavior of women
has been influenced by dependence relationships. For example, a collection of
essential readings in Women’s Studies (Jackson 1993) documents how the
patriarchal structure of society, the economy, and science maintains the
dependency of women on men. Women traditionally are cast in a dependent role;
that is, they need someone or something to take care of them. Conversely, their
roles in society are to be caretakers, which may foster a perspective of
dependence rather than independence. In the absence of authentic
interdependencies, the relationship orientation of women, as explained by Miller
(1986) sustains these dependencies. New research reveals gender differences in
the chemical response to stress, with females releasing more of the chemical
oxytocin, which is associated with affiliative behaviors (Taylor et al., 2000).

Cultural differences have been reported to explain differences in parental
attitudes toward independence. Carlson and Harwood (1999) studied 32 Anglo-
Saxon mothers from the northeastern United States and 28 mothers in Puerto Rico. Cultural understandings of social attitudes as being individualistic for people of Anglo-Saxon descent, and sociocentric for people Puerto Rican ethnicity.

Supporting the hypothesis that some childrearing goals and strategies are culturally based, the researchers found that Anglo Saxon (AS) mothers are more likely to expect independent behaviors at an earlier age than do Puerto Rican (PR) mothers. Examples of differences cited were, for AS and PR mothers respectively, using a training cup at 12.0 months of age as compared to 17.1 months and choosing one’s own clothes at 31.1 months as compared to 44.2 months.

Persons being treated for mental illnesses, similar to people with other illnesses, have dependencies on health providers and health care agencies. Women with mental illness who are mothers are uniquely dependent since they are the primary consumers of mental health services, and the onset of the major mental illnesses in women occur during the childbearing and childrearing years (National Institutes of Health, 2000).

Sands (1995) reports that MI mothers live under the threat of scrutiny of their parenting and a threat of loss of their children. Similarly, Nicholson et al. (1998) found that mothers are reluctant to accept hospitalization due to fear of losing their children while hospitalized. Mothers reported an omnipresent fear of losing contact, communication, and parental rights. As such, MI mothers may be less encouraging of their children’s independence.
Another explanation for the lower scores on Encouragement of Independence may be accounted for by Hock et al.'s (1992) findings regarding the prevalence of separation anxiety early in the lives of depressed mothers. This might be associated with a mother’s feelings about being away from her child. The centrality of a child in the lives of mothers in Sands’ study contributes to an understanding of a lower level of encouragement of independence. The finding might also be explained by the demographics of the sample. MI mothers were younger and had lower educational levels than NMI mothers, providing them with less understanding of child development, less realistic expectations and greater stress in relation to their parenting (Brown, 2001).

Strictness

The Strictness dimension revealed no significant difference between the MI and NMI mothers (t = -1.42, p = .158, df 153). Most studies of mothers with mental illness recruit participants from clinical settings. Oyserman et al. (1994), Mohit (1996), Ritscher et al. (1997), Sands (1995), and Zemencuk et al. (1995) studied mothers who were enrolled in treatment programs that were sensitive to the responsibilities of parenting. In such settings, education about child growth and development and classes in parenting skills are common interventions. Sands’ sample lived in supported housing with their children, while their parenting was supervised; furthermore, mothers in Sands’ study worked in a day care center associated with the group home. Teaching childcare and appropriate responses to children’s’ behaviors are integral to the treatment in Sands’ research setting.
Nicholson et al. (1998a, 1998b) conducted focus groups at the study site, where mothers expressed concern about maintaining discipline. In the sample of mothers recruited for The Mothers’ Study, some of the MI mothers were recruited from clinical settings. The consumer settings included sessions on childcare and discipline as part of their overall agenda (COMHCO, 2002). Thus, it is possible that mothers had benefited from various interventions offered as part of treatment or as part of the milieu. Although mothers with mental illness are reported as having difficulties with discipline (Mowbray et al., 1995a), the attitudes toward discipline revealed by the sample of MI mothers in The Mother’s Study fell within the same range as NMI mothers’ responses in this sample. Potential differences between MI and NMI mothers are possibly offset by learning parental skills as interventions in their day care or group home settings.

Aggravation

The Aggravation dimension showed a significant difference among MI mothers as compared to NMI mothers. T tests yielded a higher mean score ($t = -0.544, p = .000$) for mothers in the MI subsample.

Clinical experience provides observations that mothers with mental illness experience irritability and anxiety, as part of the symptom profile of many psychiatric disorders. In addition to illness symptoms, the social problems of people with mental illness are a source of many frustrations.

Based on a review of the literature, a high level of aggravation was expected by the researcher among the MI mothers. Nicholson et al. (1998a)
conducted small focus groups of 6 – 14 MI mothers to identify the problems facing mothers with mental illness. One of the themes of the qualitative data from a total of 42 mothers revealed that mothers encounter “role strain” between the competing demands of managing an illness and parenting. Mothers experience conflict and also guilt in knowing their attention to parenting is shared with another concern of high priority. Similar problems with the dual responsibilities was found based on data collected by Sands (1995) from interviews and participant observation among 10 MI in a supported housing program. Sands (1995) compared responses from a control group of 8 NMI mothers whose children attended the same day care center as the MI mothers. It was noted that the 8 NMI mothers were more vocal about problems with parenting, which Sands interpreted as having to do with being more comfortable with self-disclosure. Overall, both groups were alike in two themes: having difficulty dealing with children’s’ problem behaviors, and motherhood as a central life experience. This finding is in contrast to the Mothers’ Study that MI mothers experienced significantly higher aggravation than NMI mothers did. One possible explanation of this difference is that PACR was paper and pencil, scored privately, and the focus group method used by Sands might have been affected by peer pressure to agree with the group.

Level of aggravation has been shown to influence choice of discipline. Pinderhughes et al. (2000) studied factors that were associated with discipline responses of parents. Findings revealed that a direct predictor of discipline response was the cognitive-emotional responses of the mothers ($F = .71$, $p < .01$).
Cognitive-emotional responses was defined as: 1) upset affect; 2) interpretation of child’s behavior as having hostile intent 3) inclusion of harsh discipline as a choice, 4) worry that the child would not grow out of the behavior and 5) ability to identify appropriate prevention strategies. These responses bore some similarities to the PACR-Aggravation scale used in The Mothers’ Study, which contained items that measured a mother’s ability to manage being annoyed or upset about a child’s behavior.

Although Nicholson et al.’s (1993) survey found that only sixteen states routinely collect data on whether women with mental illness have young children, the demographic data that is available reveals psychosocial factors, such as socioeconomic status, that influence a mother’s level of aggravation with parenting. Mothers with mental illness live with the pressures of poverty, substandard housing, complicated access to services, and competition for social service resources (Zemencuk et al., 1995; Mowbray et al., 2000). Appointments for health care require public transportation. Their children are classified as “at risk”, so the mothers feel stigmatized and live with fears of losing their children. These factors may increase the sense of aggravation for mentally ill (MI) mothers. If a child has been placed in foster care due to a mother’s hospitalization, custody proceedings can be arduous and discouraging. It is reasonable to expect that poverty begets aggravation despite the presence or absence of a mental illness and that aggravation is part of the challenge of dealing with children. Despite the significant differences in amount of aggravation found between MI and NMI mothers in the Mothers’ Study, both groups of mothers acknowledged that the
aggravation associated with parenting was accompanied by bountiful rewards of satisfaction in the relationship (Sands, 1995).

In summary, MI mothers differ significantly from NMI mothers by reporting less Encouragement of Independence and greater Aggravation. Mothers with mental illness show no significant differences from mothers without mental illness on Warmth and Strictness.

Research Question 2:

What is the Sense of Belonging in Mothers With Mental Illness and Without Mental Illness?

The two subscales of the Sense of Belonging Instrument were evaluated separately, according to the guidelines of the author (Hagerty et al., 1993). The mean scores of the MI mothers were compared by T-test. It was found that among MI mothers, both SOBI-P ($t = 7.2$, $p = .000$) and SOBI-A ($t = 6.4$, $p = .000$), were lower and statistically significant when compared to NMI mothers.

Sense of Belonging – Psychological Experience (SOBI-P)

The attributes of the psychological experience of sense of belonging, measured by SOBI-P are valued involvement and fit. The findings of The Mothers’ Study are supported in the literature. Past research shows that MI mothers feel less valued in their role as mothers due to a number of concerns. The 10 MI mothers interviewed in Sands’ (1995) study complained about living under scrutiny for their parenting and threat of losing their children. Nicholson et
al (1998b) reported that mothers with serious mental illness described ways in which partners and extended family members compromised the valued involvement of MI mothers with their child. Focus groups of MI mothers, totaling 42 participants, reported that relatives would make decisions about the children in opposition to, or without consulting the mother; the overfunctioning of partners or extended family partners in order to relieve the mother of the burden of childcare left MI mothers feeling powerless and peripheral to the role of childrearing.

Nicholson describes how, in some instances, by not observing limits that the mother sets for the child, the stage was set for a subtle competition as to who was the better parent. Regrettably, the mothers felt undermined by the very people who are considered to be natural supports for the mother.

Problems with relationships are characteristic of people with mental illness. Mood fluctuations seen in affective disorders and altered perceptions derived from thought disorders predispose mothers with mental illness to misunderstandings and possible rejection from social groups.

Historical attitudes that marginalize people with mental illness still persist, even among health professionals (Nicholson, et al., 1993; Deegan, 1993; Holstein & Harding, 1992). Because of this stigma, people with mental illnesses are overlooked for involvement in valued social roles, such as parenting (Nicholson & Blanch, 1994). Therefore, there is evidence that valued involvement is diminished among the MI mothers.

With regard to the construct of fit, mentally ill persons' feelings of being a misfit have been documented in the literature. In field studies of the concept of
sense of belonging, Hagerty et al. (1992) reported psychiatric nurses' observations of patients' feelings of isolation, disenfranchisement, and alienation. However, the feeling of fit can partly be attributed to the temperament of the child (Blank et al., 1995; Pridham et al., 1994). Lyden (1997), in her memoir of life with her mentally ill mother, recalls, "I longed, for the thousandth time, to recreate life as something other than this daughter and this mother" (p.38). Lyden expresses the hopeless disparity in shared characteristics. In contrast to the substantial evidence of a low experience of valued involvement, mothers with mental illness describe involvement with their children and the meaning motherhood holds for them (Sands 1995; Mowbray et al., 1995a). MI mothers participate in support programs and are involved in a normative social role (Mowbray et al., 1995a). One of the 18 adult children of MI mothers in Dunn's (1993) study recalled, "What I learned to do was to connect real strongly with people. I learned some of that from my mom who — when she's not crazy — is a very connected person. What I learned from her did me well" (Dunn, 1993, p.184). When MI mothers, as informants, discussed their feelings toward their children, no evidence of lack of fit was revealed (Nicholson et al., 1998b; Mowbray et al. 1995a), but rather a closeness, "near my life" (Sands, 1995).

**Sense of Belonging — Antecedents (SOBI-A)**

MI mothers also scored significantly lower than their NMI counterparts on the antecedents subscale of sense of belonging. This finding was expected, since the highly correlated SOBI-P revealed low scores for the MI mothers. However,
the constructs of the SOBI-A, desire, energy, and potential for shared characteristics require some consideration. There are numerous reports in the literature that make reference to MI mothers’ desires for children and the significance of motherhood as a valued role (Apfel & Handel, 1993), so a low score on the desire for involvement construct of the SOBI-A is inconsistent with what is known about MI mothers. The low scores on the SOBI-A may be more reflective of the construct of energy since moderate to great stress, depressed mood, and fatigue are common in the clinical profile of mental illness. Living with stigma and low self-esteem are possible explanations for low scores on the SOBI-A construct of potential for shared characteristics. Conceptualizing mothers with mental illness as having potential as capable, brave or praiseworthy persons has not appeared in the research thus far. However, interviews with adult children of MI mothers do report positive, if unique, experiences with their mothers. Dunn (1993) reported that, “although all the participants clearly articulated pain-filled relationships with their psychotic mother, five recalled a special, if inconsistent, loving relationship with her” (p.184). Therefore, it is a worthy, though perhaps novel, idea to conceptualize MI mothers as having more similarities than differences with other mothers.

The grief of separation from one’s child is profound (Sweat, 1994). MI mothers who experience separation from their children through hospitalizations, or even psychologically, through symptoms, are likely to possess lower sense of belonging. The constructs of the SOBI-A: energy, desire for involvement and potential for shared characteristics, highlight the conflicts facing mothers with
mental illness. In summary, MI mothers report a lower level of experience of sense of belonging and a lower level of antecedents of sense of belonging than mothers with NMI mothers do.

Research Question 3

The Relationship Between Parenting Competency and Sense of Belonging As Measured by PACR-W-I-S-A and SOBI-P-A

In the theoretical framework of the Mothers’ Study, a positive relationship was assumed between Sense of Belonging and Parenting Competency based on the literature about relatedness and competencies in mothers with and without mental illness. Correlation, the existence of a relationship, does not infer causality (Munro, 1997). Inherent in correlational analysis is examining a two-way process between the concepts. There is no prior research on the relationship between Sense of Belonging and Parenting Competency in mothers, or about these concepts in mothers with specific reference to mental illness. The exploratory nature of The Mothers’ Study provides beginning data about these relationships.

The findings on the total sample are relevant to the general examination of the theoretical concepts of Sense of Belonging and Parenting Competency. According to the theoretical framework of Sense of Belonging, competency has been identified as one of its consequences. Parenting Competency as a consequence of Sense of Belonging has not been confirmed. In this study, it was found that relationships do exist between Sense of Belonging and specified dimensions of parenting competency.
Findings on the subsamples give information on the relationships in areas of parenting competency and sense of belonging in which mothers with mental illness may be similar or different from mothers without mental illness. Further, the extent of those similarities and differences, measured by examining the sizes of the correlations gives additional description of the two groups of mothers that participated in this study.

**Warmth and Sense of Belonging**

The Warmth dimension of the PACR was related to Sense of Belonging (SOBI-P and SOBI-A) in a positive direction for the total sample of mothers (N=155), (r = .214, p .008 and r = .149, ns respectively). The warmth dimension was significantly correlated with SOBI-P but was not significant in relation to the SOBI-A. Items on the PACR-Warmth scale reflected mothers’ agreement or disagreement on expressing affection, spending happy times with children, finding satisfaction in the relationship, feeling easy-going and relaxed with child (Easterbrooks & Goldberg, 1984). This is congruent with Hagerty et al’s (1993) basic theoretical constructs of Relatedness identified as Involvement and Comfort/ Sense of Well-Being (Appendix A: Figure A-1). It is also congruent with Hagerty’s Sense of Belonging-P attributes of valued involvement and fit (Appendix A: Figure A-4). The SOBI-A which measured the antecedents of Sense of Belonging, including desire, energy and potential for shared characteristics (Appendix A: Figure A-4), also demonstrated a positive direction but failed to reach significance. SOBI-A demonstrates a weaker positive, yet non-significant
correlation with the PACR-Warmth dimension than a mother's psychological experience, as measured by the SOBI-P.

When the relationship of SOBI and PACR-Warmth was examined in the two subsamples of MI (r = .206, p = .089), and NMI (r = .143, p = .188) mothers, the correlations with SOBI - P and warmth became insignificant when compared to the relationship based on the total sample, (r = .214, p = .008). However, the positive direction of the relationship persisted. Since the correlation was moderately low to begin with, and the sample sizes decreased, this finding would be anticipated. The correlations of SOBI-A with Warmth did not reach statistical significance in the subsamples of MI (r = .044, p = .717) or NMI mothers (r = .148, p = .175). A possible explanation may be the decrease in the sample size from the total sample to the subgroups (MI=69, NMI=86) and the relationships weakened overall in the smaller samples as shown in Tables 18, 19, and 20.

Encouragement of Independence and Sense of Belonging

Encouragement of Independence was found to be positively related in the total sample of mothers (N=155), reaching significance on the SOBI-P (r = .218, p = .006), but not on the SOBI-A (r = .065, p = .424). Items on the PACR-Independence scale reflected mothers' agreement or disagreement with encouraging a child's autonomous behavior. And the items explored respect for a child's preferences and opinions, encouragement of curiosity, expression of feelings, such as anger, as well as pleasant feelings, and allowing child to make some decisions. The ability to see a child as separate, different or disparate and,
encouraging this as part of the developmental process are also examined in this dimension.

The positive direction of the relationship of PACR-Independence and Sense of Belonging (SOBI-P and SOBI-A) can be understood as consistent with Hagerty’s theoretical position that a consequence of high sense of belonging is a foundation for emotional and behavioral responses. To support the finding of a positive direction, it may be hypothesized that high sense of belonging enables the mother’s emotional and behavioral responses to cultivate eventual separation in the interest of the developmental needs of the child. An argument can be made for a mother’s feeling so integral to a child that she is overprotective and would score low on encouragement of independence, rather yielding a negative relationship with sense of belonging. Though they failed to achieve significance, a negative relationship did emerge on SOBI-A, the antecedents of Sense of Belonging, when the correlations were calculated on the two subsamples of MI Mothers (SOBI-A: \( r = -.069, p = .571 \)) and NMI mothers (SOBI-A: \( r = -.008, p = .943 \)).

Hagerty makes a differentiation between close relationships that are comfortable and close relationships that are uncomfortable. The level of comfort one has in a relationship, as explained by Hagerty et al. (1992), may only be partially influenced by valued involvement and fit (Sense of Belonging). Since Hagerty et al. (1992) identified four processes of relatedness (Appendix A: Figure A-1). Sense of Belonging is only one of those processes. It is possible that parenting competency in Encouragement of Independence is more closely associated with another process of relatedness, such as Mutuality, which includes
a shared acceptance of differences (Appendix A: Figure A-1). The four processes posited by Hagerty, although theoretically related, have not been empirically studied to date. Another area of note with regard to respecting children’s autonomy among mothers with mental illness is the fear of separation from their children that MI mothers report (Mowbray et al., 1995a; Sweat, 1994; Nicholson, 1998a). Thus the positive relationship of SOB and PACR-I needs further exploration.

**Strictness and Sense of Belonging**

Strictness and SOBI-P showed a strong, significant correlation in a negative direction (r = -.295, p = .000), as did SOBI-A (r = -.280, p = .000) in the total sample of mothers (N = 155). The items in the PACR-Strictness scale reflected a mother’s agreement or disagreement with restricting choices, choosing control, preferring quiet children, and approval of physical punishment, scolding and criticism. The theoretical understanding of Sense of Belonging – P, as valued involvement and fit, is opposed to the tendency in strict parenting, measured by the PACR-S, to restrict both physical access to themselves and punishing a child’s departures from parent’s expectations. In other words, high valued involvement and fit would lead to less strict parenting because of the shared understandings between the mother and child. This is one possible explanation for the direction of the findings. The SOBI-A is theoretically conceptualized as desire for relationship, energy for relationship and potential for shared characteristics. The negative relationship with strictness can be understood by the following
hypothesis: a mother who scores high on the antecedents of Sense of Belonging, may be more likely to tolerate a wider range of her child’s behavior, have more patience, and view deviations of behavior in a positive light, thereby demonstrating less strictness.

In examining the relationship of PACR-S, SOBP and SOBI-A in the two subsamples, MI mothers (n = 69) revealed significant negative relationship with PACR-S and both SOBI-P (r = -.314, p = .004) and SOBI-A (r = -.352, p = .003). In contrast, the scores of NMI mothers (n = 86) revealed non-significant relationships, although still in a negative direction between PACR-S and SOBI-P (r = -.196, p = .071), and PACR-S and SOBI-A (r = -.162, p = .136).

The differences between the two subsamples may have been due to the differences in scores of the groups on the PACR-S and the SOBI-P and SOBI-A. Although the means of scores on the PACR-S scale between the two subsamples did not differ significantly, the mean PACR-S score of MI mothers (M = 20.6, SD = 4.16) was higher than NMI mothers (M = 19.8, SD = 3.10). Mowbray et al. (1995a), in a research study of 24 mothers with mental illness, found discipline of children an area of concern for MI mothers. They scored higher on average (M = 3.62) on feelings that they needed more control over the child’s behavior than in a comparison groups of NMI mothers (M = 2.66). Sands (1995) reported that the 10 NMI mothers participating in the focus groups for a study of low income mentally ill mothers, expressed concerns about discipline more frequently than the 8 MI mothers. Sands noted this in the context that overall, MI mothers were
less disclosing than NMI mothers about their problems with parenting. It was hypothesized that this was due to their mistrust of child protective systems.

With regard to the results of The Mother's study, the sample studied indicated that high Sense of Belonging was associated with lower levels of Strictness among 69 mothers with mental illness. Conversely, low levels of Sense of Belonging may be associated with higher levels of Strictness. Lower levels of valued involvement and fit may reflect insecurity in the relationship, eliciting a response of exerting more control, by means of strictness. Lower SOBI-A scores indicating lack of energy, lack of desire and less potential for shared characteristics can also be seen as threats to the relationship, also generating a tighter hold, expressed as greater strictness. Strictness may also be understood as a way of bolstering shared characteristics, by requiring a child's conformity to a maternal-endorsed code of behavior.

**Level of Aggravation and Sense of Belonging**

Level of Aggravation, based on the total sample (N = 155), showed a significant negative correlation with Sense of Belonging \( r = -.559, p = .000 \) and Aggression \( r = -.409, p = .000 \). That is, mothers who score higher on both Sense of Belonging scales tend to score lower on experience of aggravation associated with parenting.

The PACR-A scale asked for mothers' agreement or disagreement on such items as amount of sacrifice involved with childrearing, extent of time and energy expended in parenting, perception of demandingness of children, and how much
of a bother was the worry associated with childrearing. Another way of looking at this finding is that high levels of aggravation may be associated with lower experience of valued involvement and fit (SOBI-P) and with lower levels of the antecedents of Sense of Belonging (SOBI-A), less desire for relationship, less energy and confidence in potential for shared characteristics. Within the context of Hagerty et al's (1993) theoretical description of Relatedness, the negative correlation might be explained by the effects of high levels of aggravation on the levels of closeness and comfort between a mother and her child. The role of mothering might be experienced as overclose, uncomfortable, and undesirable. And, with regard to Hagerty, et al's (1992) theoretical description of Sense of Belonging-P, the valued involvement and fit associated with the psychological experience of Sense of Belonging with one's child might be diminished under conditions of high aggravation. The effect of high levels of aggravation on SOBI-A might explain a lower desire for a relationship, less energy available for a relationship, and fewer shared characteristics.

Similar to the findings in the total sample, in the MI subsample (n = 69), the correlation between Sense of Belonging with Aggravation yielded scores of $r = -.514$, $p = .000$ for SOBI-P and $r = -.547$, $p = .000$ for SOBI-A. Correlations in the NMI subsample (n = 86) followed the same trend for both SOBI – P ($r = -.398$, $p = .000$) and SOBI – A ($r = -.409$, $p = .000$).

Furthermore, level of aggravation accounted for the greatest difference between MI and NMI mothers ($t = -.544$, $p = .000$) on the PACR subscales. Aggravation, as described in the items of the PACR-A scale, and the dual
responsibility of childrearing and homemaking are shared experiences of all mothers. For mothers with mental illness, managing symptoms, appointments and medication effects are additional sources of aggravation.

Nicholson et al. (1998), who studied 42 mothers receiving psychiatric services from the Massachusetts Department of Mental Health, found high levels of aggravation in mothers with mental illness, based on the reports of mothers participating in focus groups. In an effort understand the parenting experience of mothers with mental illness, focus groups of 3 – 10 mothers met to discuss their concerns about parenting. In addition to day to day parenting, mothers with mental illness identified sources of conflict with regard to stigma, management of their illnesses and custody of and contact with their children as stressors. Ritscher et al. (1997) also surveyed mothers with mental illness among 107 members of psychiatric rehabilitation centers and day treatment centers. In focus groups discussing important issues in their lives, 29% of the women reported that having a mental illness made it harder to be a parent. However, the researchers did not explore whether this difficulty was due to the illness, as in experiencing symptoms, or due to the consequences of having an illness, such as poverty or stigma.

The significant negative relationship of PACR-A and Sense of Belonging among MI mothers was stronger in both SOBI-P ($r = -0.514$, $p = .000$) and SOBI-A ($r = -0.547$, $p = .000$) than the relationship of PACR-A and Sense of Belonging among NMI mothers on and SOBI-P ($r = -0.398$, $p = .000$) and SOBI-A ($r = -0.409$, $p = .000$). This indicates that the effect of aggravation on sense of belonging is
heightened among MI mothers. This may be related to higher levels of aggravation overall for MI mothers due to presence of symptoms, experiencing a lower standard of living, dealing with stigma and having demands on their time, such as medical appointments that interfere with other normative life activities.

Research Question 4

Does Sense of Belonging Influence the Relationship Between Mental Illness and Parenting Competency?

In answering research question 4, the study examined the way in which sense of belonging operated with regard to the relationship of presence or absence of mental illness (PAMI) and a specific parenting competency.

Testing sense of belonging as a moderator variable demonstrates the interaction of sense of belonging in the relationship of PAMI and PACR. In practical terms, it verifies whether or not sense of belonging could be used to manipulate the relationship of PAMI and parenting competency. Another way of saying this is whether sense of belonging could be used to change the experience of aggravation in MI mothers and NMI mothers.

A successful test of moderation would give insight into the predictive power of sense of belonging to change the relationship between presence or absence of mental illness and parenting competency. Sense of belonging failed to emerge as a moderator. In the absence of research on sense of belonging and parenting competency, and of sense of belonging among mothers, and sense of belonging among mothers with mental illness, explanations can only be
conjectured. One possible explanation might be related to the study population and the variable PAMI. The grave situational variables of daily survival, hunger, and poverty impinging on parenting competency may not be mitigated by sense of belonging. The finding does not rule out the role of sense of belonging, but supports the need for further research.

Testing sense of belonging as a mediating variable demonstrates the intervening influence of this variable in the relationship of PAMI and PACR. In the mediational analysis, sense of belonging, SOBI-P and SOBI-A, emerged as mediators only on the aggravation dimension of parenting competency and its relationship to presence or absence of mental illness. Since the mediation test held for SOBI-P and SOBI-A, it indicated that mental illness no longer had a significant influence on PACR- Aggravation once SOB was added in the regression equations. In the language of sense of belonging, MI and NMI mothers do not differ in their attitudes toward aggravation associated with parenting, if one takes into account the SOB attributes of valued involvement, fit, desire for involvement, energy, and potential for shared characteristics. When sense of belonging and aggravation were examined separately, mothers with mental illness were significantly different from mothers without mental illness on both variables. When Sense of Belonging and Aggravation were examined together in the mediation test, mothers with mental illness were found to be more similar to, than different from, mothers without mental illness. One possible explanation, not yet studied, is the counterbalancing effect of the extraordinary gratifications of mothering on the aggravation of being a parent. For example, fulfilling a need for
intimacy, filling a valued normative role, or having an experience that they identified as important to themselves.

A possible explanation for the finding that Sense of Belonging mediates PACR-Aggravation may be found in the literature on maternal role attainment. The attributes of Sense of Belonging, as hypothesized in this interpretation are indicated in parentheses.

Koniak-Griffin (1993) describes the gradual development of maternal identity as “characterized by a mother experiencing a internal sense of balance, confidence and competence in her role performance.” Pridham et al. (1994) provided context to this phenomenon by studying the contribution of perceived infant temperament to non-mentally ill mothers’ parenting self-appraisals. The researchers described how the process of recognizing and meeting an infant’s needs (valued involvement) shapes a mother’s appraisal of her competency. Over time (desire for involvement), the maternal-child transactions (aggravation) become synchronized (fit). Eventually, the mother understands the child (potential for shared characteristics), interprets the child’s behaviors correctly (valued involvement), satisfies the child from her repertoire of problem solving capabilities (valued involvement and energy for involvement) and gets feedback in terms of mutual contentment (fit, potential for shared characteristics). This is a tandem process in which aggravation is mitigated by growing satisfaction and attachment.

The results of Pridham’s et al’s study revealed that a mother’s self appraisal of problem solving competence at 3 months post-partum was positively
correlated with the mother’s perceptions of her infant’s malleability ($r = .25, p < .05$), amenability ($r = .37, p < .01$), responsivity to stimuli ($r = .27, p < .05$), persistence ($r = .37, p < .01$), and cuddliness ($r = .29, p < .05$).

The mediating effect of Sense of Belonging, a process of relatedness, on the parenting competency of attitude toward aggravation among mothers with mental illness and without mental illness in The Mothers’ Study gives beginning support for understanding the effects of relatedness on parenting competency. Further, the findings of The Mothers’ Study suggest that mental illness explains some, but not all of the differences in a mother’s experience of sense of belonging and levels of parenting competency.

**Conceptual and Methodological Issues**

**Data Collection Issues**

It is extremely difficult to access mothers with mental illness for research studies, making recruitment of participants arduous and, from a practical point of view, not cost effective. The primary concerns of utilizing clinical settings to make contact with a population of persons with mental illness in a clinical settings are ethical ones in which the institution has an obligation to control risk and maximize benefit to the patient. Confidentiality issues, vulnerability of dependent groups, response to authority figures, and possible lability of mental status in treatment settings are areas of concern. Dworkin (1992) cautions that informed consent for treatment does not necessarily constitute consent capability for research. Some of the concerns when recruiting participants from clinical settings
have to do with the resources of the institution. One hospital administrator cited the number of other research projects already being conducted at this site as a reason for declining (T. Smith, personal communication, February 13, 2002).

When participants were being recruited for The Mothers’ Study, attempts to engage clinical directors, or administrators were discouraging. Gaining access to a site entailed sending a letter and asking for an appointment to discuss the research, making a follow-up telephone call, sending the research study packet and making another follow-up call. If invited for a personal meeting, one-half day was the ordinary time expenditure, including traveling and preparation, for a brief meeting. Familiarity with the gatekeeper (medical director, research coordinator) of a clinical setting was most reliable predictor of entrée into a clinical site.

Response rate from staff nurses in clinical settings with regard to facilitating access to gatekeepers was about 30%. Nurses responded at the same rate (30%) when they themselves were gatekeepers. Interestingly, about 35 nurses volunteered as participants. Responses from nurse contact persons at the home care agency were disappointing. A possible reason for this may be the educational level of the individual staff person.

Low prestige of the research as a doctoral dissertation study and the psychosocial nature of the topic were mentioned by Dworkin (1992) as possible reasons for difficulty in gaining access to a recruitment site.

Contrasting with the experience of recruiting participants with mental illness at clinical sites, was the hospitality shown by psychosocial clubs, educational, and advocacy organizations. The executive director of a national
mental health organization was enthused and immediately put the study on the next staff meeting agenda. The president of the local chapter of another support organization wrote letters to the editors of local newspapers promoting the project and included an article in the newsletter. The director of the psychosocial club, after discussing the request at the next board meeting, recruited an interested volunteer to help with distribution of the surveys. Coordinators of mental health consumer conferences were cooperative. In general, consumers and advocates were eager to participate, once they were informed of the study.

These two distinct responses toward self-report survey research of persons with mental illness, one from clinical settings and one from direct community access to people with mental illness, may be an area for further investigation. Mowbray et al. (1995b) notes that most research studies of mothers with mental illness recruit participants from clinical settings rather than mothers with mental illness who are functioning in the community. The Mothers’ study demonstrated that direct consumer contact is an effective means of sample recruitment.

Sample Related Issues

“How to start? Listen to the mothers. Our research indicates they have much to tell us.” (Nicholson et al., 1998b, p.649)

The researcher’s serendipitous dialogue with the mothers validated Nicholson, et al.’s. (1998b, p.694) mandate to “listen to the mothers.” During the process of promoting the study and distributing the survey, the researcher gained
personal insight into how important parenting competency and sense of belonging are to mothers.

In examining selected demographic variables, it was necessary to collapse categories since there were not enough subjects in each, thus compromising discrimination offered by the separate demographic groups. For example, age was dichotomized into less than 30 years and over 30 years. Since the literature by Zemencuk et al. (1995a) reports that mothers with mental illness (MI mothers) are younger than mothers without mental illness (NMI mothers), the number of younger mothers in the sample was insufficient to draw meaningful conclusions.

Although the sample had participants from urban and suburban areas, the income level of the participants was higher than expected, with 45% of the mentally ill mothers having an income above $35,000. There are two issues here: The sample was drawn from a relatively affluent area of the northeast. This limits generalizability to other regions with more diverse socioeconomic levels. Moreover, collapsing the income category may have obscured the extent of financial disparity among the mothers in the sample. Conversely, the cost of living in the geographic area in which the study was conducted, especially for housing, reflects the higher earnings of the population. Source of income was not investigated. There is evidence in the literature that many mothers with mental illness are dependent on government assistance for income. Of 42 mothers with mental illness in Nicholson's (1998) sample, 74% of mothers reported receiving public financial assistance. Sixty-four percent of Mowbray's (2000) sample of 379 mothers with mental illness reported financial support from one or more
government programs. Depending on government assistance as the primary source of income, being a single working mother or being part of a two income family are three quite different life profiles that may be reflected in responses about parenting competency or sense of belonging. Questions about income in the demographic section of the survey may have revealed more meaningful data if they asked about sources of income. Finally, the participants were self-selected or invited to participate. Survey answers by mothers who did not participate in the study may have been different, a factor that should be considered in interpreting the results.

**Instrument Related Issues**

As discussed in the review of literature, parenting competency is a multidimensional set of knowledge, skills, and abilities with regard to child rearing. However, no one instrument examines all the dimensions of parenting competency. Generalizations regarding the entire parenting competency of a person cannot be made by measuring any one dimension. The 51- item PACR was selected for the study according to criteria for self-report instruments recommended by Grotevant and Carlson (1989). Factors such as reasonable item length, appropriate reading level, clear response format, adequate range of responses, and items that differentiate individual attitudes from dyadic or whole family attitudes were considered in instrument selection.

In this study, Parental Attitudes Toward Childrearing (PACR) was selected as a measure of parental attitudes including the expression of affection.
(Warmth), autonomous behavior (Encouragement of Independence), discipline and self-control (Strictness), and feelings about being annoyed or upset about a child’s behavior (Aggravation). In the researcher’s opinion, these four dimensions of parenting also measured intrapersonal, interpersonal, and environmental dimensions of a mother’s relational experiences. For example, feelings of warmth and ability to see oneself as separate (independent) from a loved one are factors that can be understood as intrapersonal phenomena, integral to the mothers own personality. The ability to share affection (warmth) and set appropriate limits (impose discipline) relative to a relational referent (the child), can be seen as interpersonal processes. Finally, tolerating aggravation can be understood as a response to environmental circumstances (child, health care systems).

Conceptualizing Parenting Attitudes Toward Childrearing in this way supports the proposed theoretical link to the experience of sense of belonging in the intrapersonal, interpersonal and environmental dimensions. (Hagerty et al., 1992)

In The Mothers’ Study, alpha coefficients of the PACR scales were as follows: .71 for Warmth, .68 for Independence, .65 for Strictness and .78 for Aggravation. These coefficients are consistent with the alpha coefficients found by the original authors testing the full instrument on middle class parents and reporting a range of .58 - .78. In the Mother’s Study, the majority of participants, over 60% were Caucasian, had incomes over 35 thousand dollars and were married living with a spouse. As such, the sample was primarily middle class. Based on economically disadvantaged, minority parents McGuire and Earls (1993) reported Cronbach’s alphas in the range of .51 to .71, somewhat lower.
than the internal consistency found in the use of this instrument among middle
class parents. Inter-scale correlations of the PACR were not reported in the
original report. In The Mother’s Study, the correlations as shown in Table 13 of
the results chapter, were significant and in the expected directions.

A review of the literature indicates that the majority of studies of parenting
competency are conducted using multimodal approaches such as observation,
interview, functional measures and social expectations (Herman, 1990; Jacobsen
et al., 1997; Mrazek et al., 1995). Given the complexity of parenting, the PACR
scale of 51 items, gives limited information on the individual dimensions of
Warmth measured by 10 items, Encouragement of Independence measured by 9
items, Strictness measured by 13 items and Aggravation measured by 19 items.
The PACR-Warmth subscale had 40% fewer items than the PACR-Aggravation
scale. Thus the scale had design limitations. In the data analysis the use of
subscale scores only and the absence of a total Parenting Competency Score
thwarted the interpretation of the overall concept of Parenting Competency.
Further, interpretation of the PACR Warmth, Encouragement of Independence,
Strictness and Aggravation competencies as interpersonal, intrapersonal and
environmental competencies needs further support from the literature.

The use of a self-report instrument is underrepresented in research studies
of mothers with mental illness. Most commonly self-report is used to measure
psychiatric symptoms. Although self-report is judged as “integral to good clinical
practice” (DeRoy, 1997), among mothers with mental illness, it is used primarily
in small qualitative samples (Nicholson et al., 1998a; 1998b; Sands, 1995). The
Well-Being Project (1989) is unique in its use of combined survey and qualitative measures of issues of importance to mental health consumers. Self-reports, in the popular literature, of mothers with mental illness describing their mothering experiences are becoming more common (Slater, 2000). Mowbray et al. (1995b) demonstrated the use of a self-report instrument for parenting competency among mothers with mental illness. Twenty-four women with severe and persistent mental illness effectively responded to a number of scales and open-ended questions, including parenting competency measures.

During data collection for the Mothers' Study, the researcher noted that four mothers needed assistance completing the survey questions by answering them in two sessions. The accuracy of the responses derives from the stance of the researcher who was interested in the voices of mothers with mental illness speaking for themselves in providing descriptive data. The study was delimited to mothers with mental illness who were competent to understand and respond to the questions in the instruments, and voluntarily participate in the study, as outlined in the section entitled: Protection of Human Subjects for the Mothers' Study. In this study, the number of MI mothers who volunteered indicated a willingness and accessibility of this population with regard to research in consumer-oriented settings.

In summary, the PACR had limitations in its design. The use of a parenting competency measure in combination with the SOBI has not been documented in the literature to date, so findings are tentative. However, the feasibility of collecting information about parenting, sense of belonging and,
physical and mental health using a self-report instrument by mothers with mental illness was demonstrated.

The Sense of Belonging instrument was also examined in terms of its reliability and other instrument related issues. The alpha for the SOBI-P was .95 in the sample of participants in The Mothers Study. This was slightly higher than that found by Hagerty and Patusky (1995) when it was tested among college students (.93), people with depression (.93) and retired nuns (.91). The SOBI-A alpha reached .71. This alpha coefficient is in the same range as that found in its original test groups: college students, .72; people with depression, .63; and retired nuns, .76.

Clarification of the SOBI-A and SOBI-P for the data they reveal as sequential scales or separate, exclusive scales was a concern of the researcher in The Mothers’ Study. A predictive model of SOBI-A for SOBI-P is an area for further study.

Sense of Belonging as a concept and the Sense of Belonging Instrument are relatively new in the research literature. Therefore, there might have been some value for the Mother’s Study to utilize an additional instrument measuring a related construct, such as attachment or affiliation for a comparison, and for additional data about MI mothers. Hagerty et al. (1992) discussed related measures such as social support and loneliness in the concept analysis of Sense of Belonging. In the Mothers’ Study, the need for instruments that were minimally intrusive was a priority for the researcher, since the concentration skills and attention span of mothers with mental illness were unknown.
The SOBI-A subscale of the Sense of Belonging Instrument presented conceptual problems for the researcher with regard to the measurement of the specific constructs of the antecedents of Sense of Belonging in the same scale: 1) energy for involvement, 2) desire for involvement, and 3) potential for shared characteristics. Measuring the three constructs on the same scale may have implications for persons with mental illness whose energy level and personal characteristics may be influenced by psychiatric symptoms or medications.

The psychometric properties of the instrument showed adequate reliability during test development, in The Mothers’ Study, and when recently used by Hagerty and Williams (1999). Its advantages are understandability, brevity, and ease of use. What was especially important to the researcher was the relevance of the Sense of Belonging Instrument to the variables of interest in the study. It appears that the SOBI was sensitive to the differences in mothers with mental illness (MI) and mothers without mental illness (NMI). The Mothers’ Study, unlike prior research, used this instrument exclusively among women who were mothers. In the comparison of the two groups, various mental illness diagnoses were included, unlike current studies that primarily use depression as a variable. Overall, the SOBI was an effective measure of sense of belonging in this study.

Ancillary Findings

Research and theoretical literature describing Parenting Competency (Brown 2001; Darling 1999; Jacobsen et al., 1997) and Sense of Belonging (Hagerty, et al., 1992) confirm that these variables are influenced by
multiple factors. Given interest in examining factors that may affect the scores reported by the participants in the Mothers Study, personal, family and health characteristics of the mothers in the study, these factors were tested for their relationship to the main variables.

Also confirmed in the recent research is the interrelatedness of various demographic variables. Therefore, single characteristics, such as age, can be conceptualized as having a sphere of influence, rather than linear effects. Pinderhughes, et al. (2001) investigated discipline responses in a heterogeneous group of 978 parents, of which 59% were mothers. Direct and indirect effects of various factors were identified. Pearson’s $r$ correlations were calculated among 21 variables related to parent characteristics, parenting beliefs and perceptions of the child. Examples of pertinent findings are positive correlations between mother’s education and socioeconomic status ($r = .67, p < .01$), and stress and number of children ($r = .09, p < .01$). The significance of Pinderhughes, et al’s study for The Mothers’ Study is to draw attention to the profound, complex context of Parenting Competency and Sense of Belonging.

**Age**

When the two groups of mothers were compared, as illustrated in Table 3, 26% of MI mothers were under 30 years of age, as compared to 13% of NMI mothers. The literature reports that women with mental illness tend to have children at an earlier age than women without mental illness (Apfel & Handel, 1993; Zemencuk, et al., 1995). Thus, the difference is noteworthy.
Eighty one percent of the total sample were over 30 years of age. Mowbray et al. (2000) studied 24 MI mothers who were a mean age of 36 years of age. Ritscher's (1997) sample of MI mothers averaged 41 years of age in a sample size of 107 mothers. Kumar et al. (1994) found, in a sample of 100 admissions to a psychiatric mother-baby units, the mean ages for mothers who had schizophrenia was 26.9 years, and mothers who had affective psychoses, 28.8 years. For mothers in the same sample with non-psychotic disorders, such as depression, manic-depression and anxiety, the mean age was 29.2 years. Since there is a concern regarding younger mothers with mental illness, a greater emphasis may have been placed on recruiting younger participants. Since the sample in The Mothers' Study was dichotomized into mothers under 30 years and over 30 years, generalizations about age differences are tentative. One way of improving comparison of age groups would have been to use another break point, such as 40 years, which may have yielded comparison groups that were more balanced in size.

With regard to the main findings in the total sample of The Mothers' Study, age had a significant influence on mothers' scores, with younger mothers scoring lower on the SOBI-P ($F = 12.9$, $p = .000$). Normal developmental needs of mothers occur simultaneously and in interaction with one's child. Younger mothers may be less cognitively prepared for parenting (Brown 2001), and may have lived with a relative for help with the mothering role while finishing school (Sadler et al, 2001). Valued involvement in the mothering role and fit into her new status may be conflictual in such a context.
Younger mothers, however, had statistically higher mean scores on SOBI-A ($F = 9.5, p = .002$). Younger age suggests that energy level and general health are more robust. Theories of the psychological development of women (Kaplan, 1991; Miller, 1986) may explain a higher motivation for relationship making and an inclination to seek out shared characteristics.

Younger mothers also scored significantly higher on PACR-Aggravation ($F = 5.3, p = .023$). This may reflect a younger mother’s struggle with attainment of the maternal role in conjunction with meeting her own developmental needs.

In the MI sample, younger mothers demonstrated significantly lower mean scores on both SOBI-P ($F = 5.3, p = .025$) and SOBI-A ($F = 5.3, p = .023$). Age of onset of illness is a factor for which no data was collected in The Mothers’ Study, but may have an influence on the psychosocial development of MI mothers, manifested in scores on Sense of Belonging. To a certain extent, a younger woman’s experience with the lifestyle imposed by mental illness, that is, low socioeconomic status, difficulties with relationships, and ongoing dependence on systems can be felt more acutely than women who have had a longer time to develop coping mechanisms. Furthermore, the advantages of more robust health of younger women may be diminished in young mothers who have mental illness by persistent symptoms and medication side effects.

No significant effects of age were found in the NMI group. A possible explanation for this is the break point, 30 years, for dichotomizing the age group of mothers. Mean scores of Sense of Belonging and Parenting Competency may have differed if the age groups had been compared at under 40 years and over 40.
years, since transitions in adult psychosocial development persist throughout the lifespan.

**Income**

The descriptive statistics showed that MI mothers had a lower socioeconomic status, 45% of MI had incomes above $35,000, as compared to 79% of NMI mothers.

This finding is inconsistent with evidence of the low socioeconomic status of MI mothers. Mowbray et al. (2000), in a study of 379 MI mothers using public sector services, reported a median household yearly income of $11,148 for the sample. In retrospect, it might have been useful to ask a question regarding source of income from the participants in the current study to ascertain how dependent mothers were on public assistance, as compared to receiving support from working husbands or mothers' own employment. Rogosch et al. (1992) studied 48 mothers with mental illness. Sixty-seven percent were on public assistance, and of those, 46% felt the amount of income was inadequate for basic needs. Of 42 mothers with mental illness in Nicholson et al.'s (1998a) sample, 61.9% reported receiving government benefits. Thus, the socioeconomic profile of the participants of the Mothers' Study was quite different from those reported in the literature thus far. Although all the study participants reporting incomes of under $35,000 do not fall into the category of poverty, some do, and affordable resources are limited even at that income level in terms of housing, health care and child care.
However, if income differences found in The Mothers’ Study are conceptualized as lower socioeconomic status (low SES) and higher socioeconomic status (high SES), discussion may be more meaningful.

Prolific research has been conducted on the direct and indirect effects of socioeconomic status on the lives of women. Women comprise 57.2% of the poverty population (Miller, 1999). Socioeconomic status has been found to be correlated with ethnicity, education, stress, number of children, marital status (Pinderhughes, 2001), as well as with mental illness (Apfel & Handel, 1993; Dunn, 1993; Mowbray et al., 2001) and parenting competency (Pinderhughes, 2001).

One relevant context for possible explanations of the effect of SES status on Sense of Belonging and Parenting Competency is that women are most vulnerable to be poor and remain poor. Brown (2001) has succinctly expressed this, stating “Poverty is a feminine issue because poverty among women is linked to family status. Rearing children, being unemployed and single are factors that increase a woman’s risk of being poor. The educational level of women as they go through the childrearing period relates to the woman’s potential for being fully employed, underemployed or unemployed (page 5).”

In the Total Sample, mothers with lower incomes differed significantly from mothers with higher incomes reporting lower scores on the SOBI-P ($F = 13.3$, $p = .000$). There was a weak, significant difference in scores on the SOBI-A ($F = 4.5$, $p = .036$). Significant differences were found on the PACR subscales of Independence ($F = 7.5$, $p = .007$), Strictness ($F = 7.6$, $p = .007$) and Aggravation ($F = 5.3$, $p = .023$).
Lower income mothers scored lower on both subscales of sense of belonging; lower in encouragement of independence and higher in strictness and aggravation.

Typically, poor people are marginalized socially. Lacking material resources, they are set apart from the average person. The cycle of dependence recurs as they rely on public services for transportation, for income, and for recreation. Having fewer resources may elicit parenting behaviors that are more restrictive; higher aggravation may be experienced by a constant struggle to make do with as little as possible. This constellation of circumstances suggests lower levels of valued involvement, fit, energy and motivation. Socioeconomic status has been shown to have a negative relationship to such parenting competencies as physical discipline ($r = -.25, p < .01$) and displaying an upset affect ($r = -.15, p < .01$). Conversely, a positive relationship was found with a higher SES having a repertoire of alternate punishments ($r = .20, p < .01$) and displaying positive affect ($r = .19, p < .01$), thus supporting the assertions that there are class differences in child rearing (Pinderhughes, 2001).

The relationship of poverty and psychiatric status has been well documented. Psychiatric symptoms of difficulties in mood, disordered perceptions and interpersonal problems interfere with employment, setting the context for poverty. The stresses of poverty exacerbate illness symptoms and indeed, increase the risk of first episodes of illness in genetically vulnerable persons. Bruce et al. (1991) studied the risk of new or recurring psychiatric episodes of groups of people defined by poverty status. A sample of 3467 persons 18 years or older were recruited from multiple sites in an urban catchment area. When interviewing
healthy participants, respondents identified as impoverished were twice as likely to report symptoms that met criteria for a DSM III-Axis I diagnosis. Results, using logistic multiple regression, were reported as odds ratio (OR). (OR = 1.92, p = <.05, adjusted for age, sex, race, and history of outcome diagnosis).

Significant differences were found between income groups on SOBI-A in the MI (F = 5.3, p = .023) subsample. When income was considered, the mean SOBI-A scores of low SES MI mothers in the sample (M = 23.9, SD = 4.2) decreased from its previous level (M = 24.5, SD = 4.2), suggesting the additive influence of low income on the factors among MI mothers that might impinge on the antecedents of sense of belonging.

The Parenting Competency of mothers with mental illness (MI) was significantly influenced by income on PACR-Independence (F = 5.4, p = .023) and PACR-Strictness (F = 6.9, p = .010). Mentally ill mothers with low incomes tended to have lower PACR-I scores (M = 27.4, SD = 3.1) when compared to higher SES MI mothers (M = 29.0, SD = 3.5), and when compared to PACR-I scores without considering income (M = 28.0, SD = 3.0). One explanation for this may be that financial need increases the MI mothers’ dependence on systems and intensifies fear of loss of custody.

Higher mean scores were found on PACR-Strictness among low SES MI mothers (M = 21.7, SD = 4.0) compared to higher SES MI mothers (M = 19.2, SD = 4.0). Mean scores on PACR-Strictness among MI mothers, without adjusting for income, were lower (M = 20.6, SD = 4.2) than scores for low SES MI mothers. This may be a class difference in childrearing, as described by Brown, 2001 or a coping style for the combined stress generated by poverty and mental illness.
Among NMI mothers, the influence of level of income on Sense of Belonging was significant on the SOBI-A only ($F = 4.6, p = .036$). Interestingly, NMI mothers with lower incomes had higher mean scores on SOBI-A than NMI mothers with higher incomes. The possibility that NMI mothers are more resilient and can mobilize personal resources for motivation, despite poverty, may be an area for future study. The findings of Bruce et al. (1991) suggest that there may be undiagnosed illness in the lower SES group of NMI mothers. With regard to the sample in The Mothers’ Study, 21%, or 18, of the NMI mothers were in the low SES group, but only 4 mothers reported incomes near the 2000 Poverty Threshold, $17,524 for a 4 person household (U.S. Census Bureau, 2002). No significant differences in Parenting Competency according to income level were demonstrated among NMI mothers. Once more, the income levels among NMI women may not have truly reflected poverty levels as defined by other studies. Therefore, the finding is relevant only to this sample.

Education

Fewer MI mothers completed college, with 33% having a bachelor’s degree or higher, as compared to 47% of NMI mothers. This is in contrast to results of a study of Mowbray et al. (1995a) that found only 4% of the sample of 24 mothers having a bachelor’s degree or higher. In the same study, 50% reported not completing high school. A similar trend of low educational level was reported by White et al. (1995), in which 314 MI mothers, who were caretakers of their children, reported an average educational level of 11th grade. Findings on the
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expressed concern about the influence of chronic stress and poverty on parenting (Gordon et al. 1989; Nicholson ET al., 1998; Mowbray et al., 1995). In Mowbray et al's. (2001) study of 379 MI mothers, high percentages of participants reported every day hassles of an above average level. They also reported an incidence of stressful life events at the following rates: 1) psychiatric crisis were experienced by 57% of the sample; 2) financial concerns, 50.8%; 3) relationship problems with friends, neighbors or family, 38.1%; 4) separation from children, 36.2%; and 5) losing housing, 15.3%. There was no significant effect of stress on other subscales of Parenting Competency. It is notable that no differences were found on PACR-Warmth since Pinderhughes et al. (2001) found that high stress was associated with upset affect toward a child ($r = .13, p < .01$).

The data also revealed a significant influence of stress on Sense of Belonging in the Total Sample only, as illustrated in Table 54. Mean scores of mothers reporting higher stress had significantly lower levels of Sense of Belonging $P (F = 10.4, p = .002)$ and $A (F = 10.6, p = .001)$. Mothers in Ritscher's study (1997) reported that mental illness, medications, children and finances were major stressors. On a scale, where 5 represented the highest score, 107 MI mothers scored an average stress level of 4.10.

In the MI sample, lower SOBI-P was related to higher stress levels, but not as strongly as in the total sample ($F = 5.1, p = .027$).

Trouble managing the dual roles of parenting and maintaining a Household
In reference to a characteristic that is stress related, but more specific to the roles of mothers, analysis was conducted on the Amount of Trouble Managing parenting and maintaining a household.

In the total sample, nearly all the scores of the study variables differed significantly between mothers who had Little or No Trouble Managing and those who experienced Moderate or Great Trouble Managing. Table 56 illustrates these results. SOBI-P ($F = 21.4$, $p = .000$), and A ($F = 17.5$, $p = .000$) had higher mean scores among mothers who reported little or no trouble managing. PACR-Warmth ($F = 6.6$, $p = .011$) and Independence ($F = 5.0$, $p = .027$) revealed higher scores among mothers with little or no trouble managing; and PACR-Aggravation ($F = 24.5$, $p = .000$) was decreased in mothers with little or no trouble managing.

In the MI subsample, the relationship was not as strong, but in the same direction. SOBI-P ($F = 9.2$, $p = .003$), SOBI-A ($F = 5.7$, $p = .020$) and PACR-W ($F = 5.8$, $p = .018$) showed higher scores for Mothers who little trouble managing. Aggravation ($F = 5.9$, $p = .018$) decreased for the low trouble mothers.

The NMI mothers in the low trouble category reported lower aggravation scores ($F = 6.9$, $p = .010$), similar to the total sample and the MI mothers.

Mothers’ identifications of their stressors can help researchers refine the areas needing further study. Nicholson (1998) found role strain of having a mental illness and childrearing to be a stressor for a sample of 42 mothers. The Mothers’ Study found that maintaining a household is an additional role, now identified as contributing to the roles of childrearing, and being a person managing a chronic mental illness.
CHAPTER VI
SUMMARY, CONCLUSIONS, RECOMMENDATIONS AND IMPLICATIONS

Summary
This exploratory, correlational study was designed to evaluate the relationships of parenting competency and sense of belonging among mothers with mental illness and mothers without mental illness. Little is known about the parenting patterns of mothers with mental illness. And, because parenting is a neglected social role for women with mental illness, their feelings and opinions about motherhood have not been articulated in the literature.

Understandings of the psychological development of women posit that relationships engender competency and self-esteem. Therefore, a mother’s relatedness to her child and to her role as a mother is pertinent to her parenting competency. The theoretical framework for the study was derived from the Theory of Relatedness as conceptualized by Hagerty et al. (1993). Specifically, a process of relatedness termed Sense of Belonging, was investigated in order to examine its relationship to parenting competency. The study examined whether or not a mother’s sense of belonging was related to parenting competency. No previous studies have linked sense of belonging with parenting competency, particularly in mothers with and without mental illness.

The study sample consisted of 155 volunteer participants who were mothers, of whom 69 were mothers with mental illnesses of various diagnoses.
and different levels of severity of illness. Eighty-six mothers without mental illness also participated as a comparison group. The participants were recruited from nursery schools, psychosocial clubhouses, psychiatric consumer meetings and outpatient mental health clinical sites.

Participants completed a self-administered survey in booklet form comprised of:

1) the Sense of Belonging Instrument (Hagerty & Patusky, 1995), comprised of 2 subscales, the SOBI-P, psychological experience of Sense of Belonging identified as valued involvement and fit; and SOBI-A, antecedents of Sense of Belonging, identified as energy, desire and potential for shared characteristics.

2) the Parental Attitudes Toward Childrearing Scale (Easterbrooks & Goldberg, 1984), a self-report instrument comprised of 4 subscales, measuring PACR-Warmth, PACR-Independence, PACR-Strictness, and PACR-Aggravation.

3) a demographic questionnaire.

Each booklet was accompanied by a cover letter, and a stamped, self-addressed return envelope. A small premium packet was included containing a pencil to fill out the survey, a mint candy, and a refrigerator magnet as a token of appreciation.

Research Questions

To answer research question 1, regarding the degree of parenting competency in the total sample and in the MI and NMI subsamples, univariate
descriptive statistics were calculated for the two groups of mothers. T-Tests were computed with presence or absence of mental illness as the independent variable and the 4 PACR subscale scores and 2 SOBI subscale scores as dependent variables. Significance levels were set at .001. The MI mothers had statistically significant lower mean scores on the Independence scale than the NMI mothers (t = 2.63, df = 153, p = .009). A significant difference was found on the Aggravation scale with higher scores among MI mothers as compared to NMI mothers (t = -5.44, df = 153, p = .000). There was no statistically significant difference between groups on Warmth or Strictness. Since one of the purposes of the study was to determine whether or not MI mothers differed from NMI mothers, this finding determined that in this sample, there were some similarities and some differences in parenting competency scale scores.

To answer research question 2, regarding the Sense of Belonging in the total sample, and in the MI and NMI subsamples, a similar procedure was followed. Univariate descriptive statistics were calculated for the total group and for the two groups of mothers. One way ANOVAs were computed with presence or absence of mental illness as the independent variable and the 4 PACR subscale scores and 2 SOBI subscale scores as dependent variables. Significance levels were set at .001.

When the two groups of mothers were compared, results revealed that MI mothers had statistically significant lower scores on both subscales of the SOBI-P, valued involvement and fit (t = 7.2, df = 153, p = .000), and SOBI-A, antecedents of energy, desire, and potential for shared characteristics (t = 6.4, df = 153, p =
.000). This was an indication that MI mothers had a weaker sense of belonging and less strong antecedents of sense of belonging than NMI mothers did.

To answer research question 3, regarding the relationship between parenting competency and sense of belonging, bivariate correlations were conducted on the each of the PACR and SOBI subscales, based on the total sample and subsamples of MI and NMI mothers.

In the total sample, findings indicated a significant correlation was found for SOBI-P and all four parenting competency scales. Significant positive correlations were found on Warmth (r = .214, p = .008) and Independence (r = .218, p = .006), indicating that higher scores on psychological experience of belonging is associated with greater warmth and a higher likelihood of encouraging independence. Significant negative correlations were found on Strictness (r = -.295, p = .000) and Aggravation (r = -.559, p = .000). Mothers in the total sample that scored high on SOBI-P tended to be less strict and experience less aggravation than mothers who scored low on SOBI-P.

In the total sample, high scores on the antecedents of sense of belonging, SOBI-A, were significantly associated with low Strictness (r = -.280, p = .000) and Aggravation (r = -.566, p = .000), indicating that mothers with more desire for involvement, more energy for involvement and greater potential for shared characteristics were less strict and experienced lower levels of aggravation than mothers who scored lower on SOBI-A.

In the subsample of MI mothers, both SOBI-P showed significant negative correlations with Strictness (r = .214, p = .008) and Aggravation (r = .214, p =
.008). Similar correlations were found among the MI mothers between SOBI-A and Strictness (r = .214, p = .008) and Aggravation (r = .214, p = .008).

The scores of the subsample of NMI mothers showed significant negative correlations between SOBI-P and SOBI-A and Aggravation only (r = .214, p = .008). Overall, the parenting competency measure of Aggravation consistently showed significant negative correlation to Sense of Belonging.

In summary, the results in the total sample suggest that a relationship may exist between a mother's relatedness and parenting competency. Weaker support for that relationship was demonstrated in the smaller sample sizes of the subsamples. The distinction of Aggravation experienced in parenting as negatively related to sense of belonging is notable and is an area for future study.

Research question 4 examined whether sense of belonging influences the relationship between presence of mental illness and parenting competency. Two ways that Sense of Belonging could influence the relationship between mental illness and parenting competency are as a moderating, or interacting variable, and as a mediating, or intervening variable. Sense of belonging as either a moderating or mediating variable was examined, using multiple linear regression analysis according to the guidelines of Baron and Kenny (1986). The predictor variable was represented by PAMI, signifying presence or absence of mental illness.

The role of sense of belonging as a moderating, or interacting, variable was tested first. Moderation implies a change in direction or strength of a relationship when the scores of the moderator change. Results indicated that, in this sample, Sense of Belonging failed to act as a moderating influence on the
relationship of Parenting Competency and mental illness. A change in sense of belonging would yield no change in the relationship of parenting competency and presence or absence of Mental Illness.

The role of sense of belonging as a mediating or intervening variable was tested next. Mediation implies a causal path between the predictor variable and criterion variable. Mediational analyses showed that both SOBI-P and SOBI-A do mediate, that is, intervene, in the relationship between Mental Illness and PACR-Aggravation. Sense of Belonging does not mediate, or intervene in the relationship of Mental Illness on the Parenting Competency Scales of Warmth, Independence and Strictness.

In other words, when Sense of Belonging is included in analyzing the relationship between PACR-Aggravation and Presence or Absence of Mental illness, (PAMI) the differences between MI mothers and NMI mothers on this parenting competency disappear. The aggravation level of mentally ill mothers, under the mediating influence of Sense of Belonging, is more similar to the level of aggravation of mothers without mental illness. This is a notable finding, considering the fact that MI mothers in this sample reported higher burdens and fewer resources than NMI mothers did, as evidenced by the ancillary findings.

Ancillary Analyses

Ancillary variables such as age, marital status and level of stress create a matrix within which a mother forms relationships, fulfills social roles, and
manages functioning for herself and her child. It was anticipated that the ancillary findings would show numerous and variable influences on the study variables.

The differences in scores of Parenting Competency and Sense of Belonging were examined with regard to variations in personal, family, and health characteristics. These analyses were performed in order to learn about the influence of these factors on the study variables. Comparisons of means and one way ANOVAS were conducted on the total sample and on the two different subsamples of mothers. Findings from the total sample are summarized below.

In the total sample:

SOBI-P was significantly influenced by age, income, marital status, number of children, amount of daily stress and amount of trouble managing the dual responsibilities of childrearing and maintaining a home.

SOBI-A was also significantly influenced by age, income, marital status, number of children, amount of daily stress and amount of trouble managing the dual responsibilities of childrearing and maintaining a home.

PACR-W was significantly influenced by amount of trouble managing the dual responsibilities of childrearing and maintaining a home.

PACR-I was significantly influenced by income, education, and amount of trouble managing the dual responsibilities of childrearing and maintaining a home.

PACR-S was significantly influenced by income, ethnicity, education, marital status, and number of children.

PACR-A was significantly influenced by age, marital status, daily stress and amount of trouble managing the dual responsibilities of childrearing and
maintaining a home.

In the MI subsample,

SOBI-P was significantly influenced by age, ethnicity, marital status, and amount of daily stress

SOBI-A was significantly influenced by age, income and education

PACR-W was significantly influenced by amount of trouble managing the dual responsibilities of childrearing and maintaining a home.

PACR-I was significantly influenced by income, education and ethnicity.

PACR-S was significantly influenced by income, education, ethnicity and number of children.

PACR-A was significantly influenced by marital status, amount of daily stress and amount of trouble managing the dual responsibilities of childrearing and maintaining a home.

In the NMI subsample,

SOBI-P did not show any significant influence by personal, family or health characteristics.

SOBI-A was significantly influenced by income and education.

PACR-W did not show any significant influence by personal, family or health characteristics.

PACR-I did not show any significant influence by personal, family or health characteristics.

PACR-S was significantly influenced by ethnicity.

PACR-A was significantly influenced by marital status, amount of daily
stress and amount of trouble managing the dual responsibilities of childrearing and maintaining a home.

Neither the family characteristic of number of helpers with parenting nor the health characteristic of co-occurring medical illness demonstrated a significant influence on the main variables.

Since personal, family and health characteristics are shown to have such widespread, diverse influences in this sample a more systematic analysis is strongly indicated.

Conclusions

The Main Variables

Hagerty, et al.'s Theory of Relatedness and process of Sense of Belonging was a constructive framework in guiding the study of parenting competency in mothers with and without mental illness.

Research Question One: Parenting Competency

Mothers with mental illness were not significantly different from mothers without mental illness in level of warmth.

Mothers with mental illness reported statistically significant lower scores than mothers without mental illness in encouragement of independence.

Mothers with mental illness were not significantly different from mothers without mental illness in level of strictness.
Mothers with mental illness reported statistically significant lower scores than mothers without mental illness in encouragement of independence.

Research Question Two: Sense of Belonging

Mothers with mental illness score significantly lower than mothers without mental illness the psychological sense of belonging, that is, valued involvement and fit in relationships.

Mothers with mental illness reported statistically significant lower scores than mothers without mental illness in the antecedents of sense of belonging, that is, energy for involvement, desire for involvement and potential for shared characteristics.

Research Question Three: Relationship of Parenting Competency and Sense of Belonging

In the total sample, independent of presence or absence of mental illness:

There is a significant positive relationship between psychological experience of sense of belonging and the parenting competencies of warmth and encouragement of independence

Similarly, there is a significant negative relationship between psychological experience of sense of belonging and the parenting competencies of strictness and aggravation.
There is a significant positive relationship between antecedents of sense of belonging and parenting competencies of warmth and encouragement of independence.

As in the psychological experience of sense of belonging, there is a positive relationship between antecedents of sense of belonging and parenting competencies of strictness and aggravation.

In the subsample of MI mothers:

There is a significant negative relationship between psychological experience of sense of belonging and parenting competencies of strictness and aggravation.

Likewise, there is a significant negative relationship between antecedents of sense of belonging and parenting competencies of strictness and aggravation.

In the subsample of MI mothers:

There is a significant negative relationship between psychological experience of sense of belonging and parenting competencies of aggravation.

Further, there is a significant negative relationship between antecedents of sense of belonging and aggravation.

The Mothers' Study has demonstrated that the psychological concept of sense of belonging may be related to aspects of parenting competency. Mothers with mentally illness experience sense of belonging differently than mothers without mental illness.

The parenting competencies of mothers with mental illness can be similar to or very different from mothers with mental illnesses.
Research Question Four: Influence of Sense of Belonging on the relationship between presence or absence of mental illness and Parenting Competency.

Moderation

Sense of Belonging, either through psychological experience or antecedents, failed to demonstrate moderation of the relationship of presence or absence of mental illness and parenting competencies of warmth, encouragement of independence, strictness, or aggravation.

Mediation

Sense of Belonging, either through psychological experience or antecedents failed to demonstrate mediation of the relationship of presence or absence of mental illness and three of four parenting competencies, those of warmth, encouragement of independence, and strictness.

Sense of Belonging, psychological experience shows perfect mediation of the relationship of presence or absence of mental illness and parenting competency of Aggravation.

Sense of Belonging – Antecedents does shows partial mediation of relationship of presence or absence of mental illness and parenting competency of Aggravation.

Mothers with mental illness were willing and able independently to answer a survey about themselves, health issues, and their feelings, in both clinical and community settings.
The moderator-mediator statistical procedure (Baron & Kenny, 1986) is useful in making distinctions about influences of various phenomena on variables of interest in research studies.

Although access to research participants with mental illness can successfully be accomplished through direct mental health consumer contact, the able social skills of these voluntary participants may influence the results obtained. Furthermore, the responses of the neediest of persons with mental illness, the disenfranchised, and isolated, remain unknown.

Ancillary Variables

The descriptive statistics for the sample of 155 mothers participating in the study revealed differences in demographic variables between mothers with mental illness and mothers without mental illness. General trends noted in the frequencies of the demographic variables between the two groups are noted below:

Mothers with mental illness tended to be younger, reported lower incomes, were less well educated, and were less likely to be married and living with a spouse than mothers without mental illness.

Further it was found that mothers with mental illness tended to have younger children, were less likely to have their youngest child living at home, were less likely to be the primary caregiver for their youngest child, and reported fewer helpers than mothers,
Mothers with mental illness experienced more co-occurring medical illnesses, indicated that they a higher level of daily stress, and reported more trouble managing the dual responsibilities of childrearing and maintaining a than mothers without mental illness.

Recommendations

The theoretical framework of Relatedness and the process of Sense of Belonging (Hagerty et al., 1992, Hagerty et al., 1993, Hagerty & Patusky, 1995) has potential to describe correlates of parenting competency with regard to mothers’ feelings about her valued involvement and fit with her child, desire for involvement with parenting, energy for involvement with parenting and a mother’s perception of shared characteristic between herself and her child. Since it has cognitive, affective and behavioral components, it is pertinent to the some of the difficulties that mothers with mental illness are known to have. Nursing interventions using therapeutic and psychoeducational approaches such as cognitive behavioral therapy, can be designed for parenting skills.

The antecedents of Sense of Belonging with regard to lower energy levels experienced by mothers with mental illness can be an area of intervention for nurses who, in advanced practice, prescribe and monitor medications.

Although The Mother’ Study captured responses at one point in time longitudinal studies of mother-child relationships among mothers with mental illness and their children and outcome studies of specific cognitive behavioral interventions of parenting may yield significant results.
The influence of demographic variables on parenting was shown to be multidimensional and complex. Models for explaining single and cumulative effects of these variables are worthy of investigation.

Ethical concerns of direct recruitment of persons with mental illness for research studies need to be evaluated.

Implications

The insights gained from conducting the study suggest likely areas on which nurses might reflect as they care for and about mothers with mental illness.

Systematic data collection can be initiated easily in intake and assessment interviews. Nurses are strategically placed in a number of settings where this data can be collected. Community agencies, emergency rooms, schools, prenatal and neonatal units, home care, psychotherapeutic, and pediatric settings are just a few of such places where nurses encounter mothers with mental illness.

Although it is true that nurses are found in many settings where case-finding of at-risk mothers and children can take place, nurses can carve an effective niche in numerous other settings where their observations of sense of belonging and parenting competency of mothers can occur. The researcher used the prevailing ignorance about nursing doctorates as an opportunity to teach and model the impact that nursing research can have on health care. It was found that many social service and mental health agencies marginalize nurses to roles such as medication administration and immunization monitoring, as evidenced by staffing patterns. From clinical practice, the researcher has observed that the care management of at-risk mother-child dyads is often relegated to social workers.
The course of growth and development of both mother and child in conjunction with psychiatric illnesses is a complex physical, emotional and spiritual process for which nurses have unique understanding from nursing science. Creating a job description and proposing a role is a viable activity. The need for initiative and leadership was clear throughout the data collection period.

Nursing education can be responsive in providing the knowledge and skills for nurses to take effective initiatives. The researcher’s mentoring roles with students will incorporate practice in leadership skills.

With regard to nursing research, research venues need to be enlarged. The barriers to accessing clinical settings seem to far exceed the objective of protection of human subjects. There is a undercurrent of what was perceived as professional territoriality and a keen competition for research sites. It was somewhat reminiscent of the subjugation of nurses throughout nursing history. Yet we are now well equipped to negotiate these obstacles.

The personal implication from this study is the researcher’s ongoing commitment to projects that nurture a passion. In this case it is, mothers and especially mothers with mental illness Opportunities to care for this vulnerable population will present themselves for as long women choose the privileged role of motherhood.
REFERENCES


Center for Mental Health Services (1993, May 20). Federal definitions of serious mental illness. Federal Register


APPENDIX A

SENSE OF BELONGING INSTRUMENT – SOBI
SOBI-P (PSYCHOLOGICAL EXPERIENCE) SCALE

Here are some statements with which you may or may not agree. Using the key listed below, circle the option that most closely reflects your feelings about each statement.

SA = Strongly Agree   A = Agree   D = Disagree   SD = Strongly Disagree

1. I often wonder if there is anyplace on earth where I really fit in.  
   SA A D SD

2. I am not sure if I fit in with my friends.  
   SA A D SD

3. I would describe myself as a misfit in most social situations.  
   SA A D SD

4. I generally feel that people accept me.  
   SA A D SD

5. I feel like a piece of a jig-saw puzzle that doesn’t fit into the puzzle.  
   SA A D SD

6. I would like to make a difference to people or things around me, but I don’t feel that what I have to offer is valued.  
   SA A D SD

7. I feel like an outsider in most situations.  
   SA A D SD

8. I am troubled by feeling like I have no place in this world.  
   SA A D SD

9. I could disappear for days and it wouldn’t matter to my family.  
   SA A D SD

10. In general, I don’t feel a part of the mainstream of society.  
    SA A D SD

11. I feel like I observe life rather than participate in it.  
    SA A D SD

12. If I died tomorrow, very few people would come to my funeral.  
    SA A D SD

13. I feel like a square peg trying to fit into a round hole.  
    SA A D SD

continued
14. I don’t feel that there is anywhere where I really fit into this world.  
SA A D SD

15. I am uncomfortable knowing that my background and experiences are so different from those who are usually around me.  
SA A D SD

16. I could not see or call my friends for days and it wouldn’t matter to them.  
SA A D SD

17. I feel left out of things.  
SA A D SD

18. I am not valued or important to my friends.  
SA A D SD

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SENSE OF BELONGING INSTRUMENT – SOBI
SOBI-A SCALE

Here are some statements with which you may or may not agree. Using the key listed below, circle the option that most closely reflects your feelings about each statement.

SA = Strongly Agree  A = Agree  D = Disagree  SD = Strongly Disagree

1. It is important to me that I am valued or accepted by others  
SA A D SD

2. In the past, I have felt valued and important to others.  
SA A D SD

3. It is important to me that I fit somewhere in this world.  
SA A D SD

4. I have qualities that can be important to others.  
SA A D SD

5. I am working on fitting in better with those around me.  
SA A D SD

6. I want to be a part of things going on around me.  
SA A D SD

7. It is important to me that my thoughts and opinions are valued.  
SA A D SD

8. Generally other people recognize my strengths and good points.  
SA A D SD

9. I can make myself fit in anywhere.  
SA A D SD

10. All of my life I have wanted to feel like I really belonged somewhere.  
SA A D SD

continued
11. I don't have the energy to work on being a part of things.  
12. Fitting in with people around me matters a great deal.  
13. I feel badly if others do not value or accept me.  
14. Relationships take too much energy for me.  
15. I just don't feel like getting involved with people.
Scoring for the Sense of Belonging Instrument, Scales P and A

1. Sense of Belonging Instrument – Psychological Experience (SOBI – P)

This scale consists of 18 items scored on a 4-point scale of strongly agree to strongly disagree. Strongly agree is 1 point and strongly disagree is scored as 4 points for every item, EXCEPT #4 which is reverse scored.

2. Sense of Belonging Instrument – Antecedents (SOBI – A)

There are 15 items on this scale. Strongly agree is scored as 4 points and strongly disagree is scored as 1 point in items #1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13. Strongly agree is scored as 1 point and strongly disagree is scored as 4 points in items #11, 14, 15.
APPENDIX B

PARENTAL ATTITUDES TOWARD CHILDCAREING SCALE
(M.A. Easterbrooks & W.A. Goldberg, 1984)

General Directions: The following statements represent the ways that
mothers might feel about or act towards their children. Not all mothers feel or
behave the same way. Read each statement carefully. Please indicate whether
you agree or disagree that the statement applies to you as a parent. Circle the
response category that comes closest to YOUR degree of agreement or
disagreement. Try to answer all statements.

Most of the statements are worded for one child; if you have more than one
child think of each item as it applies to your youngest child. Some of the items
refer to a spouse. If there is no spouse, think of the item as it would apply to a
significant other, a relative, or just others who know you and your child.

SA = Strongly Agree    A = Agree    D = Disagree    SD = Strongly
Disagree

1. I respect my child’s opinions and encourage him
   or her to express them.
2. I feel that it is never too early to start teaching
   a child to obey commands.
3. I believe that if a child makes occasional slips after
   he or she has been toilet trained, his or her slips
   should be ignored.
4. I often feel angry with my child.
5. I encourage my child to express anger as well
   as pleasant feelings.
6. I punish my child by putting him or her off somewhere
   by himself or herself for a while.

continued
7. I am bothered because I can't do the things I liked to do before the baby was born. 

8. I wish my spouse spent more time with our child. 

9. I feel a child should be given comfort and understanding when he or she is scared or upset. 

10. I believe physical punishment to be the best way of disciplining. 

11. I find that taking care of a young child is much more work than pleasure. 

12. I find that my child is likely to get into something and break it if I don't keep my eyes on him or her every moment. 

13. I express affection by hugging, kissing and holding my child. 

14. I find some of my greatest satisfactions in my child. 

15. I prefer my child not try things if there is chance he or she will fail. 

16. I feel that the earlier a child is put on the potty, the easier it is to toilet train him or her. 

17. I usually take into account my child's preference in making plans for the family. 

18. I feel that a child who is always quiet and peaceful is the best kind of child to have. 

19. I find it difficult to punish my child. 

20. I let my child make many decisions for himself or herself. 

21. I worry about the bad and sad things that can happen to a child as he or she grows up. 

22. I find that my child's father and I often disagree about the best way to raise our child. 

23. I find that toddlers act like they are the most important people in the house and are always demanding things. 

24. I do not allow my child to get angry with me. 

25. I feel my child is a bit of a disappointment to me. 

continued
26. I am easy-going and relaxed with my child.

27. I believe that too much affection and tenderness can harm or weaken a child.

28. I tend to spoil my child.

29. I wish my child's father took more responsibility for disciplining our child.

30. I talk to and reason with my child when he or she misbehaves.

31. I joke and play with my child.

32. I encourage my child to be curious, to explore, and to question things.

33. I have strict rules for my child.

34. I think one has to let a child take many chances as he or she grows up and tries new things.

35. I feel that my child and I have warm, intimate times together.

36. I believe in praising a child when he or she is good, and think it gets better results than punishing when he or she is bad.

37. I threaten punishment more often than I actually give it.

38. I sometimes feel that I am too involved with my child.

39. I make sure my child knows that I appreciate what he or she tries or accomplishes.

40. I teach my child to keep control of his or her feelings at all times.

41. I wish my child did not have to grow up so fast.

42. I believe that scolding and criticism makes my child improve.

43. I feel that I sacrifice a lot of my personal interests for my child.

44. I worry about the health of my child.

45. I feel that there is a great deal of conflict between my child and me.

continued
46. I encourage my child to be independent of me.

47. I make sure I know where my child is and what he or she is doing.

48. I find it interesting and educational to be with my child.

49. I think children must learn early not to cry.

50. I feel that I have more authority over my child than my child’s father.

51. I wish I could spend more time with my child.

continued
Scoring Instructions

Parental Attitudes Toward Childrearing Scale (PACR)

Four subscales (warmth, encouragement of independence, strictness, aggravation) were derived from the 51-item PACR. The question numbers that correspond to each subscale appear below.

Warmth

(N = 10 items; Cronbach’s alpha = .58 mothers, .78 fathers)

Items 3, 9, 13, 14, 26, 31, 35, 36, 39, 47

Encouragement of Independence

(N = 9 items; Cronbach’s alpha = .69 mothers, .69 fathers)

Items 1, 5, 17, 20, 30, 32, 34, 46, 48

Strictness

(N = 13 items; Cronbach’s alpha = .67 mothers, .73 fathers)

Items 2, 6, 10, 16, 18, 24, 27, 33, 37, 40, 42, 49, 50

Aggravation

(N = 19 items; Cronbach’s alpha = .69 mothers, .69 fathers)

Items 4, 7, 8, 11, 12, 15, 19, 21, 22, 23, 25, 28, 29, 38, 41, 43, 44, 45, 51
APPENDIX C

CONTACT PERSON ORIENTATION / PROTOCOL FOR THE STUDY

NYU letterhead

ORIENTATION AND PROTOCOL FOR THE STUDY

Thank you for agreeing to assist in data collection for The Mother's Study, a dissertation research survey being conducted under the auspices of New York University, Division of Nursing.

The study is interested in mothers who are caretakers or have regular contact by visits, telephone calls letters or email at least twice a month, with their children 18 years and under. The study is completely anonymous. Participants are being asked to complete a survey which should take about 30 minutes, and return it by mail, or to contact persons, like you, to mail for them. Should you have any questions about the study, please feel free to call me at the phone number indicated on the survey materials.

The survey consists of a packet containing a cover letter, a questionnaire booklet, a stamped, addressed return envelope and, a small zip-lock bag (premium packet) containing a pencil, a mint candy and a refrigerator magnet.

The questionnaire booklet has three parts: There are two sections containing questions for which the participant will indicate how strongly she agrees or disagrees with the statements. The third section of the booklet is a list of background questions about the participant.

You are being asked to assist in the following ways:

1. Post the flyers at your agency and/or distribute the flyers to potential participants.
2. Introduce the study to any potential participants, according to the study protocol.
3. Distribute survey packets to any potential participants who feel that they qualify for the study, according to the study protocol.
4. If a participant is unable to mail the survey back to the researcher herself, please mail it for her after she has inserted the questionnaire into the envelope and sealed it.
5. If you are a home care nurse or know the potential participant from a clinical setting, please be sure to read the special guidelines that pertain to you.

Page 1 of 3
continued
In order to ensure that the participants’ rights and welfare are adequately protected, the following protocol should be followed:

Study protocol:

1. Say to the potential participant: “This is a flyer recruiting participants for a study of mothers of children 18 years or under. The study is dissertation research being conducted by a nurse under the auspices of New York University Division of Nursing. The study is completely anonymous. There is no way a particular respondent can be connected with a particular questionnaire. Your participation would be greatly appreciated.”

2. Hand the flyer to the potential participant.

3. Tell the potential participant that she may call the researcher at the phone number on the flyer to obtain a survey packet.

4. Or, if she prefers, she may obtain a survey packet from you.

5. When you give the survey packet to the participant, say: “All the materials you need for the survey are in this envelope. Do not put your name on the booklet. I will not read your responses to the questions. If you need assistance about the questionnaire or mailing procedure, I will help you to the best of my ability, or you may call the researcher. The first item in the envelope you should look at is the cover letter, as it contains your instructions.”

6. If the participant asks for or appears to need help with the instructions, please review the cover letter with her.

7. Say to the participant: “When you are finished with the survey booklet, place it in the response envelope and seal the envelope. It should then be mailed directly back to the researcher.”

8. In the event that a participant is unable to get to a mailbox, you may offer to mail it for her after she has inserted the completed survey into the response envelope and sealed it.

9. Remind the participant that she may keep the pencil with the researcher’s phone number on it and she may call the researcher with any questions or concerns about the survey. The refrigerator magnet is hers to keep as a small token of appreciation.

10. Thank the participant for completing the study: Say, “Thank you. Your participation is truly appreciated. Please feel free to call the researcher with any questions or concerns about the survey.”

Special guidelines for home care nurses or for contact persons from clinical settings:

Since a potential participant may have an existing relationship with you, the following guidelines are measures to ensure that participation is truly voluntary, anonymous, and without any obligation on the part of client.

1. Recruit a participant on the basis of who is deemed to be capable of carrying out the required task of filling out the questionnaire without jeopardizing her health or safety.
2. Whenever possible, simply inform the client of the study and instruct her to contact the researcher if she would like to participate.

3. If possible, speak to the participant in a one-to-one setting, rather than in a group, where she may feel peer pressure to acquiesce.

4. If the client prefers, please give her a survey packet, then follow the instructions in steps 4 and 5 of the protocol above.

5. Please assure the potential participant that she is not obligated to participate in the study to please you or that you have an expectation for her to participate.

6. Please affirm to the potential participant that her decision to participate in the study, or not, will in no way affect the availability of services or program status for which she is entitled through your agency.

7. Screen the client for comprehension of the process.

Once again, thank you for your assistance.

Janet D’Arcangelo, MA, RN, CS
Doctoral Candidate
Principal Investigator
APPENDIX D

LETTER OF PERMISSION TO POST FLYERS

NYU Letterhead

September 1, 2000

Contact Person Heading
Contact Person Heading
Contact Person Heading

Dear Contact Person,

I am asking your support for a dissertation research project being conducted on mothers of children 18 years and younger. The research project is in the form of a survey in which anonymity is guaranteed. Subjects are being recruited from ambulatory settings that women visit, including women’s health centers and women’s support groups. Since your agency serves women, I am asking permission to hang flyers in locations that have visibility to potential participants. The flyer describes the criteria for participation in the study, and gives the name and phone number of the principal investigator. A sample of the flyer is attached for your review.

If you have further questions I will be happy to describe the study in more detail. I can be reached at [redacted].

Yours truly,

Janet D’Arcangelo, MA, RN, CS
Doctoral Candidate
Principal Investigator
APPENDIX E

RECRUITMENT POSTER/FLYER

Research Subjects Needed

If you are a mother of a child
18 years or younger.....

You can be part of a Research Survey being conducted under the auspices of
NEW YORK UNIVERSITY
DIVISION OF NURSING

Anonymity Guaranteed
Survey consists of self-administered form that can be returned by mail

For more information, call
Janet D'Arcangelo, MA, APRN

Your participation is greatly appreciated!
APPENDIX F

COVER LETTER FOR PARTICIPANTS

NYU Nursing

April, 2001

Thank you for your interest in THE MOTHERS' STUDY, a doctoral dissertation research study

My name is Janet D'Arcangelo. I am a doctoral student nurse researcher. If you would like to volunteer for the study or ask any questions about the study, please call me at [redacted] would be pleased to hear from you.

- THE BACK OF THIS SHEET PROVIDES:
  - A Description of the project
  - Instructions on filling out and/or returning the survey
  - Your rights and protection as a research participant

- The study is VOLUNTARY

- The study is COMPLETELY ANONYMOUS

- The study involves answering a written survey and returning the booklet by mail

- Eligibility requirements:
  - You must be between 18 and 55 years old
  - You must read and understand English
  - You must have a child 18 years old or under
  - You must not have used street drugs or be a heavy consumer of alcohol in the past 5 years

PLEASE TURN THE PAGE OVER AND CONTINUE READING....

New York University
School of Education • Division of Nursing
246 Greene Street • New York, NY 10003-6677 • Telephone 212.998.5500 • Fax 212.995.3748 • www.nyu.edu/deans

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Invitation to Participate and Description of Project

You are invited to be a participant in a doctoral dissertation research study of parenting by mothers. To qualify for the study you must be the mother of a child aged 18 or under. And, you must be free of substance abuse or alcoholism for the past 5 years. The study is interested in parenting behaviors, feelings about parenting, and health issues. Your participation in the study will not require your name or other information that could identify you.

Accompanying this letter is a survey booklet. Please do not put your name anywhere on the booklet. This way your answers cannot be linked to you. There is no way that the researcher will be able to identify a particular questionnaire with a specific participant. It should take no more than 30 minutes to complete the entire survey. Please feel free to ask questions about the anything in the survey that you do not understand.

When you are finished answering the questionnaire, put the booklet into the stamped self-addressed response envelope provided and seal the envelope. Then, mail the booklet directly to the researcher in the response envelope, as soon as possible. Or, return the questionnaire in the sealed response envelope to the person who gave you the survey packet, who will mail it for you.

Although it is not expected that any questions will cause you distress, you may postpone completing the questionnaire for a few days, or you may stop answering the questions altogether. If you decide to not complete the survey, it will not affect your relationship with your health care provider, your participation in your current program or any health care you and your child are now receiving. Please return the survey within two weeks.

By participating in the study, you will be helping nurses improve the ways we care for mothers and their children. The more we understand parenting experiences, the better we can plan appropriate health services. Enclosed with the survey packet are a pencil to mark your responses in the booklet and a mint candy to enjoy while completing the questionnaire. The refrigerator magnet is a small token of my appreciation. Thank you for supporting this research.

Janet D'Arcangelo, MA, RN, CS
Doctoral Candidate and Principal Investigator
APPENDIX G

SAMPLE SURVEY BOOKLET

THE MOTHERS' STUDY

SURVEY BOOKLET

Doctoral Dissertation Research Under the Auspices of
NEW YORK UNIVERSITY
DIVISION OF NURSING

2000 - 2001

When you have completed answering the questions in the survey booklet, please place it in the accompanying response envelope and drop it in a mailbox. Thank you for participating in the study!
PART 1

General Directions: The following statements represent the ways that mothers might feel about or act towards their children. Not all mothers feel or behave the same way. Read each statement carefully. Please indicate whether you agree or disagree that the statement applies to you as a parent. Circle the response category that comes closest to YOUR degree of agreement or disagreement. Try to answer all statements.

Most of the statements are worded for one child; if you have more than one child think of each item as it applies to your youngest child. Some of the items refer to a spouse. If there is no spouse, think of the item as it would apply to a significant other, a relative, or just others who know you and your child.

SA = Strongly Agree  A = Agree  D = Disagree  SD = Strongly Disagree

1. I respect my child's opinions and encourage him or her to express them.  
SA  A  D  SD

2. I feel that it is never too early to start teaching a child to obey commands.  
SA  A  D  SD

3. I believe that if a child makes occasional slips after he or she has been toilet trained, his or her slips should be ignored.  
SA  A  D  SD

4. I often feel angry with my child.  
SA  A  D  SD

5. I encourage my child to express anger as well as pleasant feelings.  
SA  A  D  SD

6. I punish my child by putting him or her off somewhere by himself or herself for a while.  
SA  A  D  SD

7. I am bothered because I can't do the things I liked to do before the baby was born.  
SA  A  D  SD

8. I wish my spouse spent more time with our child.  
SA  A  D  SD

9. I feel a child should be given comfort and understanding when he or she is scared or upset.  
SA  A  D  SD

continued
10. I believe physical punishment to be the best way of disciplining.

11. I find that taking care of a young child is much more work than pleasure.

12. I find that my child is likely to get into something and break it if I don't keep my eyes on him or her every moment.

13. I express affection by hugging, kissing and holding my child.

14. I find some of my greatest satisfactions in my child.

15. I prefer my child not try things if there is chance he or she will fail.

16. I feel that the earlier a child is put on the potty, the easier it is to toilet train him or her.

17. I usually take into account my child's preference in making plans for the family.

18. I feel that a child who is always quiet and peaceful is the best kind of child to have.

19. I find it difficult to punish my child.

20. I let my child make many decisions for himself or herself.

21. I worry about the bad and sad things that can happen to a child as he or she grows up.

22. I find that my child's father and I often disagree about the best way to raise our child.

23. I find that toddlers act like they are the most important people in the house and are always demanding things.

24. I do not allow my child to get angry with me.

25. I feel my child is a bit of a disappointment to me.

26. I am easy-going and relaxed with my child.

continued
27. I believe that too much affection and tenderness can harm or weaken a child.
   SA A D SD

28. I tend to spoil my child.
   SA A D SD

29. I wish my child's father took more responsibility for disciplining our child.
   SA A D SD

30. I talk to and reason with my child when he or she misbehaves.
   SA A D SD

31. I joke and play with my child.
   SA A D SD

32. I encourage my child to be curious, to explore, and to question things.
   SA A D SD

33. I have strict rules for my child.
   SA A D SD

34. I think one has to let a child take many chances as he or she grows up and tries new things.
   SA A D SD

35. I feel that my child and I have warm, intimate times together.
   SA A D SD

36. I believe in praising a child when he or she is good, and think it gets better results than punishing when he or she is bad.
   SA A D SD

37. I threaten punishment more often than I actually give it.
   SA A D SD

38. I sometimes feel that I am too involved with my child.
   SA A D SD

39. I make sure my child knows that I appreciate what he or she tries or accomplishes.
   SA A D SD

40. I teach my child to keep control of his or her feelings at all times.
   SA A D SD

41. I wish my child did not have to grow up so fast.
   SA A D SD

42. I believe that scolding and criticism makes my child improve.
   SA A D SD

43. I feel that I sacrifice a lot of my personal interests for my child.
   SA A D SD

continued
44. I worry about the health of my child. SA A D SD
45. I feel that there is a great deal of conflict between my child and me. SA A D SD
46. I encourage my child to be independent of me. SA A D SD
47. I make sure I know where my child is and what he or she is doing. SA A D SD
48. I find it interesting and educational to be with my child. SA A D SD
49. I think children must learn early not to cry. SA A D SD
50. I feel that I have more authority over my child than my child's father. SA A D SD
51. I wish I could spend more time with my child. SA A D SD

PART 2
Here are some statements with which you may or may not agree. Using the key listed below, circle the option that most closely reflects your feelings about each statement.

SA = Strongly Agree  A = Agree  D = Disagree  SD = Strongly Disagree

1. I often wonder if there is anyplace on earth where I really fit in. SA A D SD
2. I am not sure if I fit in with my friends. SA A D SD
3. I would describe myself as a misfit in most social situations. SA A D SD
4. I generally feel that people accept me. SA A D SD
5. I feel like a piece of a jig-saw puzzle that doesn't fit into the puzzle. SA A D SD
6. I would like to make a difference to people or things around me, but I don't feel that what I have to offer is valued. SA A D SD
7. I feel like an outsider in most situations. SA A D SD

continued
8. I am troubled by feeling Like I have no place in this world. SA A D SD

9. I could disappear for days and it wouldn't matter to my family. SA A D SD

10. In general, I don't feel a part of the mainstream of society. SA A D SD

11. I feel like I observe life rather than participate in it. SA A D SD

12. If I died tomorrow, very few people would come to my funeral. SA A D SD

13. I feel like a square peg trying to fit into a round hole. SA A D SD

14. I don't feel that there is anyplace where I really fit into this world. SA A D SD

15. I am uncomfortable knowing that my background and experiences are so different from those who are usually around me. SA A D SD

16. I could not see or call my friends for days and it wouldn't matter to them. SA A D SD

17. I feel left out of things. SA A D SD

18. I am not valued or important to my friends. SA A D SD

19. It is important to me that I am valued or accepted by others. SA A D SD

20. In the past, I have felt valued and important to others. SA A D SD

21. It is important to me that I fit somewhere in this world. SA A D SD

22. I have qualities that can be important to others. SA A D SD

23. I am working on fitting in better with those around me. SA A D SD

24. I want to be a part of things going on around me. SA A D SD

25. It is important to me that my thoughts and opinions are valued. SA A D SD

continued
26. Generally other people recognize my strengths and good points. SA A D SD

27. I can make myself fit in anywhere. SA A D SD

28. All of my life I have wanted to feel like I really belonged somewhere. SA A D SD

29. I don’t have the energy to work on being a part of things. SA A D SD

30. Fitting in with people around me matters a great deal. SA A D SD

31. I feel badly if others do not value or accept me. SA A D SD

32. Relationships take too much energy for me. SA A D SD

33. I just don’t feel like getting involved with people. SA A D SD

You will be happy to know that there is just one more section of the survey left to answer. Finishing the questionnaire is very important to the study. Thank you for continuing to the last section.

**PART 3**

**BACKGROUND INFORMATION:**
This section asks about the background characteristics of the mothers in the study, especially about health related matters. This information will allow the researcher to understand mothers' feelings and behaviors across different groupings and conditions. For each item, circle the number next to the appropriate item.

1. Age
   1 Under 20 yrs.
   2 20 – 25 yrs.
   3 26 – 30 yrs.
   4 31 – 40 yrs.
   5 over 40 yrs.

continued
2. Highest level of education completed
   1. Did not complete high school
   2. High School / GED
   3. Technical/Trade School
   4. Some College
   5. Associate Degree
   6. Bachelors Degree
   7. Masters Degree
   8. Doctoral Degree
   9. Other (please explain) __________

3. Annual household income
   1. Under 5,000
   2. 5,001 - 10,000
   3. 10,001 - 15,000
   4. 15,001 - 20,000
   5. 20,001 - 25,000
   6. 25,001 - 30,000
   7. 30,001 - 35,000
   8. Over 35,000

4. Which of the following best describes your ethnic background:
   1. African American
   2. Asian American
   3. Caucasian
   4. Hispanic
   5. Native American
   6. Other, Please specify ________________________

5. How many siblings do you have?
   Brothers _________  Sisters _____________

6. Present marital status
   1. Never married
   2. Married, living with spouse
   3. Married, living separate from spouse
   4. Living with significant other
   5. Divorced
   6. Legally separated
   7. Widowed

   continued
7. Please provide the following information about your two youngest children.

<table>
<thead>
<tr>
<th></th>
<th>Age</th>
<th>Does this child currently live with you?</th>
<th>Are you a primary caregiver for this child?</th>
<th>If this child does not live with you, do you visit, write, telephone or email him/her at least twice a month?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child #1</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Child #2</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

8. What other adults live in your household? Circle all that apply.
1. Spouse
2. Significant Other
3. Other Relative(s)
4. Roommate/Friend
5. I live alone
6. I live with my children and no other adults

9. Who do you turn to when you need help with your children?
1. Spouse/partner
2. Family
3. Friend/neighbor
4. Health care professional

10. If you are the caregiver of your child, how well do you feel you manage the dual responsibility of caring for a child and managing your household?
1. I manage very well
2. I sometimes have trouble managing
3. I often feel overwhelmed
4. I feel overwhelmed

11. How would you describe the amount of stress you experience on a daily basis?
1. None
2. Mild
3. Moderate
4. Severe

12. How would you describe your child’s temperament?
1. Easy-going
2. Unusually Quiet
3. Unusually Active
4. Irritable

continued
13. Do you have any pets?
   1  Yes
   2  No

14. Are you a member of any of the following organized groups? (Circle all that apply)
   1  Member of a parish, temple, or other place of worship
   2  Member of a club, community group or civic organization
   3  Member of a school community
   4  Other, please specify ____________________________
   5  I am not a member of an organized group

15. How many times in the past five years have you been hospitalized for a physical illness, physical disability, or accident?
   1  None
   2  Once
   3  more than once

16. Do you receive ongoing medical care for a physical illness or physical disability?
   1  Yes, regularly
   2  Yes, occasionally
   3  No

17. Do you take medication for a medical illness?
   1  Yes, regularly
   2  Yes, only as needed
   3  No

18. If you receive medical care or take medication, what is the name of the physical illness or disability that is being treated.
   Specify ____________________________

19. Have you received treatment or therapy for a psychiatric/ nervous condition in the past 5 years?
   1  Yes, regularly
   2  Yes, occasionally
   3  No

20. Do you take medication for a psychiatric/ nervous condition?
   1  Yes, regularly
   2  Yes, only as needed
   3  No
21. How many times in the past five years have you been hospitalized for a psychiatric/nervous condition?
   1. None
   2. Once
   3. More than once

22. During your hospitalization(s), who has cared for your child or children?
   1. My spouse or sexual partner
   2. A relative
   3. A friend
   4. A foster home or other social agency
   5. Never been hospitalized

23. Are there signs, symptoms or feelings that you notice before a psychological or emotional problem becomes severe?
   1. Yes
   2. No

24. When you recognize a sign, symptom or feelings that indicate you are having psychological or emotional problems, how often do you take care of the problem before it becomes severe?
   1. Always
   2. Most of the time
   3. Sometimes
   4. Never

YOU ARE NOW FINISHED WITH THE SURVEY.
YOUR PARTICIPATION IN THIS STUDY IS TRULY APPRECIATED. THANK YOU VERY MUCH.

Instructions for returning the survey:
Place the survey in the enclosed envelope and seal it.
Mail the survey or return the sealed response envelope to the person who gave it to you.
It will be mailed back to the researcher for you. Please return the survey within two weeks.

If you have any questions about the survey please feel free to contact the researcher by mail or at [insert contact information].
APPENDIX H

INCENTIVE PACKET FOR PARTICIPANTS

Incentive Packet
As a token of appreciation to the participant, each survey envelope will contain a small zip lock bag containing a pencil to fill out the survey, printed with the researcher's phone number, 2" X 3" refrigerator magnet and a wrapped mint candy.

Pencil to fill out survey

THANK YOU!
...for supporting nursing research

Refrigerator magnet

Wrapped mint candy