AN EMPIRICAL STUDY:
A MODEL OF THE PATHWAYS BETWEEN SOCIAL SUPPORT, FAMILY WELL BEING, PARENTING QUALITY, AND CHILD RESILIENCE

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AN EMPIRICAL STUDY: A MODEL OF THE PATHWAYS BETWEEN SOCIAL SUPPORT, FAMILY WELL BEING, PARENTING QUALITY, AND CHILD RESILIENCE

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Abstract

The foreword to the report on the Surgeon General's Conference on Children's Mental Health highlights the crisis that has been created by the suffering experienced by children with mental health problems and their families (U. S. Public Health Service, 2000). The importance of valuing the families of these youth, building on their strengths, and having available an array of social supports has been widely recognized. Despite this endorsement, little theoretical development or empirical validation has been done that supports the development and strengthening of parental social support in social work interventions.

The purpose of this dissertation is to contribute to a conceptual and empirical understanding of the pathways between social support, family well being, quality of parenting, and the development of child resilience in families with a child with serious emotional problems. Based on a review of key concepts and empirical findings within these constructs, a conceptual model and a set of research questions are proposed to describe the transactional relationships between the four domains. The method includes three primary analytic activities (conceptual mapping, scale development, and structural equation modeling) to investigate the validity of the model and the associations between the dependent and independent variables.

The findings are that parental social support is significantly and positively correlated with family well being and with quality of parenting. Family well being

and quality of parenting are positively associated with child resilience. The model explains 3% to 5% of the variance in child resilience; and family well being is the strongest predictor of child resilience. Social support accounts for 6% of the variance in family well being, and social support and family well being account for 54% of the variance in quality of parenting.

The study findings empirically validate the protective role of social support in families with a child with serious mental health problems. Social work practice needs to recognize the importance of social support in the practice acts of assessment and intervention. Social work research needs to develop new methods and new measures for understanding the complex relationships among social support, family well being, quality of parenting, and child resilience.

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CHAPTER 1

INTRODUCTION

Chapter One is an introduction to and overview of the dissertation. The goal and objectives of the study are stated, including the importance of the study from the perspectives of theory development, research, and intervention. The study's relevance to social work theory and research are delineated. The chapter concludes with a summary of the organization of the dissertation.

Goal and Objectives of the Study

The goal of the dissertation is to contribute to a conceptual and empirical understanding of the pathways between social support available to parents, family well being, quality of parenting, and the development of child resilience in families with a child with serious emotional problems. Little conceptual development or research has been done that contributes to a theoretical framework for understanding the relationships among these variables.

Key concepts and empirical findings within the domains of social support, family well being, quality of parenting, and child resilience are identified from theory development and research from social work and other related disciplines. Pertinent theoretical assumptions and empirical findings from the social support literature are reviewed, highlighting what contributes to understanding how social support may function for parents of a child with serious emotional problems. Relevant information is presented regarding family well being, the mediating role of social support, and the role of family well being on quality of parenting. The

role of quality of parenting in child development is reviewed, including its importance as a protective factor in child resilience. From the child resilience literature, the concept of protective mechanisms is highlighted. Two outcomes of child resilience, self-esteem and competence, are described.

Based on the review of key concepts and research findings, a conceptual model is proposed to describe the transactional relationships between the four domains. Retrospective analysis of an existing dataset is conducted to empirically test and refine the conceptual model and to answer the dissertation's research questions. The term retrospective analysis is used rather than secondary analysis throughout the study because the author was a member of the research team for the original study, and participated in the study design and oversight. The results of the analyses are: first, a conceptual model that is empirically based; and, second, a set of empirically developed scales that can be used in the assessment of resilience in families with a child with serious emotional problems.

Relevance to Social Work Theory and Practice

The theoretical framework for the study is social systems theory. Social systems theory recognizes that different parts of a whole, functioning entity are interrelated and interdependent (Bertalanffy, 1981). Performance of any one part not only affects other parts but also may depend on those parts for its survival (Berrien, 1968; Robbins, Chatterjee, & Canda, 1998). Systems theory encompasses the individual as well as his social environment. Pincus and

Minahan (1973) explicitly applied systems theory to social work practice, with the premise that people depend on systems in their immediate social environment for a satisfactory life. From a systems perspective, the goal of social work practice is to help people perform life tasks, alleviate distress, and achieve aims and positions that are important to them. Systems that may help people are informal or natural systems, formal systems, and social institutions. Social work tasks include: 1) helping people to use and improve capacity for problem-solving; 2) building new connections between people and resource systems; 3) helping or modifying interactions between people and resource systems; and 4) improving interactions between people within resource systems (Pincus & Minahan, 1973).

A second form of systems theory, ecological systems theory, sees the individual system as part of a larger ecological system with which it must negotiate so as to accommodate, adjust, and survive. Ecological systems theory was introduced to social work by Carel Germain in the life model of social work practice and proposes that both person and environment can be fully understood only in terms of their relationship; each system continually influences the other (Germain & Gitterman, 1995, 1996). The organizing issue for social work is the goodness of fit of people with their surroundings; when people and their environment are not able to adapt reciprocally, either or both are damaged. The aim of social work is to strengthen the adaptive capacities of people and to influence their environments so that transactions are more adaptive. Some defining characteristics of the life model are: the relationship between client and

social worker is viewed as a partnership, the focus is on personal and collective strengths, an emphasis is placed on client activity and decision-making, and there is significance in social and physical environments and culture (Germain & Gitterman, 1996).

The premise of this study is that social support contributes to family well being, quality of parenting, and child resilience in all families, including families with a child with serious emotional problems. Systems theory is the theoretical base for understanding the concept of social support; and within social work practice the use and facilitation of social support is promoted in those models that are based on systems and ecological perspectives.

Importance of the Study

The Foreword to the Report on the Surgeon General's Conference on Children's Mental Health highlights the crisis that has been created by the suffering experienced by children with mental health problems and their families (U. S. Public Health Service, 2000). The report recommends that the healthcare system provide incentives for prevention and treatment services that are organized to support families. In recent years the importance of valuing the families of these youth, building on their strengths, and having available an array of social supports has been widely endorsed in the children's mental health field (Cheney & Osher, 1997; Karp, 1993; Koroloff, Friesen, Reilly, & Rinkin, 1996). For example, Friesen & Koroloff (1990) provided practice guidelines for a

treatment approach that is premised on the importance of support for parents with a child with serious emotional problems.

Despite the endorsement of social support for parents with a child with serious emotional problems, little theoretical work has been done that provides a conceptual framework for understanding the outcomes of parental social support for the parents, for family functioning, and for the child. In the absence of conceptual clarity, little empirical evidence has been produced which supports the development, strengthening, and maintenance of parent social support as social work interventions. The purpose of the dissertation is to contribute to an empirical understanding of the pathways by which social support to parents with a child with serious emotional problems can develop and strengthen child resilience.

The study recognizes that social support to other family members, including the child with emotional problems and his/her siblings, may also contribute to child resilience. However, the focus of this dissertation is social support to parents rather than other family members. Second, the term parent as used in the dissertation includes anyone who is in a caregiver role for a child with serious emotional problems, including single parents, kinship caregivers, and foster and adoptive parents.

Problem Statement and Research Questions

As was previously stated, the purpose of the dissertation is to contribute to a conceptual and empirical understanding of the pathways between social

support available to parents, family well being, quality of parenting, and the development of child resilience in families with a child with serious emotional problems. A primary goal is to answer a set of research questions related to the relationships between these domains. The study primarily considers social support, family well being and quality of parenting as the independent variables, and child resilience, defined as competence and self-esteem, as the dependent variable.

Specific research questions are:

1. To what degree is social support related to family well being in families with a child with serious emotional problems?
2. To what degree is social support related to quality of parenting in families with a child with serious emotional problems?
3. To what degree is social support related to child resilience in families with a child with serious emotional problems?
4. To what degree is family well being related to child resilience in families with a child with serious emotional problems?
5. To what degree is quality of parenting related to child resilience in families with a child with serious emotional problems?
6. How do social support, family well being, and quality of parenting proportionately contribute to child resilience in families with a child with serious emotional problems?

The anticipated outcomes of the study are a conceptual model that has been tested and a set of empirically developed scales that can be used in the assessment of child resilience in families with a child with serious emotional problems.

Organization of the Dissertation

Chapter Two provides a literature review and definitions for the semantic fields of the key domains used in the dissertation. Children with serious emotional disturbance are described, including a definition, prevalence estimates, and the roles of parents of these children. A process model of stress and coping is selected as the theoretical framework to describe family functioning. A semantic field is set forth for each key domain in the theoretical model (social support to parents, family well being, quality of parenting, and child resilience) including dictionary derivatives and definitions of each domain and related terms, key dimensions, relevant research, and the measurement tools. Chapter Two concludes with the presentation of a conceptual model to describe the pathways between the key domains in families with a child with serious emotional problems.

Chapter Three describes the method, a retrospective analysis of an existing dataset, used to address the research questions. The data source is described, including study description, research questions, data collection methods, instrumentation, and sample. Second, the findings of a series of preliminary data analyses are presented. Third, the steps of the method are

delineated. Guided by the framework and conceptual model from Chapter Two, the first activity of the method is the use of conceptual mapping to select a theory-based set of items from the dataset to represent the independent constructs of social support, family well being, and quality of parenting. The second activity is a series of empirical analyses of the conceptually developed item sets with the goal of developing a set of subscales and total scale representing each predictor construct. The final activity, structural equation modeling, is designed to empirically determine the relative contribution of each predictor construct to child resilience.

The fourth chapter describes the results of the three primary methodological activities. First, the steps of the conceptual mapping activity are described, followed by the item sets selected for each independent construct. Second, the results are presented of statistical analyses that examine the degree of variability in the data for the items, the relationships of items within each independent construct, and an empirical analysis of how the items within each construct fit together. The outcome of these analyses is a set of subscales and total scale representing each predictor construct. Finally, the chapter summarizes the findings from the regression analyses and structural equation modeling that describe the relative contributions of the dependent constructs to child resilience.

Chapter Five includes a discussion of the study findings, limitations and future implications. The chapter includes a summary of the study findings,

including a discussion of the characteristics of the study that impact on the interpretation of the findings. The second section of the chapter describes the limitations that are present in the study design and method. The chapter ends with conclusions, implications, and recommendations of the study for future social work research studies, social work theory and practice, social policy, and social work education.

CHAPTER TWO

CONCEPTUAL DEFINTIONS AND LITERATURE REVIEW

Chapter Two defines and bounds the semantic fields for the key concepts used in the dissertation study. The introduction of the chapter contextualizes the review of the literature in two ways. First, children with serious emotional disturbance are described, including a definition, prevalence estimates, and the roles of parents of these children, both as caregivers and as partners with professionals. Second, three theoretical models for family functioning are described and a rationale is proposed for the selection of the process model of stress and coping as the theoretical framework for the dissertation. In addition, each key domain in the conceptual model (social support, family well being, quality of parenting, and resilience) is defined. The semantic field provided for each concept includes dictionary derivatives and definitions of each term and related terms; definitions from the Social Work Dictionary and respected texts from social work and related disciplines; and key dimensions of the concepts. Finally, a description of the measurement domains used in the study operationalizes each concept.

Introduction and Context

Children with Serious Emotional Disturbance

In the United States, the Center for Mental Health Services of the Substance Abuse and Mental Health Services Administration has established a federal definition for children with serious emotional problems. According to this

definition, children with serious emotional disturbance are "persons from birth up to age 18 who currently or at any time during the past year have had a diagnosable mental, behavioral, or emotional disorder of sufficient duration to meet diagnostic criteria specified within DSM-IV; and that resulted in functional impairment which substantially interferes with or limits the child's role or functioning in family, school, or community activities" (*Final notice establishing definitions for (1) children with a serious emotional disturbance, and (2) adults with a serious mental illness*, 1993, p. 29425). In the absence of any national epidemiological studies of mental disorders in children and adolescents, Friedman, Katz-Leavy, Manderscheid, & Sondheimer (1996) recommended that a range be used for prevalence rates based on a review of a number of smaller studies. Five to 9% is the recommended range for the prevalence of youth with serious emotional disturbance and extreme functional impairment. For youth with a serious emotional disturbance and substantial functional impairment, the estimated range is 9 to 13%. Both estimates are limited to 9 to 17 year olds because only two of the reviewed studies included children under the age of 9.

The Surgeon General's Report on Mental Health (U. S. Department of Health and Human Services, 1999) attested to the challenging role faced by any parent or caregiver of a child with a serious emotional or behavioral problem. The report acknowledges that the children's mental health system too often fails to provide parents and family members with respect, support, services, and/or advocacy. Over the past two decades, the importance of valuing the families of

these youth, building on their strengths, and having available an array of social supports has been recognized (Cheney & Osher, 1997; Karp, 1993; Koroloff, Friesen, Reilly, & Rinkin, 1996). In addition, Friesen & Koroloff (1990) provided practice guidelines for a treatment approach that is premised on the importance of support for parents with a child with serious emotional problems. One obstacle to making the transition to viewing families as partners in care is the propensity of mental health professionals toward blaming parents and attributing to them responsibility for their children's mental health problems (Pottick & Davis, 2001). Despite growing evidence regarding the role of genetics in determining adult personality, a recent survey of child mental health professionals found that about one-fifth unequivocally hold parents responsible for child problems, and about one-half show both agreement and disagreement regarding parental attribution (Johnson et al., 2000). As the authors indicated, an underlying variable may be the strong American belief that happy successful adults are created by good parents, and vice-versa. Beliefs such as this are related to theoretical models of the family reviewed in the following section.

Theories Regarding Family Functioning

A number of theoretical frameworks have been used to explain and examine how families function. During the 1980s, many theorists and researchers used a process model of stress and coping (Lazarus & Folkman, 1984) as a theoretical framework. However, other theories, including attachment theory and the family ecological model, emerged to explain the way families'

function and became more prominent than the stress and coping model in child development literature.

According to attachment theory, an individual's past experiences with attachment figures, especially during childhood, are used to form internal representational models of the self. These working models affect the way a mother interacts with her infant, thus affecting the infant's behavior and the infant's adoption of representational models (Bowlby, 1969). The process model of parenting (Belsky, 1984) is one illustration of the use of attachment theory to explain the well being of children. Belsky's position was that the marital relationship is the most important source of support in exerting either a positive or a negative influence on parenting behaviors. This model identified three determinants of caregiver behavior contributing to the etiology of child abuse: personal psychological resources of parents, characteristics of the child, and contextual sources of support and stress. These domains are used in the model to explain individual differences in parenting. In addition, the parents' own developmental histories, the marital relationship, and the parents' employment are noted as influences on the well being of parents, and thereby caregiving behavior which in turn affects child development. Based on limited previous research regarding the effects of social support on mothers (Crnic, Greenberg, Ragozin, Robinson, & Basham, 1983), the model presumed that social support exerts primarily an indirect effect on the child. Belsky's process model of

parenting influenced a number of research studies examining social support and other determinants of parenting capacity (Crittenden, 1985).

The family ecological model is another theoretical framework used to explain the relationship between family well being and contributing factors (Bronfenbrenner, 1986). The ecological model represented a paradigmatic shift from attachment theory in the study of caregiving behavior and child development. Rather than focusing on intrafamilial processes and attributes, such as parent history and personality characteristics, the focus is on the external factors that may facilitate the family's capacity to foster child resilience and healthy development. Bronfenbrenner identified three external systems that affect the family: mesosystems, exosystems, and chronosystems. Mesosystem models examine the influences that operate between the primary settings in which child development takes place, such as home and school. It is assumed that the effects occur in both directions; that is, school affects home, and home affects what occurs in school. Exosystem models identify the influences in other settings in which parents function but where children do not enter, such as the work environment. Chronosystem models analyze the dynamic relationships between changes and continuities over time, both within the person and within the environment.

Recent theorists (Asarnow & Horton, 1990; Beresford, 1994; McDonald, Gregoire, Poertner, & Early, 1997) have returned to a process model of stress and coping to explain family functioning, using a combination of Lazarus and

Folkman's work in psychology regarding personal stress (Lazarus & Folkman, 1984) and sociological studies on family stress (Hill, 1958; McCubbin & McCubbin, 1987). Coping is conceived as a complex interaction taking place between the individual and the environment, with the goal of management of stress rather than mastery. Coping resources and the use of coping strategies moderate vulnerability to the effects of stress. Within the domain of coping resources, the process model acknowledges the contribution of both personal coping resources, such as physical health, ideological beliefs, and intelligence, and socio-ecological and intrapersonal factors. Socio-ecological coping resources include social support, the marital relationship, concrete resources, and economic viability (Beresford, 1994). In addition, the process model recognizes the role of coping strategies, both those that promote family well being and those that influence individual well being. Coping strategies include actions, behaviors, and thoughts used by an individual to deal with a stressor.

According to this model, an important attribute of a stressor is its controllability, the degree to which an individual believes that the stressor can be managed. Beresford (1994) reviewed existing literature and concluded that little research had been done on the relationship between coping strategies and the outcome of family well being. Findings include that the perception of having coping skills is positively associated with adjustment, and that practical coping skills predict mothers' satisfaction with life. In addition, the use of problem-

focused strategies rather than emotion-focused strategies is associated with lower caregiver distress levels.

The process model of stress and coping is used in this study for a number of reasons. First, the model emphasizes that variables such as social support, child characteristics, and family well being are transactional; that is, that the nature of the stressor, the personality characteristics and other attributes of the actors, and the types and sources of available coping resources influence how the factor functions (Antonucci & Jackson, 1990; Bott, 1971; Lepore, 1997). Each variable can operate as either a dependent or an independent variable. Second, the process model does not blame or attribute responsibility to an individual; the model assumes that each individual is managing stress to the best of his or her ability.

Definition Of The Concept Of Social Support

Semantic Field of Social Support

The first concept to be defined is social support. The term support is derived from the French verb *supporter* and the Latin verb *supportare*, which is defined as to carry. The term support has several meanings in The New Shorter Oxford English Dictionary that are relevant (Brown, 1993 p. 3153):

1) Endure without opposition or resistance; bear with, put up with, tolerate; 2) Undergo, endure, especially with courage or determination; bear up against; 3) Uphold or maintain the authority or validity of; give assistance in (a course of action); 4) Strengthen the position of (a

person or community) by one's assistance or backing; uphold the rights, opinion, or status of, stand by, back up; 5) The action of preventing a person from giving way or of backing-up a person or group; assistance, backing.

These definitions of support point to the related term uphold. The term uphold includes several relevant definitions (p. 3522): "1) Hold up, support, sustain, maintain unimpaired and intact; 2) Raise up or lift up; direct upwards; 3) Support by advocacy or assent".

The term sustain is derived from the Latin verb *sustinere* which means to hold or keep (p. 3163). The verb sustain is defined as "1) Support the efforts, conduct, or course of (a person); 2) Keep (a person, the mind, spirit) from failing or giving way; 3) Cause to continue in a given state; maintain at the proper level or standard". Another term in the same semantic field is assist, which is derived from the Latin verb *assistere*, defined as "to take one's stand" (p. 132). Assist is defined as to help (a person in, to do, with, etc.; a person in necessity; in action, process, or result); support, further, promote. The final related term is promote which is derived from the Latin verb *promovere* which means" to move forward" (p. 2375). Promote is defined as to advance or raise (a person) to a higher rank or position.

The term social is derived from the French noun *socius*, which is defined as "companion, ally, or fellow" (p. 2930). The definitions of social include 1) Living or disposed to live in companies or communities; desirous of the pleasant

society or companionship of others; 2) Associated, allied, combined; 3) Marked or characterized by mutual friendliness or geniality. Taken together, the semantic field of social support includes the concepts of assistance to another person in maintaining, undergoing or enduring; preventing a person from giving way or falling back; strengthening the position of another person; and raising a person to a higher position.

Veiel & Baumann (1992) noted that social support originated as an atheoretical concept in that its philosophical roots are found in basic beliefs regarding human needs. The first evidence for the effectiveness of social support is found in Durkheim's social epidemiological study of suicide in 1897. The data from his study indicated that suicide was most prevalent among groups with the weakest social ties. It is generally agreed that the initial contemporary theoretical development of the concept of social support occurred in the mid-1970s through the contributions of Cobb, Caplan, and Cassel. Cobb (1976) focused on the way social support protects the individual from the consequences of crises. He defined social support as: information leading the individual to believe that he or she is loved and cared for, esteemed, and a member of a network. Although Cobb did not use the term buffering, he made the assertion that social support facilitates the ability to cope with crises and that one should not expect main effects from social support. Cassel was an epidemiologist and asserted that the social environment, including the presence of others, is related to the host's susceptibility to environmental toxins (Sarason, Sarason, & Pierce, 1990).

Caplan (1974) took the concept of social support and applied it to preventive psychiatry and community mental health, focusing on how professional helpers can create, mobilize and enhance informal support systems.

Many theorists from social work and allied disciplines have offered definitions of social support. Gottlieb (1983 p. 28) defined social support as follows: "Social support consists of verbal and non-verbal information or advice, tangible aid, or action that is proffered by social intimates or inferred by their presence and has beneficial emotional or behavioral effects on the recipients." This definition, and many others, made a conceptual distinction between different categories of social support (Antonucci & Jackson, 1990; Gottlieb, 1983; Heller, Price, & Hogg, 1990; Pearlin, Lieberman, Menaghan, & Mullan, 1981). In relation to the stress process, social support is viewed as a coping resource and has been broadly defined as those functions performed for the individual by significant others (Thoits, 1995). Cutrona & Russell (1990) reviewed several extant models and proposed five basic dimensions of social support: emotional support, social integration, esteem support, informational support, and tangible aid. Vaux (1988a) reviewed existing theory and recommended that social support be viewed as a metaconstruct comprising support network resources, supportive behavior, and support appraisals.

Several other dimensions of social support theory are useful to distinguish. First, a distinction is made between formal and informal social support. Informal support can be defined as social support provided to a person by unpaid

individuals such as relatives, friends, neighbors, and peers. Formal support is social support provided by a paid person or an organization. In the dissertation, the term social support refers to informal social supports. Second, the term social network is defined as "the webs of relationships that exist between individuals and a wide range of people, including relatives, friends, neighbors, work colleagues and professionals" (Jack, 2000). The term social network is derived from formal network theory; personal network refers to the ties that surround a specific individual (Brissette, Cohen, & Seeman, 2000). Structure and density are two terms used to describe social networks. Structure describes the patterns of relationships that exist among ties, including network size. Cohen & Wills (1985) reviewed a number of social support studies and conclude that network size is a relatively weak predictor of well being. Network density, the extent to which network members are acquainted with one another, has been found to contribute to social identity and to facilitate the flow of support resources.

Another relevant contribution to social support theory is the concept of stress mediators, also known as coping resources (Lazarus & Folkman, 1984). Stress mediators are variables that individuals can use on their behalf in the presence of stress. The two domains of stress mediators usually identified are personality characteristics and situational or contextual factors. Personality coping resources include such matters as self-esteem, a sense of mastery, optimism, locus of control, and past experience, especially experience dealing with the stressor. Examples of situational stress mediators are anticipation of the

stressor, perceived control over the onset of the stressor, and social supports. As noted earlier, some social support theorists build on attachment theory of child development (Bowlby, 1969), and contend that an individual's sense of social support is a personality characteristic that has its source in early primary relationships and is related to perceptions of support availability (Sarason, Sarason et al., 1990). Other theorists, using a more ecological framework, stressed the importance of social contexts and supports (Bronfenbrenner, 1986). Many theorists emphasized that social support is transactional, that is, that the nature of the stressor, the personality characteristics and other attributes of the recipient of social support, and the types and sources of available social support influence how social support functions (Antonucci & Jackson, 1990; Bott, 1971; Lepore, 1997).

Beresford (1994) noted that coping resources could be viewed as both resistance and risk factors. The availability of a stress mediator makes an individual more resistant to the adverse effects of stress. On the other hand, the absence of a coping resource is a risk factor that can make an individual more vulnerable to stress. As noted later, these attributes are identified as protective factors and mechanisms in the child resilience literature (Garmezy, 1994; Rutter, 1987; Egeland, Carlson, & Sruofe, 1993).

Social support theory proposes two major models, the main effect and the buffering effect, to explain the association or pathways between social support and well being. The main effect model proposes that social support, defined as

social integration or social embeddedness, has a beneficial effect on well being whether or not the person is under stress. The main effect of social support can occur either by protecting the individual from exposure to the stressor or by providing a general enhancement to well being.

The buffering model hypothesizes that social support protects individuals from the potentially harmful effects of stressful events. Using the framework of the process model of stress and coping (Lazarus & Folkman, 1984), social support is viewed as a stress mediator or coping resource. Stress mediators are variables that individuals can use on their behalf in the presence of stress. At least two junctures have been identified where social support can have a buffering effect: between stressor and distress, and between stress and health or mental health outcome. For example, the buffering effect of social support has been verified as operant with individuals facing unemployment (Pearlin, Lieberman, Menaghan, & Mullan, 1981) and with families caring for a child with a chronic disability (Dunst & Trivette, 1986; McDonald, Gregoire, Poertner, & Early, 1997; Sloper & Turner, 1993; Snowdon, Cameron, & Dunham, 1994). Some theorists believe that the buffering effect of social support operates only when the individual is under stress. Crnic et al., 1983 and Vaux (1988c) argued for the importance of stressor-support-outcome specificity, claiming that the nature of the stressor determines what is appropriate support, and that the buffering effect occurs only when the support is appropriate to the specific stressor.

Cohen & Wills (1985) reviewed existing research studies and concluded that there was evidence consistent with both main effect and buffering models. For example, studies indicate that social integration has a positive main effect on general well being but may not be helpful in times of stress. Alternately, in situations of chronic life strain and stressful life events, Pearlin et al. (1981) found that perceived social support acted indirectly to buffer depression by modifying the antecedent process. In this study social support acts to buffer the individual from losing self-esteem and a sense of mastery which in turn prevents the onset of depression. Other researchers report that evidence for the buffering model is found only if: 1) the social support measurement tool assesses behaviors that are responsive to a stressful event, and 2) the instrument measures perceived support (Cohen & Wills, 1985). These reviewers also conclude that social embeddedness (i.e., the main effect) and functional social support (i.e., buffering effect) appear to be different processes. The consistent finding of a buffering effect in stressful situations indicates that certain support processes may be activated only in the presence of stress.

Several theorists and researchers identify a distinction between available support and received support. Lin (1986, p.18), for example, defined social support as "the perceived or actual instrument and/or expressive provisions supplied by the community, social networks, and confiding partners." Received support refers to actual support that occurs in interpersonal transactions or exchanges, including both verbal and nonverbal behavior (Dunkel-Schetter &

Bennett, 1990). Received support refers to the recipient's report of what was received and was helpful in past events. The most widely used instrument to measure received support is the Inventory of Socially Supportive Behaviors (Barrera, Sandler, & Ramsay, 1981). Available support, also known as perceived social support, is the recipient's appraisal of the availability and adequacy of social support, his or her belief that support would be available if needed (Barrera, 1986). Many studies indicated that perceived support is more beneficial to the recipient's physical and mental health than actual received support (Pearlin et al., 1981; Sarason, Pierce, & Sarason, 1990; Thoits, 1995).

In this section the semantic field for the concept of social support has been defined and bounded. The semantic field of social support is described as including the concepts of assistance to another person in maintaining, undergoing or enduring; preventing a person from giving way or falling back; strengthening the position of another person; and raising a person to a higher position. Second, social support theorists distinguish at least five dimensions of social support: emotional supports, social integration, esteem support, informational support, and tangible aid. Third, it is useful to view social support as transactional; that is, that the nature of the stressor, the personality characteristics of the recipient of social support, and the types and sources of social support available influence how social support functions and is perceived. Distinctions are identified between formal and informal support, the dimensions of social support, the main effect and buffering effect of social support on well

being, and perceived vs. available social support. Given the many historical roots of the concept of social support and its multidimensional nature, it is clear that the concept of social support includes many disparate definitions and distinctions. The lack of a coherent theory of social support has resulted in assessment instruments that differ in what they measure (Cohen, 1992; Sarason, Sarason et al., 1990; Tracey & Whittaker, 1987; Vaux, 1988b; Veiel, 1992).

In this study the concept of social support is defined as informal support that includes the domains of emotional support, social integration, esteem support, informational support, and tangible aid. The primary instrument used to measure social support focuses on the individual's perception of social support availability.

Parents With a Child with a Disability

This section further bounds the concept of social support by delimiting social support to parents with a child with a disability. Relatively little research has been conducted on the use of coping mechanisms, including social support, by parents caring for a child with a disability of any nature (Eiser, 1990). The existing research can be difficult to interpret because different definitions and categories of coping strategies, including social support, are used. In addition, previously constructed measures are often adapted, making it difficult to generalize findings across studies.

Dunst & Trivette (1986) examined the mediating influence of social support on families with children with mental retardation, physical disabilities, and

developmental risks and found both direct and indirect effects of social support. The only main effect variable on parental well being was parental satisfaction with support, although no main effect of social support was found for family functioning. In addition, findings indicate that a supportive network mediates the degree of parents' protectiveness of their children as well as their perception of the difficulty of their child's behavior. The relationships between stress, coping resources, and satisfaction with the family's functioning have been studied in families with children with developmental disabilities (Snowden, Cameron, & Dunham, 1994), with results indicating that the degree of support available from spouse and friends is significantly associated with the level of satisfaction with family functioning. Similar findings regarding a positive relationship between social support at times of crisis and current satisfaction with life were reported in a study of families with a child with a severe physical disability (Sloper & Turner, 1993).

An early ethnographic study of families with a child with a progressive neuromuscular disorder identified both the wide variety of problems faced by the families as well as a range of coping strategies used by the parents (Bregman, 1980). The author lived with and observed five families for four days each. One unexpected strategy observed in families was the development and cultivation of coping resources, including support from spouses, close friends, and support groups. Second, the parents' management of the child's disability included coping strategies that are specifically directed at "resource maintenance". In

addition, the study highlights that a family with a child with a serious disability benefits from having access to a range of support resources. Kazak & Wilcox (1984) compared a sample of 56 families with a child with spina bifida with 53 matched comparison families and found that the families with a child with spina bifida had smaller social networks (i.e., fewer friends) and greater boundary density (proportion of network connections between the two parents' social networks).

The impact of acute vs. chronic parenting stress was specifically evaluated in a study of parents caring for a child who is hearing impaired (Quittner, Glueckauf, & Jackson, 1990). The study used the term chronic stress in a manner similar to Pearlin et al. (1981) to describe the presence of relatively continuous problems rather than discrete, one-time only events. The study design contrasted the buffer model where social support protects emotional well being from high levels of stress, with a mediator model predicting that social support would indirectly influence the effects of stress. No evidence was found for the buffer effect. Evidence was found for a mediating effect of social support on maternal stress through the paths of perception of competence and role restriction. The researchers speculated that social support might function differently in situations of chronic stress.

One conceptual model to explain the lack of a buffering effect under chronic stress is the conservation of resources theory (Hobfoll & Freedy, 1990). It assumes that individuals attempt to conserve the quality and quantity of their

resources, and that social interactions may be both a source of resource acquisition and a source of resource loss. This model was further developed by the cost of coping hypothesis, which states that stressors and social support are not always independent factors, especially under chronic stress situations (Lepore, 1997). The cost of coping hypothesis assumes that adaptive costs, such as social strain, are associated with ameliorating the effect of chronic stress. In summary, we need to recognize that chronic stress may affect and limit both help-seeking behavior and support provision (Gottlieb, 1992).

Caregiver stress, coping resources, and parents' perceptions of the child's positive contribution to the family environment are the variables examined in one of the few research studies on stress and coping in families with a child with an emotional disability (McDonald et al., 1997). Caregiver stress is the outcome variable and coping resources are viewed as mediators. Findings indicated that increases in the perception of the child as making a positive contribution to the family, as well as informal supports from family, friends, and community, mediate the impact on caregiver stress by enhancing the caregiver's coping resources.

In summary, studies of social support to families with a child with a disability help to identify what may be different or unique about the relationships between social support to parents, parenting capacity, and child resilience in families with a child with serious emotional problems. First, families with a child with a disability need and make use of a range of coping resources, including social support. Second, these families pay attention to resource maintenance.

Given the chronic and episodic nature of their child's disability, supportive resources need to be cultivated and sustained over an extended period of time. Third, studies indicate that social support in families with a child with a disability has a main effect on parental well being and on satisfaction with support. Fourth, some research studies make a distinction between buffering and mediating effects. Buffering effects are defined as those effects that protect the individual from high levels of stress. The mediator model predicts that social support indirectly influences the effects of stress. Although individual studies define buffering and mediating effects somewhat differently, there may be more evidence for a mediating effect than for a buffering effect. Mediating effects have been identified, for example, for the degree of parents' protectiveness of their children, perceptions of the difficulty of their child's behavior, and parents' perceptions of their parenting competence.

Definition of the Concept of Family Well Being

This section defines the concept of family well being and related terms. Definitions are included of well being, quality of life, family risk and protective factors, and family well being. Key dimensions of family well being are identified and described, including the assumption that family well being, as well as social support and quality of parenting, are transactional, that is, may interact bidirectionally as both dependent and independent variables in a family with a child with a disability.

The concept of family well being is included in our conceptual model because of the family's role as both a risk factor and a protective factor in promoting resilience in children and adolescents. Rutter (1979) identified six family risk factors associated with child psychiatric disorders: overcrowding, low socioeconomic status, serious marital discord, criminality of the father, maternal mental illness, and child custody status. A recent review of the literature on one of these risk variables, mothers with a serious mental illness, concluded that maternal depression may be a marker for parenting style, and can lead to detrimental effects by one year of age (Oyserman, Mowbray, Meares, & Firminger, 2000). The review also indicated that mental illness is only one of many risk factors (e.g. social, economic, and interpersonal variables) that these mothers face, and that being a parent can have positive effects for these women, including motivation to stay in treatment and the value of a normative role.

Crowley & Kazdin (1998) indicated that research on well being and life satisfaction has emerged over the past 20 years, beginning with the use of national survey designs and social indicators of subjective well being. They defined quality of life as "how well one feels his or her important needs, goals, and wishes are being satisfied" (Crowley & Kazdin, 1998). Quality of life fits within the metaconstruct of subjective well being. Well being includes two dimensions, positive and negative affect. Positive affect refers to positive emotions, such as joy; negative affect refers to unpleasant emotions including depression, anxiety, and anger.

A number of researchers and theorists have identified dimensions that relate to parental quality of life and well being. Camara & Resnick (1987) identified four family processes that may mediate the effects of divorce on children's social and emotional functioning: interparental conflict, interparental cooperation, and father-child and mother-child relationships. Scales for interparental cooperation include support by father and mother in each other's role as parent, mother's and father's respect and esteem for one another as a parent, father's and mother's evaluation of each other as a parent, degree of communication between parents regarding the child, degree of parental cooperation on problem-solving regarding caring for the child, and degree of shared decision-making regarding the child. Lewis & Wallerstein (1987) studied families 10 years post-divorce and identified five profiles of family functioning: remarriage history, socioeconomic status, feelings of anger, parental happiness, and rejection of parenting. In their study parental happiness is measured by the child's assessment of the parents' sense of personal happiness and satisfaction. Rejection of parenting is defined as the degree to which the child feels welcomed and enjoyed by parents who are relatively comfortable with the parenting role.

Family well being has also been defined in the development of assessment instruments. The Child and Adolescent Burden Assessment, an instrument developed to measure family burden resulting from a child's mental health problems, includes the domains of economic cost, impact on family relationships (previous or current partner, with other children, between other

children, other children's behavior), impact on other relationships (with other family members and friends), restrictions on personal and social activities, stigma, psychological adjustment (feelings of depression, tiredness, worries), and feelings of competence to deal with the child's problems (Farmer, Burns, Angold, & Costello, 1997; Messer, Angold, Costello, & Burns, 1996). The Caregiver Strain Questionnaire defines caregiver strain as "the demands, responsibilities, difficulties, and negative psychic consequences of caring for relatives with special needs" (Brannan, Heflinger, & Bickman, 1997). The areas of family well being included in this instrument are disruption of family life and relationships, demands on time, negative mental and physical health effects for family members, financial strain, sacrifice, disruption of social/community life, worry and guilt, fatigue and strain, embarrassment, and child/caregiver relationship. Yatchmenoff, Koren, Friesen, Gordon, & Kinney (1998) also assessed the impact on the family of caring for a child with a serious emotional problem through the Effects of the Situation Questionnaire. This caregiver-completed instrument assumes that the family's caregiving experience will include both stresses, defined as internal experiences of difficulty or distress, and enrichment, described as enhancements to the parents' quality of life on a daily basis.

Frey, Greenberg, & Fewell (1989) used the process model of stress and coping to examine how child characteristics, social networks, parental belief systems and coping styles related to parent outcomes. In the domain of family well being, the dimensions covered are family cohesion, family expressiveness

and conflict, harmony of family life, and parental agreement regarding child care. Crowley & Kazdin (1998) hypothesized that both parent support and family life relate to parental quality of life. The domains included in family life were interpersonal relationships and organizational structure of the family. Finally, Cowen (2000) summarized previous literature and contended that there are two key variables that promote child wellness: positive parent-child attachment and the acquisition of stage-appropriate developmental competencies. His review identified four input variables: caregiver variables, family milieu variables (healthy partner relationship, good relationships among family members), child variables, and absence of major stressors. Family milieu, which is analogous to family well being, includes a healthy marital relationship and positive relationships among family members.

A recent review of family risk factors for child externalizing behavior problems identified six family social interaction processes: engagement, validation, firm discipline, effective problem solving, structure, and modeling of norm-maintaining behavior (Hann & Borek, 2001). Three of these risk factors (engagement, validation, and effective problem solving) fall within the domain of family well being. Engagement refers to the quality of parent's attachment and warmth towards the child. There is much empirical evidence that the quality of mother-infant attachment predicts the development of early onset child behavior problems, and some evidence that parental engagement continues to be a causal variable during childhood and adolescence. Validation is defined as

"behavior likely to comfort children, increase their sense of security, or communicate that they are valued and valuable" (Hann & Borek, 2001). Research findings show that parental rejection and hostility during childhood are associated with behavior problems (Patterson, DeBaryshe, & Ramsey, 1989; Reid, 1993). Moderate to strong effects are present during toddlerhood and latency age; lower effects are evident in early adolescence.

In summary, the domain of family well being includes the dimensions of the family's organizational structure, interpersonal relationships, parent psychological status, and parent self-efficacy. Family organizational structure refers to the family's cohesion, harmony, agreement regarding caregiving, and expressiveness and conflict. The area of interpersonal relationships includes both family relationships (previous or current partner, with other children, between other children, other children's behavior) and relationships with other family members and friends. Parent psychological status is defined as feelings of depression, tiredness, and worries versus feelings of joy and energy. Parent self-efficacy is defined as the parent's sense of competence in dealing with their child's problems.

Definition of the Concept of Quality of Parenting

This section defines the concept of quality of parenting and related terms. A review and critique of the theoretical assumptions regarding the role of parenting in child development is provided, including its place as a protective

factor in resilience theory and research. Key dimensions of the quality of parenting, including parenting style, parent attitudes and involvement, use of structure and discipline, and child characteristics and behavior are identified and described.

Traditional theories of child development emphasize the role of the primary caregiver, especially during the child's first year of life, in establishing the basis for the infant to develop healthy attachments, a sense of self, and a sense of self-efficacy (Bowlby, 1969). Building on social learning theory, the development of self-efficacy, defined as "judgments of how well one can execute courses of action required to deal with prospective situations" (Bandura,1982 p.122), is viewed as central to human agency, self-regulation, and a child's choice of activities and environments. The quality of parenting continues to play a key role in the child's development, interacting with the child's developmental phase, child characteristics and behavior, and the family's sociocultural context.

Building on this theoretical framework, quality of parenting is included in our conceptual model because of its contributory role in promoting child resilience. Several studies of child resilience demonstrated a significant relationship between quality of caregiving and a child's ability to adapt to adversity (Masten, Morison, Pellegrini, & Tellegen, 1990; Werner, 1993; Werner & Smith, 1992). Grolnick (1989) and Reid (1993) concluded that a number of risk factors are mediated effectively by the quality of parenting. The family process model of stress and coping (Beresford, 1994) included parenting skills as a

personal coping resource for families caring for a child with disabilities. Wyman, Sandler, Wolchik, & Nelson (2000) noted that recent studies have distinguished key dimensions of parenting quality including child supervision, consistent structure and discipline, parent attitudes and active involvement, and clear family communication patterns. In addition, the impact of the child or adolescent on caregiver behavior has been identified as a predictor variable.

A review of the literature indicates that many research studies on the effects of parenting on educational achievement (Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987; Gribble et al., 1993; Grolnick & Ryan, 1989; Steinberg, Elmen, & Mounts, 1989a) used Baumrind's typology of authoritarian, permissive, and authoritative parenting styles (Baumrind, 1971). Parents who are high in demandedness (attempts to shape and control child behaviors and attitudes) and low in parental responsiveness to the child characterize the authoritarian style. Parents with a permissive parenting style make few demands on the child, use little punishment, and are accepting of a child's impulses. The final parenting style, authoritative parenting, includes the setting of clear expectations regarding child behavior, the enforcement of rules and standards, the use of open communication between parents and children, and the encouragement of the child's individuality. Baumrind's follow-up findings from a study of pre-school children indicate that an authoritative parenting style is most likely to result in social and cognitive competence by the ages of 8 and 9. Dornbusch et al. (1987) tested Baumrind's theory using a large and diverse

sample of adolescents and found that authoritative parenting was positively associated with school performance. Some differences were found in findings for Hispanic males and Asian children; further studies are needed to understand the role of parenting styles among various ethnic groups.

Research studies also have examined the role of individual dimensions of parenting quality as predictors of child resilience. In the area of parent attitudes and involvement, Connell, Spencer, & Aber (1994) examined how a number of indicators relate to outcomes in school for 10 to16 year old African American youth. They found that the youths' experience of their parents' school involvement predicted the youths' own educational engagement, which in turn predicted school adjustment and achievement. In a study of the association of parent style with child self-regulation and competence in school, Grolnick & Ryan (1989) found that maternal involvement was significantly correlated with six of the nine dependent variables. Gribble et al. (1993) conducted interviews with two groups of 4th to 6th grade highly stressed youth (identified as stress-affected and stress-resilient) and their parents. The study examined the views of parents and youth on three components of parent-child relationships: parent attitudes, parent involvement, and parent guidance. Both the stress-resistant youth and their parents reported more positive parent attitudes, defined as caring feelings regarding the child and appreciation of the child's strengths, and higher parental involvement in activities with their children.

Another dimension of parenting quality, use of structure and discipline, has been examined in several research studies. Grolnick & Ryan (1989) conceptualized two domains of parenting quality, autonomy support and structure, and examined how these domains are associated with school achievement. Higher levels of structure had a significant overall effect on child self-regulation variables, including the child's self-report of control understanding. Steinberg, Elmen, & Mounts (1989) conducted a longitudinal study of the association between authoritative parenting and school achievement in 120 10 to 16 year olds. The study examined three dimensions of authoritative parenting: warmth, psychological autonomy, and behavioral control. Their results indicated that behavioral control is a contributor to the youth's psychosocial maturity, and that psychological autonomy is both a correlate and an antecedent. Patterson et al. (1989) identified three family variables that are predictors of child antisocial behavior: harsh and inconsistent discipline, low level of positive parental involvement, and poor monitoring and supervision. He supports a social interaction model; proposing that ineffective parents do not reward prosocial behaviors and do not use effective punishment for antisocial behavior. In a review of longitudinal and treatment studies regarding conduct disorder, Reid (1993) emphasized the importance of effective discipline strategies and supervision in the prevention of conduct disorder. Research conducted by Webster-Stratton, Kolpacoff, & Hollingsworth (1989) indicated that parents can be taught effective parenting, including consistent discipline and control,

development of the child's social processing skills, and effective supervision outside of the home.

A final dimension of quality of parenting and family well being is the contribution of child characteristics and behavior. A number of studies have demonstrated that a reciprocal relationship exists between parenting quality and the child's personality and behavior (Crockenberg, 1981; Crowley & Kazdin, 1998; Steinberg, 1989; Grolnick & Ryan, 1989). Using a structural equation model based on the process model of stress and coping, McDonald and his colleagues (1997) found only three latent variables that made a significant direct contribution to caregiver stress in families with a child with emotional problems. One of the three latent variables, and the one with the highest contribution to caregiver stress, was the child's externalizing problem behaviors. The researchers concluded that child problem behaviors are difficult to mediate and directly contribute to caregiver stress. In a study of the factors that determine aggressive behavior development in adolescent boys, the youth's temperament was one of four variables that contributed to the development of aggressive behavior (Olweus, 1980). Further analyses indicated that the youth's temperament had an indirect effect through the mother's permissiveness of aggression. The author speculates a reciprocal relationship; that is, an overly active child may exhaust the mother, who then becomes more permissive of aggressive behavior.

Definition of the Concept of Resilience

This section defines and bounds the semantic field for the concept of resilience. The semantic field includes dictionary derivatives and definitions of resilience and its key terms: child resilience, risk factors, protective factors, and protective mechanisms. In addition, two outcomes of child resilience, self-esteem and competence, are defined.

Semantic Field of Resilience

In its general usage the term resilience refers to the ability to spring back or return to a previous state. Merriam-Webster's Collegiate Dictionary (1993) defines the noun *resilience* as "the capability of a strained body to recover its size and shape after deformation caused especially by compressive stress." Its second definition of *resilience* is "an ability to recover from or adjust easily to misfortune or change." The New Oxford Dictionary of English (Pearsall, 1998) does not provide a definition of resilience or resiliency. Both terms are designated as derivatives of the adjective *resilient*, defined as "able to recoil or spring back into shape after bending, stretching, or being compressed." The New Oxford Dictionary traces the origin of *resilient* to mid-17th century Latin. The Latin verb *resilere* is defined as "to recoil", from *re* 'back' and *salire* 'to recoil'. Merriam-Webster's Collegiate Dictionary offers the same derivative roots for *resilience* from the Latin terms but also makes a reference to the derivatives of *sally*, defined as "an action of rushing or bursting forth." The derivatives of *sally*

include the Old French verb *sailir*, to rush forward, and the Latin verb *salire*, to leap. *Sally* is also identified as akin to the Greek verb *hallestha*, to leap.

Given these accepted standard definitions of the concept, a declarative definition of resilience is the ability to spring back or return to a previous state. The next step is to provide a denotative definition of resilience through a review of definitions from the disciplines of social work and related human sciences. Barker's Social Work Dictionary (1999) provides the following definition of resilience: "The ability to recover, spring back, or return to previous circumstances after encountering problems or stresses. This is a factor that social workers consider in assessing their clients and in developing prognoses and treatment plans." The resiliency-based model of social work practice (Fraser & Galinksy, 1997) defines resilience as adaptive behavior arising from the interaction of risk and protective factors. The Encyclopedia of Sociology (Borgatta & Borgatta, 1992) does not include a section on resilience but in the section on stress, notes that researchers have identified three components of stress: stressors, mediating factors, and outcome variables. Internal coping resources such as mastery and self-esteem and external coping resources such as social supports are listed as mediating factors. The Concise Dictionary of Psychology (Statt, 1998) does not define the term resilience, and does not make reference to it in the definition of stress.

Child Resilience

For a more precise definition, the concept of resilience can be further limited to its recent use in reference to child development. In the mid-1970's, results were published of a series of longitudinal coping studies that began in 1953 with 128 normal infants (Murphy & Moriarty, 1976). Throughout the infancy and childhood of these subjects, researchers observed both differing internal physiological ways to reduce tension and differing capacities for seeking and accepting help from the environment. In exploring how resilience develops, the authors make the observation that stress evokes added energy--the inoculation effect observed when a child masters a stressful event. The Kauai Longitudinal Study (Werner & Smith, 1982) defined resilience as the capacity to cope effectively with internal and external stresses. Project Competence used "stress resistance" as a synonym for resilience in its study of stress and competence in children; and defined stress resistance as "the manifestation of competence in children despite exposure to stressful events" (Garmezy, Masten, & Tellegen, 1984, p. 98). A similar definition of resilience is found in the British National Child Development Study which viewed resilience as positive adaptation and competence in the presence of substantial risk (Rutter, 1987).

The Kaiser Infant Development Study included a sub-study of resilience in children at substantial risk of adverse outcomes. The sub-study defines resilience as an unusual capacity to recover from or cope successfully with major stressors, both internal and external (O'Grady & Metz, 1987). The Mother-Child

Project conceptualized resilience within the framework of an organizational and developmental perspective as a process; a capacity that develops over time through transactions of the individual with the environment (Egeland, Carlson, & Sroufe, 1993). Resilience is viewed as the capacity to use internal and external resources to successfully master stage-specific developmental issues. Smith and Carlson (1997) reviewed the literature on stress, coping, and resilience in children and concluded that resilience is defined in three ways. First, resilience is equated with coping, defined as efforts to restore or maintain equilibrium in the presence of significant stress. Second, resilience is conceptualized as the ability to recover in the face of trauma. Third, resilience is defined as protective factors or mechanisms that mediate the relationship between risk and competency. These definitions are outcomes-oriented, as opposed to the process-oriented definition proposed by Caprara & Rutter (1995) which posits that resilience may be developed through compensatory experiences; that is, individuals develop resilience through the process of successful coping with stressors, analogous to building resistance to infection through immunization.

Masten (2001), Luthar, Cicchetti, & Becker (2000), and Rutter (1990) proposed that the construct of child resilience includes two essential factors, the presence of serious threats to adaptation or development, and the achievement of positive adaptation and good outcomes. The instability of research findings regarding resilience may be due, in part, to the presence of these two key variables rather than only one factor (Luthar et al., 2000). The need to use a

developmental perspective is a common theme in theoretical frameworks for child resilience. A developmental perspective takes into account the child's developmental level and functioning, the multiple levels of influence on a child's developmental pathways, and the reciprocity between the risk and protective factors and the child's adjustment. A related realization is that resilience in children occurs through normal human adaptive processes, including the development of cognition, regulation of behavior, and interactions with caregivers and the environment (Masten, 2001).

Risk Factors

As noted above, the concept of resilience includes the presence of serious threats to child development. The phenomenon of resilience emerged from the study of risk factors in disciplines such as epidemiology and developmental psychopathology (Cicchetti & Toth, 1997; Masten et al., 1990; Rutter, 1990). Risk factors describe those circumstances that increase the likelihood that a child will experience negative outcomes and problem behaviors. Risk was defined as "factors that accentuate or inhibit disease and deficiency states, and the processes that underlie them" (Garmezy, 1994, p. 9). Kirby & Fraser (1997, pp. 10-11) defined risk factors as "any influences that increase the probability of onset, digression to a more serious state, or maintenance of a problem condition." There is considerable agreement that risk factors can be found within the child, the family, the neighborhood, and in societal structures. For example, in the area of adolescent pregnancy Smokowski (1998) identified the following

risk factors: single-parent family, poverty, permissive sexual attitudes in family, chaotic family environment, lack of family support, and a sibling who is sexually active or is a teen mother. As the teenage pregnancy example illustrates, risk factors may exert direct or indirect influences upon each other, resulting in risk chains as well as risk clusters for specific negative outcomes.

Rutter (1979) identified six family risk factors for child psychiatric disorders: severe parental discord, low socioeconomic status, overcrowding and/or large family size, father criminality, maternal psychiatric disorder, and a child in state custody. His study also found that more than one risk factor needed to be present; the presence of two risk factors resulted in a four-fold increase in risk for psychiatric disorder. In a study using data from the Ontario Child Health Study, risk factors from the child's environment as well as child attributes classified as protective factors were examined to determine which protective factors, holding risk constant, predict absence of child psychiatric disorders (Rae-Grant, Thomas, Offord, & Boyle, 1989). For both children (4-11 year olds) and adolescents (12-16 year olds) the risk factor with the highest relative odds for presence of a child psychiatric disorder was family problems. Grizenko & Pawliuk (1994) used parental reports to identify risk and protective factors in preadolescents, using a disruptive behavior group and a matched control group without disruptive behaviors. At the child level, significant variables included biological (infant hyperactivity, learning disabilities, and perinatal complications) and psychological child characteristics (jealousy, anxiety, and

attention-seeking behavior), maternal depression, history of frequent punishment, and emotional neglect. The authors also noted social risk factors, such as moving often, changing schools, and violence in the home. The National Institute of Mental Health recently convened an expert panel and conducted an extensive literature review of family risk factors for children's externalizing behavior problems. The evidence-based malleable risk factors identified were lower levels of parental engagement, greater use of invalidation, and harsh and inconsistent discipline (Hann & Borek, 2001).

Better understanding is needed regarding how risk factors and risk processes operate in person-environment interactions. For example, there is evidence for a strong overlap between acute and chronic stressors, with higher risks associated with acute events and experiences. We also know that children are active players in their environment, and that differences within families seem to be more influential than between families. Finally, it appears that there are long-term, carry-forward effects of early childhood stressors although it is unclear how this process occurs (Rutter, 1994). There is some evidence that boys are more vulnerable to stressors in the first decade of life; in the second decade girls are more susceptible to risks; and males are more vulnerable in the third decade (Werner & Smith, 1992). An understanding of these underlying processes and mechanisms can provide a framework for effective intervention strategies.

Conceptual clarity is important in the measurement of risk. First, risk factors such as parenting style do not affect every child in the same manner.

The research design should not assume that a risk factor has equivalent levels of risk for all children (Luthar, 1993); or that risk is present based on the presumed presence of a stressor (Kaplan, 1999), such as having a parent with mental illness. Second, the mediational model of stress heightens awareness of the need to consider the effects of risk factors in conjunction with one another, rather than in isolation. All independent variables, including risk factors, may be linked with one another (Gore & Eckenrode, 1994). In summary, it is important to clarify whether risk refers to a descriptor of negative life conditions, an independent variable, a moderator variable that interacts with other stressors, or negative outcomes.

Protective Factors and Processes

The final core characteristic of child resilience is a process that mediates the relationship between stress and competence. There is disagreement regarding the nature of the process, except for the belief that it is related to the presence of protective factors or mechanisms. As noted earlier in the section on social support, there are two basic models to explain the interaction between stressors (i.e., risk factors) and protective factors, the main effect and the buffering effect models. In the main effect model, also referred to as the additive model, protective factors directly increase the likelihood of a positive outcome. Substantial main effects have been found for parenting qualities, intellectual functioning, socioeconomic status, and positive self-perceptions (Masten, 2001). The buffering effect or interaction model maintains that protective factors have an

effect only in the presence of, and in combination with, risk factors. Kirby & Fraser (1997) reviewed three variations of the buffering effect model. First, protective factors operate as a buffer to risk factors, reducing the possible negative effects of a stressor. Second, protective factors break the cycle of a chain of risk factors. Finally, the presence of a protective factor may prevent the initial onset of risk.

Since the mid-1980's, there has been a recognition of the presence of protective factors as those influences that modify, ameliorate, or alter a person's response to stressors (Smith and Carlson, 1997). The Kauai Longitudinal Study followed all 698 children born on the island in 1955 from the perinatal period through ages 1, 2, 18, and 32 years. At the conclusion of the study, three clusters of protective factors differentiated successful from non-successful high-risk youth: 1) at least average IQ and the ability to elicit positive responses from others; 2) ties with parent substitutes that promoted trust and autonomy; and 3) an external support system, including youth groups, church, and/or school (Werner & Smith, 1992). Rak and Patterson (1996) reviewed several studies and identified a number of protective factors within the child and the family. At the child level, protective factors included an active approach to problem-solving, the ability from infancy on to gain the positive attention of others, an ability to be alert and autonomous, the tendency to seek out novel experiences, and an optimistic view even in the face of distressing experiences. Another review of studies of resilience found overall agreement on child competence and positive

personality characteristics, positive relationships with family and friends, and participation in outside activities (Grizenko & Pawliuk, 1994). At the family level, protective factors included the age of the opposite sex parent, consistent nurturing during the first year of life, alternative caretakers who step in when parents are not present, a multi-age network of relatives, the presence of sibling caretakers, and structure and rules during adolescence. As this summary of protective factors indicates, the influence of protective factors varies during developmental periods.

New developments continue to occur in research on the concept of resilience and how it relates to child well being. These developments are primarily related to the identification of protective factors and their role in buffering stress, and the possible role of stressors in the promotion of resilience. Several theories have been proposed to explain how protective factors increase resilience in children. Rutter (1987) distinguished between protective factors and protective processes. He defined protective factors as those variables and mechanisms that modify a person's response to a risk situation, and protective processes as successful engagement with risk that involves a change from risk to adaptation. Later he identified four mediating mechanisms in protective processes (Rutter, 1990). The first type includes those mechanisms that directly reduce the impact of risk exposure. The second protective process refers to mediating factors that stop or reduce the impact of risk chains that contribute to the long-term effects of exposure to stressors. The development of a child's self-

esteem is a third protective process. Finally, turning points and the opening up of new opportunities may serve as mediating mechanisms. More recently, Rutter added four more protective mechanisms: protective processes that reduce sensitivity to risk, an increase of positive chain reactions, compensatory positive experiences that counter the effects of risk, and positive cognitive processing of negative events (Rutter, 1995). A related phenomenon is the ability of some children to actively generate and create experiences that foster competence (Masten et al., 1990). Murphy & Moriarity (1976) and Werner (1993) identified the ability of resilient children to evoke help and positive responses, as well as the capacity to identify resilient caregivers. Kirby and Fraser (1997) noted another type of protective mechanisms, societal and structural system-level reforms that reduce the impact of risk factors.

Caprara and Rutter (1995) discussed another development, the insight that resilience is not solely a trait or characteristic that is inherent in children; rather resilience may develop within the child as a result of compensatory experiences. They went further, and asserted that the compensatory experiences may either precede or succeed the stressor. Their second hypothesis is that early exposure to stress may actually facilitate resilience and enhance the child's resistance to later stressors. They made the parallel of resistance to infections and how it can be developed through either natural exposure to the pathogen or immunization.

These developments in child resilience have parallels with new understandings in related fields that approach human functioning with assumptions of active human agency, prevention, and health promotion (Windle, 1999). In the field of health care, the salutogenic model of health emphasized the concept of coherence (Antonovsky, 1990). A person's sense of coherence depends on his/her belief that the environment is structured and predictable, that resources are available to meet whatever challenges are presented, and that the challenges are worthy of engagement. This approach to well being contends that the strength of resistant resources is far more important than stress avoidance.

Healing, a related concept, is contributed by the field of holistic health. Dubos (1990) described healing as a process that makes the patient better able to cope with new situations, rather than simply the return to the state of health previous to the disease. Wieck (1987) referred to healing in a similar manner as a process that produces greater wholeness and health for the individual. Theobald (1997) applied the concept of self-healing to the ability of citizens to heal themselves and create fundamental social changes.

Operational Definition

The final type of definition is operational, referring to the properties of the concept of resilience that lend themselves to measurement. Operational definitions are found in various longitudinal research studies of resilience in children. It is important to keep in mind that the operational variables are not resilience. Resilience is a latent construct that cannot be seen or touched. The

operational properties are manifestations or observable behaviors that are believed to represent the concept of resilience. For example, O'Grady & Metz (1987) in their longitudinal study of 109 at-risk children identified four outcome measures or dependent variables: school adjustment problems, social competence, behavior problems, and emotional problems. Standardized instruments were used to collect data on these variables. Radke-Yarrow & Brown (1993) used a case study methodology to understand what characterizes 18 resilient children and 26 troubled children in their 10-year longitudinal study of children of affectively ill and well parents. Using multiple methods and informants, six areas of functioning were assessed: self-regulation, relationships within and outside the family, mastery, cognitive functioning, self-perceptions and other perceptions, and physical growth and health.

As these examples illustrate, most researchers use a developmental framework for the study of child resilience. Resilience is associated with the successful completion of critical developmental tasks at age-appropriate times, often referred to as mastery or competence. Garmezy, Masten, & Tellegen (1984) defined competence as effective adaptation to the environment that furthers the developmental processes. In general, competence in children is viewed as the ability to function normatively and in an age-appropriate manner at home, in school, and in the community. In addition, there can be variation in outcomes across a number of developmental domains, such as cognitive, social, educational, and emotional.

A number of researchers and theorists identify self-esteem as another outcome associated with child resilience. For example, Werner (1993) identified child self-esteem as an outcome related to the quality of infant-caregiver attachments. Self-esteem is "the feelings and thoughts that individuals have about their competence and worth, about their abilities to make a difference, to confront rather than retreat from challenges, to learn from both success and failure, and to treat themselves and others with respect" (Brooks, 1994). Self-esteem is within the semantic field of the construct of self-efficacy. Bandura (1982) proposed that parents provide a role model for effective action and give children opportunities to experience mastery. Competence in the completion of normative roles leads to the development of self-efficacy. Within the profession of social work, self-efficacy is defined as "a client's expectation and belief in his or her ability to accomplish specified tasks that are needed to reach therapeutic goals. The social worker helps to enhance the client's belief by offering direct assistance, pointing out client strengths, breaking down the tasks into doable elements, and using all available resources" (Barker, 1999, p. 432).

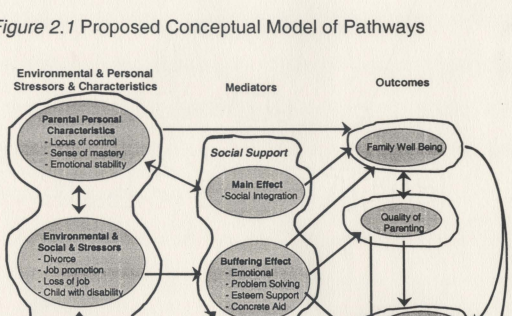
The existence of several outcomes across developmental domains is one of many challenges for child resilience research (Cicchetti & Garmezy, 1993). First, which outcomes should be identified and studied? Second, are some outcomes given more priority than others? Third, should resilience be equated with excellence versus moderate levels of competence? Luthar et al. (2000) argued that both developmental theory and the nature of the risk factors being

studied should guide how the researcher responds to these questions. Another challenge is the instability of resilience over time in an individual. Many high-risk children do not maintain consistent high adaptation, and new strengths and vulnerabilities may emerge throughout a person's development (Werner & Smith, 1992). There is clear evidence, for example, that environmental improvements in middle or late childhood can reverse the impact of earlier neglect or marital discord (Rutter, 1985). Another challenge is that both risk and protective factors may function in different ways at different developmental stages and for the same individual at different phases of development. In addition, either risk or protective factors may play a mediating role, resulting in relationships between the independent variables. The interrelatedness of the independent variables points to the use of cluster analysis rather than multivariate models that emphasize which predictor variable has the strongest relationship to the dependent variable (Gore & Eckenrode, 1994). The research design needs to recognize the dynamic and bidirectional nature of child resilience. Finally, many studies have noted marked variations in outcomes in children with exposure to the same types of risk factors. Rutter (1985) offered a number of possible reasons: age and gender differences, child temperament, genetic factors, effective versus ineffective coping mechanisms, timing and multiplicity of risk factors, and the protective effects of compensatory positive experiences.

Proposed Conceptual Model of Pathways

Figure 2.1 depicts the proposed conceptual model for describing the pathways between personal and environmental stressors and characteristics, social support, family well being, quality of parenting, and child resilience. The domains describe the key variables that affect family functioning and child resilience. The arrows between the domains represent the interactions in one or both directions between the domains.

Figure 2.1 Proposed Conceptual Model of Pathways



The conceptual model assumes that the four primary variables (social support, family well being, quality of parenting, and child resilience) are transactional and bidirectional. Child characteristics, for example, may have an impact on family well being and social support. The model assumes that having a child with

serious emotional problems creates stress in families, although it may also contribute to family enrichment. The model depicts a mediating effect, that social support indirectly influences child resilience. Finally, the model assumes that families actively seek to manage stress as it occurs, using whatever resources are available and developing new coping strategies as necessary.

From the perspective of social work practice theory, the model is based on a systems and ecological perspective, as illustrated in the life model of social work practice (Germain & Gitterman, 1995, 1996). This practice model assumes that environmental resources, including social support networks, are coping mechanisms that can be used by both individuals and families to deal with life stressors. Relatedness is a central attribute and viewed as a positive outcome of adaptive relationships between persons and environments.

CHAPTER THREE

METHOD

Chapter Three describes the method that will be used to answer the research questions. First, the data source is described, including study description, research questions, context and setting, data collection methods, instrumentation, and sample. Second, preliminary data analyses are summarized. The purpose of these analyses was exploratory, that is, to determine whether the dataset met a series of minimum feasibility standards for use in the dissertation. The final section of Chapter Three sets forth the research questions which relate to the associations between the dependent construct, child resilience, and the independent constructs of social support, family well being, and quality of parenting. The final section also describes the method for three primary analytic activities (i.e., conceptual mapping, scale development, and structural equation modeling) used to assess the validity of the proposed model for the associations between the dependent and independent constructs.

Data Source

This section addresses the challenges related to use of an existing dataset; and provides a description of the data source, the Bronx Children's Emergency Services Project, including study purpose and hypotheses, the three models of intensive in-home crisis services, context and setting, data collection methods, instrumentation, and sample.

Retrospective data analysis includes a number of potential methodological problems, such as the researcher's understanding of study context, understanding of conceptual design, appropriateness of the measures, access to the original research team, access to individual level data, previous decisions regarding missing data, and subject attrition. In this situation the researcher was a member of the original research team and helped to design and oversee all aspects of the study, including the conceptual framework and programmatic models, the research questions and hypotheses, the method and research design, and data collection methods and instrumentation. In addition, the researcher has the consent of the Principal Investigator, Dr. Mary E. Evans, as well as access to Dr. Evans and other team members if questions and issues arise regarding the database. The issue of appropriateness of measures was addressed by conducting a preliminary data analysis and a conceptual mapping exercise, both of which are described later.

Two analytic issues may arise regarding use of an existing database. First, person-level files may include only scale and sub-scale scores, making it impossible to do item-level analysis. Second, the data file may include aggregate data results only that don't allow for person-level analytic techniques. In this situation the database includes item-level data at the individual child and parent levels. Another dilemma may be a lack of information regarding previous decisions about how to deal with missing data, and an inability to change those decisions. With the Bronx dataset, previous decisions regarding missing data

are known. In addition, since the entire original dataset is available, this researcher is able to make and execute a different set of decisions regarding the method for addressing missing data.

A final challenge with retrospective data analysis is subject attrition in the original study. Attrition cannot be changed; however, the advantage is that the attrition rate is known. In a prospective study, the amount of attrition that will occur is unknown and cannot be predicted.

In summary, the typical challenges of retrospective data analysis are not present in this study. The researcher was a member of the original research team, participated fully in the conceptual design of the study and its oversight, and has access to the original research team. In addition, the full dataset is available including individual level data making it possible to examine item-level data and reclassify items into domains, design a different method for handling missing data, and conduct further data analysis.

Research Study Description

The Bronx Children's Emergency Services Project was a research demonstration project supported by a grant from the National Institute of Mental Health (1R18MH50357) and the Center for Mental Health Services (5HD5SM50357) (Evans, 1992). The Principal Investigator, Dr. Mary Evans, was a principal research scientist at the Bureau of Evaluation and Services Research in the New York State Office of Mental Health. The study examined the efficacy of three models of intensive in-home services as alternatives to hospitalization for

children experiencing severe psychiatric crises. The purpose was to determine the differential system, child, and family outcomes associated with the three program models. The child outcomes examined include self-esteem, emotional and behavioral functioning in a variety of settings, and service satisfaction. The family outcomes were social support, parental self-efficacy, family adaptability and cohesion, and level of satisfaction with services.

The children's mental health field has lacked a standardized intervention other than inpatient psychiatric treatment for children and adolescents who present in emergency psychiatric settings. One alternative approach recommended in the system of care literature is the provision of intensive, in-home services that offer treatment for the youth and support for his/her family (Evans, 1996). These programs are derivatives of the Homebuilders model developed for a child welfare population (Fraser, Pecora, & Haapala, 1991) and are typically short in duration (4 to 6 weeks), offered in the home, and focus on skill development in areas such as behavior management, family crisis management and communication skills. These interventions had not been systematically evaluated for use with a child mental health population (Evans, Boothroyd, & Armstrong, 1997).

In 1987 the New York State Office of Mental Health had developed and funded such a program, Home-Based Crisis Intervention (HBCI). The research demonstration project established two additional emergency intervention programs, Enhanced Home-Based Crisis Intervention and Crisis Case

Management, and compared their outcomes with HBCI (see Evans, et al.,1997 for a full description of each program). The programs were similar in their target population (children at risk of inpatient admission due to a psychiatric crisis), goal (prevention of psychiatric placement by offering short-term, intensive in-home services), duration of 4 to 6 weeks, and a focus on the child within the context of the family.

Program Models

HBCI staff received four days of training in the Homebuilders model. Each team consisted of four counselors with a caseload of two families each and a supervisor, and a 24-hour, 7-day a week response availability. In-home visits and supports were provided within 24 hours of intake and on a regular and frequent basis. The intervention approach included skill building, in-home assessment and treatment by a psychiatrist, counseling, concrete services, and linkages to other services needed by the child and family.

The Enhanced Home-Based Crisis Intervention Program (HBCI+) made adjustments to the HBCI model recommended by family members and providers to make the model more appropriate for children in psychiatric crisis and for families from diverse cultural and ethnic backgrounds. The enhancements included additional supports for families and additional training and technical assistance for staff. The added family supports included in-home and out-of-home respite services available on both a planned and emergency basis. The respite care training included how to provide respite that respects the cultural and

ethnic diversity of families. The in-home respite care was available to both the child and siblings. Out-of-home respite care was delivered in the home of the respite provider and was designed to be short term (limit of 3 days) but could be offered as often as needed during the intervention. In addition to respite, flexible service dollars (average of $100 per family) were available for use by the counselor to meet basic, recreational, transportation, educational, and other needs. The third added support service was the availability of a bilingual parent advocate, whose tasks included development of a family support group, organizing family recreation events, and offering one-on-one support to families. Enhanced training and ongoing case-specific consultation and technical assistance for staff were offered in the areas of cultural competence and community violence.

The third program model, Crisis Case Management (CCM), was an adaptation of an existing children's intensive case management program. The purpose of CCM was to determine whether a rapid assessment of need and linkage to services could result in similar outcomes as HBCI and HBCI+. The primary difference of CCM was caseload size. Each crisis case manager carried a caseload of 4 families receiving short-term crisis case management, and 4 families receiving regular case management services. Given the increased caseload, crisis case managers focused on assessment of child and family needs and strengths, coordination of services, and referral and linkages to other

services and supports. Flexible service dollars and in-home and out-of-home respite care were available for CCM families.

Context and Setting

The research demonstration was conducted in the Bronx, the poorest of New York City's five boroughs, with an average annual per capita income of $15,995 in 1991 (Government, 1995). In 1995 the Bronx population was 1,203,789 of which 44% were Hispanic, 31% were African Americans, 23% were White, and 2% were other (Government, 1995). New York State Kids Count rated the Bronx worse than the average county on all indicators, including infant mortality, violent arrests, teenage pregnancy, and proportion of children in congregate care (Dunton, 1994). In the Bronx borough, 49% of children lived in families below the poverty level and 63% lived in single-parent families. Bronx was chosen for the study due to the opportunity it provided to examine the association between child mental health problems and the contextual factors of poverty, minority status, and psychosocial stress.

The research method for the Bronx study was a prospective, positively controlled three-group randomized design. Clinical staff evaluated all children presenting at two emergency psychiatric services in the Bronx using a standardized risk assessment instrument. This assessment provided information about all presenters, which was used by staff to help determine which children were clinically appropriate for intensive, in-home services. Other eligibility requirements included a child between the ages of 5 to 17 years and living at

home with either a natural, foster, or adoptive family, and the agreement of both child and family to receive intensive, in-home services. Children who met the target population criteria were referred and randomly assigned to one of the three in-home interventions.

Data Collection Methods

The major domains of data collection included child, family, and provider characteristics, provider behaviors, intermediate outcomes, and distal outcomes at the child, family, staff, and system levels. Intermediate outcomes included child self-esteem, family social support, and parent self-efficacy. Data collection occurred over a 26-month period between 1993 and 1995 and took place at three points: intake, discharge, and six months post-discharge. Data collection instruments were available in either Spanish or English, and interviewers conducted the interviews in either language. Program staff (counselors or case managers) collected the intake data; interviewers from the Hispanic Research Center at Fordham University conducted the discharge and follow-up interviews. Families were reimbursed $20 at each data collection point.

Instrumentation

This section describes briefly the instruments administered to children and families in the study, including the instrument's respondent, the response format, and the measure's psychometric properties. Evans et al. (1997) provides a full description of all instrumentation used in the Bronx study. Measures related to child characteristics and functioning include the Child Description Form (CDF),

the Supplemental Assessment Form, the Child and Adolescent Functional Assessment Scale (Hodges, 1990), the Child Behavior Checklist (Achenbach, 1991), and the Piers-Harris Children's Self-Concept Scale (Piers, 1984). Instruments related to family characteristics and functioning are the Emergency Services Assessment Measure, the Supplemental Assessment Form, the Inventory of Socially Supportive Behaviors (Barrera, 1986), the Parent/Child Relationship Scales (Magura & Moses, 1986), Family Adaptability and Cohesion Evaluation Scales II (Olson, Portner, & Bell, 1982), Family Environment Scale (Moos & Moos, 1981), and the Parental Self-Efficacy Scale (Boothroyd, 1996).

Child Characteristics and Functioning

The Client Description Form (CDF) is a 32-item measure that conforms to the minimum data standards for client demographic information established by the National Institute of Mental Health (Leginski et al., 1989). The CDF was designed by the New York State Office of Mental Health to collect client characteristics on children enrolled in seven different types of community-based programs. The CDF is completed by a mental health professional and collects three types of information: basic demographic information about the child, educational status information about the child, and information on the child's psychiatric history, including diagnosis, symptoms and behavior over the past 18 months, and prior mental health placements. The Supplemental Assessment Form, designed specifically for the Bronx study, collected information on child and family unmet needs.

The Child and Adolescent Functional Assessment Scale (CAFAS) (Hodges, 1990) was designed to assess a child's functional impairment in five domains: role performance, thinking, behavior toward self and others, moods and emotions, and substance abuse. Each subscale provides a series of behavioral descriptions that clinicians use to assess the child's degree of impairment in four response categories of severe, moderate, mild, or average. The total score on the CAFAS, the sum of the scores of the five child domains, represents the youth's degree of impairment. The internal consistency of the child total score on the CAFAS is .72 (Hall, Cascardi, & Kutash, 1995). The validity of the CAFAS as a measure of functional impairment has been tested through a comparison with the Child Behavior Checklist. A significant difference was found in the CAFAS total score between children classified in the clinical and nonclinical range on the Child Behavior Checklist (Huz, 1996). Discriminant validity and sensitivity to change over time were examined by initial level of care and over time (intake, 6 months, 12 months, and 18 months). Findings included significant variation in scores by level of care as well as reduction in scores over time at each level of care.

The Child Behavior Checklist (CBCL) (Achenbach, 1991) is a parent self-report measure used to assess children's behavioral problems and social competence. The CBCL includes 118 behavior problem items that a parent answers using the alternative responses of not true, somewhat or sometimes true, or very or often true. The items provide standard scores on empirically

derived scales based upon the child's age and gender. Second-order factor analysis has produced two broad band factors of internalizing and externalizing behavioral problems. The psychometric properties of the CBCL have been extensively tested (Freeman, 1985; McConaughy & Achenbach, 1988). Scores on interclass correlation to assess test-retest reliability, interparent agreement, and interviewer reliability all exceed .90. One-week test-retest coefficients for the subscales are in the .80 to .90 range and correlations with similar scales from other measures are in the .60 to .80 range (Freeman, 1985). Biederman (2001) tested the stability of the CBCL over a 4-year period in a sample of children with the DSM diagnosis of attention deficit hyperactivity disorder (ADHD). Pearson and Intraclass correlations were conducted on T scores of baseline and follow-up CBCL scores for eight of the CBCL's nine clinical scales, three competence scales, and composite scales to assess dimensional stability. Moderate to substantial and significant relationships between baseline and follow-up scores were found for nearly all subscale and composite scores for group means as well as for individual comparisons.

The Piers-Harris Children's Self-Concept Scale (Piers, 1984) asks children to report on how they perceive various aspects of their lives by responding yes or no to 80 items. The items cluster into six domains associated with how children feel about their behavior, their intellectual and school status, physical appearance, anxiety, popularity, and happiness and satisfaction. Test-retest reliability for the total score (for periods of 4 weeks to one year) ranges from .42

to .96 (Piers, 1984), and internal consistency coefficients are in the .88 to .92 range.

Family Characteristics and Functioning

The Emergency Services Assessment was developed by BESR for the Bronx study and was completed by a clinician at intake into one of the three interventions. The 32-item measure collects information in six domains: parenting competency, residential or environmental factors, community resources, medical care, transportation, and education. The Supplemental Assessment Form provided additional information on family demographics and service needs.

The Inventory of Socially Supportive Behaviors (ISSB) (Barrera, Sandler, & Ramsay, 1981) is a 40-item self-report measure of received support. The ISSB is designed to gather information regarding the support recipient's perceptions of available social support. Respondents are asked to assess the informal social supports received from different individuals during the past 30 days using a 5-point scale from 1 (not at all) to 5 (about every day). Parents completed the ISSB at admission to one of the three home-based interventions. Concurrent validity of the ISSB total score with measures of network size has been demonstrated with correlations of .24 and .42 (Sandler, 1984). Correlations of .359 have been found of the ISSB with the cohesion subscale of the Moos' Family Environment Scale (Barrera et al., 1981). Internal consistency coefficients range from .90 to .94, with a test-retest reliability over a one-month interval of .80 (Barrera et al., 1981).

The Parent-Child Relationship Scales, consisting of 6 of the Child Well-Being Scales, include the dimensions of parental recognition of problems, parental motivation to solve problems, parental acceptance/affection for children, parental approval of children, parental consistency of discipline, and parental teaching/stimulation of children (Magura & Moses, 1986). Counselors or case managers completed this instrument. Each scale provides a series of numbered behavioral descriptions of parental performance, with higher functioning indicated by a lower number. The content validity of the Child Well-Being Scales was ensured by a review of child welfare literature, consultation from child welfare experts who reviewed instrument drafts, and a pilot test. In addition, factor analysis was used to examine the trait validity of the scales (Magura & Moses, 1986). The stability of the child well-being classifications was examined by a repeated measures test. Data on 86 families were completed twice at a 2-week interval. Agreement on the two sets of ratings ranged from a low of .37 (Consistency of Discipline) to a high of .83 (Physical Safety in Home) with a mean value of kappa of .65, standard deviation of .12 (Magura & Moses, 1986).

The Caregiver Self-Efficacy Scale (Boothroyd & Evans, 1996) is a self-report measure designed to measure the extent to which parents and other caregivers perceive that they have control over various issues related to caring for a child with serious emotional problems. The instrument includes 25 items that are asked in a positive direction. The subscales are behavior management, school issues, advocacy, emotional support, and provider issues. Both total

score and subscale scores can be calculated. Content validity of the measure was assessed through a review of relevant literature, and a review of draft instruments by caregivers of children diagnosed with serious emotional problems. Alpha for the total score is .86; test-retest reliability over a seven week period for the overall test is .42 (Boothroyd, 1997).

The Family Adaptability and Cohesion Evaluation Scales (FACES II) (Olson et al., 1982) is a self-report measure that asks the respondent to describe the cohesion and adaptability that exists within the family. The two subscales, cohesion and adaptability, are within the domain of family well being. Family cohesion assesses the degree to which family members are connected to or separated from their family. The family adaptability subscale measures the extent to which the family is flexible and able to change. This 30-item measure (16 items for cohesion and 14 adaptability items) uses a 5-point scale ranging from 1 (almost never) to 5 (almost always). Alpha reliabilities are .78 for adaptability, .87 for cohesion, and .90 for the total scale (Olson et al., 1982). The concurrent validity of FACES II with the Dallas Self-Report Family Inventory, a global measure of family health, was reported to be .93 for cohesion and .78 for adaptability (Hampson, Hulgus, & Beavers, 1991).

The Family Environment Scale (FES) (Moos & Moos, 1981) is a widely used self-report measure of family functioning. The most widely used version is a 90-item true-false instrument which assesses the social climate of families from a framework that views behavior as an interaction between the person and the

environment (Sawin & Harrigan, 1994). The FES consists of 10 subscales that fall within three domains: social relationships, personal growth, and family system maintenance. For the Bronx study, 10 items were selected that represent the social relationship and family system maintenance domains. In initial studies of the psychometric properties of the FES, internal consistency data ranged from .61 to .78 for the various subscales (Moos, 1974). Test-retest reliabilities for a eight-week period varied from .73 to .86; 48-month test-retest reliabilities ranged from .45 to .54 for various subscales (Moos, 1990). Regarding concurrent validity, the FES subscales have been associated with a variety of life stressors, including adjustment to pregnancy and parenthood, adaptation among families with a member with a psychiatric or medical condition, and adjustment to childhood illness (Sawin & Harrigan, 1994). Predictive validity has been found of the FES for treatment outcomes in individuals with psychiatric problems, impact of divorce on child adjustment, and attrition from treatment (Moos & Moos, 1981).

Sample

During the study period, 247 children were referred from the two psychiatric emergency services, randomly assigned and enrolled in one of the three in-home intervention programs. Only three of the families judged to be clinically appropriate for an in-home intervention refused to receive an in-home service. About 76% of the referred families came from one psychiatric emergency service, and 24% came from the other referral site. The number of

referrals from each intake site was generally proportional to the number of children evaluated at each site (Evans et al., 1997).

Of the 247 families enrolled in the study, nine families agreed to participate and initial demographic information was collected, but the families did not receive an intervention. These nine families were excluded from data analysis conducted for the Bronx study (n = 238). For the 238 families who received an intervention, data are missing for one of two reasons. First, either the parent or the child was lost to attrition and data could not be collected. Second, data were collected but some individual item-level responses for a scale or sub-scale are missing. When individual item-level responses were missing for 30-40% of the items on a scale or subscale, a mean substitution method was used to complete the missing data for data analysis conducted for the Bronx study.

A total of 238 children and families received the in-home intervention during the 26-month study period (Evans et al., 1997). At intake, the age of the children ranged from 4 to 17 years, with an average age of 12.3 years (SD=3.6 years). About half of the enrollees were boys (53%) and 47% were girls. More than half (59%) of the children were Hispanic, 34% African American, 5% White and 2% other. Spanish was the primary language for about one-fifth (18%) of the children.

In regard to living arrangement, 63% of the children resided in single parent households, 24% lived with two parents, 9% with relatives, and 4% lived

with foster or adoptive parents. The annual family income was less than $20,000 in almost three quarters of the households, and only 7% of the families had incomes higher than $30,000. The most frequent diagnostic categories for the children were disruptive behaviors (37%), adjustment disorders (21%), mood disorders (17%), psychotic disorders (11%), anxiety disorders (9%), and other disorders (5%). Regarding most frequent behaviors and symptoms, 57% of the children displayed suicidal ideation, 55% depression, 43% temper tantrums, 41% verbal aggressiveness, 34% anxiety, and 32% destruction of property.

Preliminary Data Analysis

The purpose of the preliminary data analysis was to determine whether the Bronx study dataset met a series of minimum feasibility standards for use by this researcher. These standards include: whether the dataset included indicators for the independent and dependent constructs, the degree of variability in the data, the acceptability of the level of missing data, the presence of a reasonable correlational structure for items within and across the key domains, and an empirical test of how the items fit together. The standard for the presence of indicators for the dependent and independent constructs was whether a visual review of measurement instruments in the dataset produced at least two indicators for each major construct (social support, family well being, quality of parenting, and child resilience). Variability was examined by comparing the actual and theoretical range of scores for each indicator. The degree of variability is important because the purpose of science is to study subjects that vary

regarding a particular attribute, and to explain the variation through scientific investigation (Nunnally, 1978). Thorne & Giesen (2000) further explain that in correlational analyses a restriction of the range of either variable lowers the correlation. If the range is restricted, it is difficult to determine whether a low correlation is due to a lack of relationship or to the truncated range. The standard used for variability in the preliminary data analysis was that at least 80% of the time, the actual range of scores should be at least 75% of the theoretical range of scores. Variability was also determined by a review of the mean, standard deviation, and skewness for each indicator.

Regarding the appropriateness of correlational structure of the items, Cohen (1988) determined that a correlation of .5 is large, a correlation of .3 is moderate, and .1 should be viewed as small. The standard used was that a correlation range of .3 to .7 should be present at least 60% of the time for indicators within a domain because indicators within a domain should be similar, (i.e., measure the same construct) but each should make a unique contribution to the meaning of the construct. For correlations across domains, correlations should be lower (< .3) and the correlations should be significant less than 5% of the time. An empirical test of how the indicators fit together was conducted through factor analysis. Factors were extracted by principal components analysis before the solution was rotated; factors with eigenvalues greater than one were selected (Kim & Mueller, 1978). Factor patterns were used to interpret

the factors because the patterns reflect each variable's unique association to the factor, minus the association among factors.

Appendix A includes a full report of the preliminary data analysis. A summary of the findings is included in the following section.

Review of Bronx Study Instrumentation

The first task was a mapping exercise to determine whether the Bronx dataset included indicators in the domains of the dependent and independent constructs (social support, family well being, quality of parenting, and child resilience). Using the Chapter Two review of the theoretical and research literature on the domains, the measures and/or subscales of data collection instruments used in the Bronx study were mapped onto the domains of parental social support, family well being, quality of parenting, and child resilience. Table 3.1 summarizes the results of the mapping exercise.

Table 3.1

Mapping Exercise

Domain	Social Support	Family Well Being	Quality of Parenting	Child Resilience
Indicators (n = 33)	Inventory of Socially Supportive Behaviors (Total Score) Emergency Services Assessment (ESA): Family use of informal community supports (1 Question)	ESA: Family Relations Spouse Relations Leisure Activities Quality Time (4 Questions) FACES II Cohesion (1 Subscale) FACES II Adaptability (1 Subscale)	ESA: Provide Structure Appropriate Discipline Child Feels Loved (3 Questions) Parent-Child Relationship Scales Acceptance Approval Consistency Stimulation Recognition Motivation (6 Questions) Parental Self-Efficacy Scale- Management School Advocacy Support Provider (Total score & 5 subscales)	CBCL Total Problem Internalizing Externalizing (3 Subscales) Piers-Harris Behavior School Status Appearance Anxiety Popularity Happiness (Total Score & 6 subscales)

In the domain of social support, two indicators were identified. Six indicators represented the domain of family well being. For the domain of quality

of parenting, 15 indicators were selected. For the domain of child resilience, ten variables were identified.

In summary, the mapping exercise with the Bronx dataset indicated that one necessary but not sufficient condition for use of the dataset had been met, that the dataset contained at least two indicators for each domain of the model. It was decided to proceed with several steps of data analysis.

Variability in Data

The first step of the analysis was to use descriptive statistics to determine how much variability was present in the data for each of variables used in the Bronx study. For consistency, the statistics collected for each instrument included the possible range of scores for the instrument, the range of the raw scores, and the mean, standard deviation and skewness for the raw scores. A second goal was to determine the amount of missing data for each indicator.

The standard used for acceptability of variability was that at least 80% of the time, the actual range of scores should be at least 75% of the theoretical range of scores. This standard was met; for 88% of the indicators, the actual range was at least 75% of the potential range of scores. The amount of missing data ranged from 2.5% to 31.5%. For 11 indicators, the amount of missing data was 10% or less. Between 11% and 25% of the data was missing for 10 indicators. Twelve indicators had data missing in the range of 26% to 35%. In general, the indicators collected at Time 2 had much more missing data than those collected at Time 1. In summary, the assessment of the variability and the

amount of missing data for each indicator indicated to proceed with further data analysis.

Analysis of Correlations Within Same Domain

The next step in the preliminary analysis of the Bronx dataset was to determine the degree of relationships between indicators, that is, the correlations between subscales and/or total scales within each domain of social support, family well being, quality of parenting and child resilience. The standard used was that a correlation range of .3 to .7 should be present at least 60% of the time for indicators within a domain because indicators within a domain should be similar (i.e., measure the same construct) but each should make a unique contribution to the meaning of the construct. The Pearson product-moment correlation coefficient was conducted with the set of 33 indicators: two indicators in the domain of social support, six indicators representing family well being, 15 in the domain of quality of parenting, and 10 indicators in the domain of child resilience.

A review of the correlations within each domain indicated that there was a minimal (less than .1) correlation between the two indicators for social support. For the domain of family well being, 10 of the 15 correlations (67%) fall within the range of .2 to .7. The domain of quality of parenting includes 15 indicators. Correlations from .2 to .7 were found for 40 of the 105 correlations (38%). This finding indicates that some of the indicators for quality of parenting should be reviewed and either eliminated or moved to another domain. For child resilience,

the total score and subscales of each instrument (Piers-Harris Children's Self-Concept Scale and Child Behavior Checklist) were correlated at a moderate to high degree with one another but a small to minimal correlation (less than .1 for 19 of the 21 correlations) was found between the instruments. These findings indicate that the two instruments measure constructs, child self-esteem and competence-behavior, which are not associated with one another.

Analysis of Correlations Between Domains

The final step of correlational analysis was to examine the degree of association across the four domains of social support, family well being, quality of parenting, and child resilience. The standard used was that the correlation should be minimal (<. 3) and significant less than 5% of the time. Following is an example of the correlations of social support with the other domains.

In the area of social support one indicator was the instrument, the Inventory of Socially Supportive Behaviors (ISSB). One additional question from the Emergency Services Assessment, the family's use of informal community supports, was included as an indicator in this domain. The ISSB (Time 2) was significantly correlated with one variable from the Parental Emotional Well Being domain, the Adaptability Subscale of FACES ($r = .28$; $p < .01$) and four variables from the domain of Quality of Parenting: the Parental Self-Efficacy Scale total scale ($r = .21$; $p < .01$), the subscale of behavior management ($r = .19$; $p < .05$), the advocacy subscale ($r = .182$; $p < .05$), and the emotional support subscale ($r = .23$; $p < .01$). All correlations with indicators in other domains were less than .3.

The question on family's use of informal community supports was significantly related to one question (family spends quality time together) from the domain of family well being ($r = .18$, $p < .01$). In the area of child resilience, this question was related to 3 of the 7 variables from the Piers-Harris Self-Concept Scale, the Total Scale ($r = .19$, $p < .05$), the Intellectual and School Status subscale ($r = .17$, $p < .05$), and the Physical Appearance subscale ($r = .22$, $p < .01$). All correlations of this indicator with other domains were less than .3.

Appendix A includes a full report of the analysis of correlations between domains. In summary, a low level of correlation (< .3) was found for indicators across the domains of social support, family well being, quality of parenting and child resilience. Very few of the correlations were significant at the .05 level. These findings are as expected, assuming that each domain and its indicators represent a unique construct.

Factor Analysis

The correlational analyses were based upon the theoretical model (Figure 2.1) presented in Chapter 2 on the associations between social support, family well being, quality of parenting, and child resilience. The next task was to empirically evaluate how the indicators clustered together through principal components analysis. The purpose of the factor analysis was more confirmatory than exploratory, in that the goal was to test out empirically the theoretical relationships shown in the model (Figure 2.1).

Principal components analysis (PCA) is a method that produces linear combinations of observed variables, with the first principal component accounting for the largest amount of variance in the data, the second component accounting for the second largest, etc. The objective of the factor analysis was to reduce the set of 33 indicators to a smaller number of hypothetical components with the assumption that the observed correlations are due to some underlying common factors. The factor pattern matrices were used for interpretation because they represent each indicator's unique relationship to the factor, discounting the association among factors. A number of solutions were run using nine, eight and seven factors. The seven-factor solution was selected as the most parsimonious solution using two standards: the eigenvalue greater than one rule and the criteria of interpretability of the data. A 7-component PCA (see Table 3.2) with a varimax rotation accounted for 64.9% of the variance.

Table 3.2
Seven Component Principal Components Analysis

Factors	Percentage of Variance
Family Perception of Family Functioning	13.7%
Child Perception of Self-Esteem	12.7%
Clinician Perception of Quality of Parenting	11%
Clinician Perception of Family Functioning	8%
Resilience-Child Behavior	8%
Clinician Perception of Social Support and Quality of Parenting	6%
Family Assessment of Well Being	5.2%

Based on the findings from the preliminary data analyses, the construct of child resilience was divided into two domains, behavior and self-esteem. For each domain the indicators correlate highly with each other, but not with the

indicators in the other domain of child resilience. In addition, for all principal component analyses conducted, the indicators representing behavior loaded onto one factor and the indicators representing self-esteem load onto another factor.

The other interesting finding from the principal component analysis was the empirical differences between clinician assessment versus child and family self-report. This difference between clinician and consumer perceptions is not unusual and is often found, for example, with quality of life measures. Based on the principal component analysis, it appears that clinicians and families use different standards and/or values in assessing such constructs as well being and parenting skills.

The 7-factor Principal Component Analysis solution confirmed the interpretation of the correlational analysis. Even in cases where indicators supposedly assess the same constructs, the variables often did not load together. These findings support the possibility of constructing new scales using individual items from the dataset that, first, more accurately represent the independent constructs (social support, family well being, and quality of parenting) and, second, may show clearer associations with the dependent construct, child resilience.

Problem Statement and Research Questions

As was previously stated, the purpose of the dissertation is to contribute to a conceptual and empirical understanding of the pathways between social

support available to parents, family well being, quality of parenting and the development of child resilience in families with a child with serious emotional problems. A primary goal is to answer a set of research questions related to the relationships between these domains. Although the literature review indicates that the relationships between these constructs are transactional, bi-directionality cannot be assessed in this study because neither randomization nor multiple data collection points is used. The study considers social support, family well being and quality of parenting as the independent constructs, and child resilience, behavior and self-esteem, as the dependent constructs. Specific research questions are:

1. To what degree is social support related to family well being in families with a child with serious emotional problems?
2. To what degree is social support related to quality of parenting in families with a child with serious emotional problems?
3. To what degree is social support related to child resilience in families with a child with serious emotional problems?
4. To what degree is family well being related to child resilience in families with a child with serious emotional problems?
5. To what degree is quality of parenting related to child resilience in families with a child with serious emotional problems?

6. How do social support, family well being, and quality of parenting proportionately contribute to child resilience in families with a child with serious emotional problems?

The anticipated outcome of the study is a set of empirically developed scales that can be used in the assessment of child resilience in families with a child with serious emotional problems.

Analytic Plan for Dissertation

As noted above, the preliminary analyses indicated that the Bronx dataset is a reasonable dataset to address the purpose of the dissertation, the development of an empirical set of indicators for the independent constructs of social support, family well being, and quality of parenting in a model of child resilience in families with a child with serious emotional disturbance. The analytic plan consists of three primary activities using the Bronx dataset: conceptual mapping, scale development, and structural equation modeling.

Another activity related to method was to request an ethics review by the Interdisciplinary Committee on Ethics in Human Research at Memorial University. As a preliminary step, a letter was requested and received from the Principal Investigator of the study, "Outcomes of Three Children's Psychiatric Emergency Programs" granting permission to use the de-identified dataset to conduct a secondary analysis of the study data. An application for ethics review was submitted; the decision of the Interdisciplinary Committee on Ethics in Human Research was that the study did not involve any direct use of human

participants, and was not subject to review by a Research Ethics Board. Appendix B includes a copy of the letter from the committee.

Conceptual Mapping

The first activity of the method, conceptual mapping, is the refinement of the set of indicators from the Bronx dataset that will be used to represent the theoretical constructs of social support, family well being, and quality of parenting. Although the instruments used in the Bronx study are standardized scales with good psychometric properties, a key operational requirement of the study is that new scales can be developed that are conceptually driven and more closely represent the constructs of social support, family well being, and quality of parenting. In addition, standardized scales often are not "standard" for ethnically diverse populations, such as this sample. Rather than conducting a review at the level of instruments or subscales, the review will be at the item level. Using as the selection criteria the conceptual framework and definitions developed in Chapter 2, an item-by-item review of all instruments from the Bronx study will identify any items that fit within the semantic fields of the independent constructs (social support, family well being, and quality of parenting). The purpose of the conceptual mapping is to identify, from a theory-based perspective, which items are appropriate to use to represent the predictor variables. This activity will produce a set of items for each independent construct, using representative items from the Bronx study.

The following decision rules guide the conceptual mapping activity. First, the item review is limited to the instruments administered at enrollment into the Bronx study. Previous use of the Bronx dataset indicated that missing data was less problematic at intake than at the two follow-up data collection points (discharge from program and six months post-discharge). Second, the decision was made to be inclusive rather than exclusive in item selection because subsequent scale development activities would eliminate any items that do not adequately represent the construct.

The final decision rule is that two instruments, the Piers-Harris Children's Self-Concept Scale and the Child Behavior Checklist, will not be included in the conceptual mapping because these instruments are used in this study to represent the dependent construct, child resilience. In addition, any other items reviewed in the mapping activity that relate primarily to the dependent construct, child resilience, are not included. There are several reasons for keeping the dependent construct fixed in this study. First, the focus of the study is to empirically validate the hypothesized model of the relationships of the independent constructs to the dependent construct. A related purpose is to estimate the degree to which the various independent constructs affect the dependent construct. Manipulation of both the dependent construct as well as the independent constructs may maximize the possibility of making the data fit the proposed conceptual model as opposed to the intent of the dissertation, which is to examine the validity of the model. Second, the independent constructs are not

well measured through the instruments in the Bronx dataset; the question is whether measures can be developed that better represent these constructs. The purpose is to optimize the construction of the independent constructs while holding constant the measures of the dependent construct. Finally, well-established measures of the two domains of child resilience (child behavior and child self-esteem) already exist in the Bronx dataset. As was indicated by the preliminary factor analyses summarized earlier, two well-defined factors emerged that represent child resilience. One factor, identified as resilience-child self-esteem, consists of the total scale and subscales of the Piers-Harris Children's Self-Concept Scale. The second factor, categorized as resilience-child behavior, includes the three subscales of the Child Behavior Checklist. These factors support the argument that the dependent construct should remain intact. While it may be appropriate in future studies to determine whether better measures of child resilience can be developed, that question is not addressed in this study.

Scale Development

The second major activity is a series of statistical analyses that will result in a set of subscales and total scale for each predictor construct that are derived from both theory and scientific analysis.

Descriptive statistics (i.e., means, standard deviations, standard errors and skewness) and the theoretical and actual ranges of scores will be examined to ensure that values are in the legitimate range, to determine the degree of variability in each item, and to review the level of missing data. Regarding

whether values are in the legitimate range, the minimum and maximum values will be examined to ensure that values were in the appropriate range. If a value is out of range, the cases with those values will be re-coded to missing. Variability is important for two reasons. First, the purpose of science is to study subjects that differ with respect to a particular attribute and to explain the variation through scientific investigation (Nunnally, 1978). Second, when conducting correlational-based analyses, restricting the range of any variable (i.e., low variability) lowers or attenuates the correlation. When the range is restricted, it is difficult to determine whether the low correlation is due to a lack of variability in the item or to a lack of relationship among the variables (Thorne & Giesen, 2000). The standard used regarding item variability is to eliminate any items with zero variability. A second standard used in this analysis is that skewness of more than twice its standard error represents some departure from symmetry (Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975). When highly asymmetrical items are identified, they will be retained for future analyses under the assumption of inclusiveness previously discussed and because the items may be eliminated during subsequent steps in the scale development process. Third, the decision rule for missing values is that no more than .30 values should be missing. Efforts will be made to find the missing cases in other Bronx data files; if the data cannot be found, the item will be deleted. The final step before proceeding to correlational analyses is to standardize the items. In this study the items are from a variety of measures that employ different response options. Therefore the

items lack a consistent response metric and are difficult to directly compare. *Z* scores summarize in standard deviation units, how far a raw score is from the mean (Thorne & Giesen, 2000). The solution is to standardize the items into *z* scores to permit more direct comparisons.

Correlational analyses will be used to determine the degree of relationships among items within each independent construct. As noted by Gay (1985), there is no hard and fast rule about how high a correlation coefficient needs to be; the interpretation is related to how the correlation is going to be used. For example, the standard used to estimate the reliability of an instrument is higher than the criterion to examine relationships among variables. The standard used to interpret these relationships is that moderate correlations (.25 to .7) should be present most of the time because the items within a domain should be similar (i.e., measure the same construct) but also make a unique contribution to the measurement of the construct. Pearson product-moment correlations will be conducted with each set of items derived from the conceptual mapping activity (i.e., 51 items representing the construct of social support, 63 items representing family well being, and 37 items representing quality of parenting). The correlations also will be reviewed to determine whether the scoring of items is in the same direction. The standard used is that an item should have mostly positive correlations with other items in the same construct. If not, the item will be re-coded so that a higher score represents more of the same trait than a lower score.

In the next step of the scale development process, factor analysis will be used to empirically examine how the items within each construct fit together. The objective is to reduce the set of items to a smaller number of hypothetical uni-dimensional components (i.e., subscales) under the assumption that the observed correlations are due to some underlying common factors. Principal components analysis (PCA) was selected because it produces linear combinations of observed variables, with the first principal component accounting for the largest amount of variance, the second component accounting for the second largest, etc. The rotated factor pattern matrices will be used for interpretation because they are orthogonal (i.e., independent) and represent each item's unique relationship to the factor, minus the association among factors. The standards used to interpret the PCA and to select the most parsimonious solution will be: eigenvalues greater than one (Kaiser, 1960; Kim & Mueller, 1978), visual inspection of scree plot (Cattell, 1966), factor loadings of .45 or greater, and conceptual interpretability. Regarding the cutoff for the factor loading, Dunteman (1989) suggests a cutoff value between .40 and .50. Finally, a qualitative review of subscales will be conducted using the construct definitions developed in Chapter Two.

Cronbach's alpha will be computed for each subscale to assess the acceptability of the scales' internal consistency. Alpha coefficients will be estimated with various items included or omitted if their PCA loadings approximate .45. The criterion used is to develop a scale that maximizes alpha.

However, in cases where the deletion of an item results in minimal increase in alpha, the item will be retained if the item has conceptual significance. The rationale for the decision to be inclusive rather than parsimonious is to capture as much data as possible regarding each independent construct for the structural equation modeling analyses.

The next activity is to select a method for dealing with missing data. The problem with missing data is that most standard statistical methods assume that all information is available for each variable included in the analyses. The first response to the missing data is that only instruments administered at Time 1 (enrollment in the intervention) be used for the data analysis. There are two reasons for this decision. First, use of Time 1 data only strengthens our ability to test the conceptual model (see Figure 2.1) because it eliminates the confounding factor of the intervention. Second, this decision will reduce the amount of missing data because a higher proportion of data was collected at Time 1 than at Time 2 (discharge from the intervention) or Time 3 (six months post discharge).

A number of methods are available for dealing with missing data problems. One solution, listwise deletion, excludes from the dataset any subjects with missing information. The disadvantage of listwise deletion is that the end result can be the elimination of a large proportion of subjects from the original sample. A second method, pairwise deletion, computes the means, standard deviations, and correlation matrix using the data that is available. Pairwise deletion is not recommended if the assumption of missing completely at random

(i.e., the probability of missing data on a variable is unrelated to either the value of that variable or to the values of any other variables in the dataset) cannot be met. This assumption cannot be met for the selected items from the Bronx dataset.

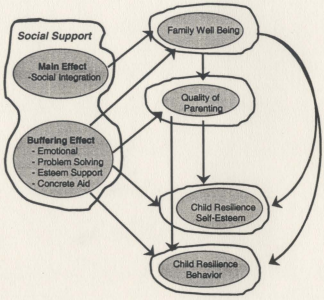
Imputation, another method for dealing with missing data, substitutes a reasonable estimate (imputation) for each missing value, thus making the dataset complete (Allison, 2001). The decision rule is to use the imputation method of mean substitution, a method that substitutes the mean of all related items on which data is available for that individual case. The predicted values are substituted for the missing values. The disadvantage of using imputed data is that it produces biased estimates, underestimating standard errors and overestimating test statistics (Allison, 2001). Given this disadvantage and the low level of missing data for the items used, the previous steps of scale development used only the existing data. Before the examination of the interscale correlations for each construct, mean substitution will be used to handle the missing data. The standard is to substitute the mean of other items within the same subscale for that individual, if 75% of the values for that individual are present. The rationale for the decision to use items within the same subscale is to use the most homogenous set of items available.

Finally, interscale correlations for each construct will be examined to assess the relative independence of the subscales. For this analysis, subscale scores will be generated by adding the *z* scores of items within a subscale and

re-standardizing the subscale scores by conversion to *z* scores. The standard is that interscale correlations should be moderate (.25 to .7) but significant because each subscale should make a unique but meaningful contribution to the meaning of the construct.

Based on these analyses, the research questions related to the model presented in Figure 3.1 will be examined for this dissertation. The items that represent parental personal or environmental risk factors, such as family income, marital status, race/ethnicity, and safety of the family's housing, will not be included in these analyses. Although these items are depicted in the conceptual model (Figure 2.1) that represents the overall belief structure and are considered predictors of resilience, they are not the focus of this study because the sample size (n = 222) restricts the number of variables that can be examined.

Figure 3.1
Components of Conceptual Model Examined in Dissertation



To answer the first 5 research questions, the standardized scales of social support will be correlated with the other two predictor indicators of interest (i.e., family well being, and quality of parenting) as well as with the two outcome measures of child resilience (i.e., child self esteem and child behavior) to determine the extent to which these newly constructed scales of social support are both independent of the other predictors in the model while associated with child resilience. Both Pearson product-moment and Spearman's rank-order correlations will be run and the results of these analyses will be summarized by each specific research question.

Structural Equation Modeling

In order to answer the final research question, simultaneous equation modeling with latent variables will be used to estimate a series of structural equation models (SEM). Structural equation models consist of two parts: a measurement part that links observed variables to latent variables through factor analytic techniques, and a structural part that links the latent variables to one another through simultaneous equation models. One advantage of combining factor analysis with simultaneous equation modeling is a reduction in measurement error, leading to improved estimates in terms of bias and sampling variability (Kaplan, 2000). The models will be based on the predictive model for the relationships between the independent variables (social support, family well being, and quality of parenting) and the outcomes of child self-esteem and child behavior. The methodology of structural equation modeling is especially useful

when the question of interest includes both how well the predictor variables explain the outcome variable and which specific independent variables are important in the prediction model (Maruyama, 1998). Separate structural equation models will be analyzed for child self-esteem and child behavior because these constructs represent two distinct dimensions of child resilience. In addition, the small sample size limits the number of parameters that can be examined in each model.

First, a structural equation model will be developed and analyzed that corresponds to the predictive model (Figure 3.1) and uses observed variables for the predictor variables. In this model, simultaneous equation modeling will be used, with social support as the predictor variables for family well being, social support and family well being as predictors for quality of parenting, and quality of parenting and social support as predictors for child self-esteem.

In the development of the structural equation models, the following decision rules will be used. First, the following procedures will be used to deal with the problem of identification. The path coefficients between errors and variables will be set at one. Second, with unobserved variables, one path between the unobserved variable and the observed variables will be set at one. In addition, with all endogenous variables the mean of the error will be set at 0. Second, standardized parameter estimates will be used. Output will include maximum likelihood estimates, means and intercepts, and the indirect, direct, and total effects.

The second step will be to develop a structural equation model where the dependent variables are treated as unobserved or latent indicators for complex constructs. For this model, social support, family well being, and quality of parenting become unobserved or latent variables that are indirectly measured by their subscales developed earlier in the study. The use of latent variables permits the examination of the unreliability of the unobserved variables. Measurement error in predictor variables may lead to biased estimates of the squared multiple correlations and the regression weights. The subscale scores for each latent variable will be used as best estimates of the latent variables.

The likelihood ratio chi-square test will be the standard for determination of the acceptability of the fit of the models. This statistic tests the null hypothesis that the model fits the data. An anticipated problem regarding lack of good fit is related to the complexity of the model and the problem of identification. There are too few cases, and too many parameters to estimate when using the unobserved variables for this complex a model. To address the problem of poor fit, a third structural equation model will be analyzed with weighted observed variables used for the independent variables. In order to resolve the identification problem and still differentially weight the subscale scores for each predictor variable, the value of each predictor variable will be recomputed by multiplying each subscale score by its regression weight produced by the structural equation model with unobserved variables. The new subscales

will be added together and the new summed variable will be converted to a *z* score. The new variable will be used to represent the weighted observed variables for the predictor indicators in the final SEM model. Finally, the total effects, direct effects, and indirect effects will be compared for the models with observed variables and weighted observed variables. These steps of structural equation modeling will then be repeated with child behavior as the outcome variable.

The outcome of the structural equation modeling will be an understanding of the proportional contribution of the independent constructs to the prediction of child resilience in the areas of child behavior and self-esteem. The results will identify variables within the domains of social support, family well being, and quality of parenting that may be useful to assess and predict resilience in children with serious emotional problems.

CHAPTER FOUR

RESULTS

Chapter Two defined a set of constructs (social support, family well being, quality of parenting, and child resilience) and proposed a theoretical model of the relationships between these constructs (see Figure 2.1). Chapter Three proposed a method, a series of activities and procedures to address a set of research questions that examine the relationships of the independent constructs (social support, family well being, and quality of parenting) to the dependent construct, child resilience (see Figure 3.1). Chapter Three also demonstrated the feasibility of using data from the Bronx Children's Emergency Services Project to empirically test the relationships among the constructs. Chapter Four describes the results of three primary activities (i.e., conceptual mapping activity, scale development, and structural equation modeling) used to assess the validity of the proposed model.

Conceptual Mapping Activity

The purpose of the conceptual mapping activity was to identify the set of indicators from the Bronx dataset to be used in developing the scales to represent the independent constructs of social support, family well being, and quality of parenting. The conceptual framework and definitions developed in Chapter Two were used as the selection criteria for an item-by-item review of all data collection instruments used at intake in the Bronx study (see pp. 64-71 for description of instruments). The outcome of this activity is a theory-based set of

items that represent each predictor construct. The decision rules that guided the conceptual mapping activity are found in Chapter 3.

Method

Each of the individual items from the intake instruments from the Bronx study was placed on a separate piece of paper (n=199), and the name of the instrument was written on the back of each item. The purpose of this procedure was to facilitate a review of each item that was independent of the context of the instrument, including subscales, and to prepare for the sorting function. Two individuals who participated in the Bronx research study team independently reviewed each item and assigned it to one of the three predictor constructs or identified the item as not belonging to any of the three domains. The choices of the two reviewers were then compared. All items on which there was agreement regarding mapping were assigned to the selected construct.

Where there was disagreement among raters, consensus was reached regarding where to assign the item through discussion and a review of the conceptual framework in Chapter Two. As noted earlier, one question was whether to include items that focused on parental personal or environmental risk factors, such as family income, marital status, race/ethnicity, and safety of the family's housing. Although these items are depicted in the conceptual model (Figure 2.1) that represents the overall belief structure and are considered predictors of resilience, they are not the focus of this study (Figure 3.1) because the sample size (n = 222) restricts the number of variables that can be examined.

The decision was to eliminate any items representing parental personal or environmental risk factors.

A second question involved where to include items that related to parental involvement with school, such as "ability to know what your child is doing at school". Given the findings of the literature review, these items were mapped onto the domain of quality of parenting. A similar question was where to assign items that relate to development of child problem-solving skills, such as "in solving problems, the children's suggestions are followed." These items were included in the domain of family well being. The final question was whether to include items that related to child characteristics, such as severity of psychiatric diagnosis, and level of functioning. These items were excluded because they were considered to be more loosely associated with the dependent construct, child resilience.

If consensus was not reached regarding where to map an item, the item was not used. Finally, the items that had not been assigned to any construct were reviewed again to confirm that they did not belong to any of the independent constructs.

Outcomes of Conceptual Mapping Activity

Table 4.1 shows the results of the conceptual mapping. Of the 199 items reviewed, 172 items were selected by at least one rater and 151 items were assigned to the three constructs (51 items to the domain of social support, 63 items to family well being, and 37 items to quality of parenting). Agreement

among raters was relatively high for two constructs; social support (69%) and family well being (61%) and somewhat lower for the construct of quality of parenting (38%).

Table 4.1

Results of Conceptual Mapping Activity

Items	Selected By	Agreement		1 Rater Only		Final
Constructs	Either Rater	n	%	n	%	n
Social Support	59	41	69	18	31	51
Family Well Being	76	46	61	30	39	63
Quality of Parenting	47	18	38	29	62	37

The findings from the conceptual mapping are summarized below according to each of the three independent constructs. A brief description of the conceptual definition of the construct is provided, and the items are found on the tables in the Chapter (Tables 4.2, 4.6, and 4.10) that contain the descriptive statistics for items representing each construct. In addition, the lists of the items selected to represent the constructs are located in Appendices C, D, and E. Finally, Appendix F provides a list of the items that did not map on to any of the independent constructs.

Construct of Social Support

The semantic field of social support is described as including the concepts of assistance to another person in maintaining, undergoing or enduring;

preventing a person from giving way or falling back; strengthening the position of another person; and raising a person to a higher position. Second, social support theorists distinguish at least five dimensions of social support: emotional supports, social integration, esteem support, informational support, and tangible aid. Third, it is useful to view social support as transactional; that is, that the nature of the stressor, the personality characteristics of the recipient of social support, and the types and sources of social support available influence how social support functions and is perceived.

Studies of social support to families with a child with a disability help to identify what may be different or unique about social support in families with a child with a disability as compared to families without a child with a disability. First, families with a child with a disability need and make use of a broader range of coping resources, including social support. Second, these families need to pay more attention to resource maintenance because they tend to overuse and overwhelm their supports more than families without a child with a disability. Given the chronic and episodic nature of their child's disability, supportive resources need to be cultivated and sustained over an extended period of time. Third, studies indicate that social support in families with a child with a disability has a main effect on parental well being and on satisfaction with support. In addition, social support mediates parental stress through the paths of parents' perceptions of the difficulty of their child's behavior, perceptions of their parenting competence, and the degree of parents' protectiveness of their children.

Representative Items for Social Support

As noted in Table 4.1, the two raters identified 51 items from five measures as representing the construct of social support. These items are listed by source in Appendix C and on Table 4.2.

Construct of Family Well Being

The construct of family well being fits within the semantic field of subjective well being, which includes the two dimensions of positive and negative affect. Positive affect includes positive emotions such as joy and negative affect refers to negative emotions. Family well being also relates to quality of life, a person's assessment of how well his/her goals and needs are being met.

The domain of family well being includes the dimensions of the family's organizational structure, interpersonal relationships, parent psychological status, and parent self-efficacy. Family organizational structure refers to the family's cohesion, harmony, parental agreement regarding childcare, and the family's expressiveness and ways of handling conflict.

The area of interpersonal relationships includes both family relationships (previous or current partner, with other children, between other children, other children's behavior) and relationships with other family members and friends. In the area of interpersonal relationships, three factors (engagement, validation, and effective problem solving) are critical in the parent-child relationship. Engagement refers to the quality of parent's attachment and warmth towards the child. Validation is defined as "behavior likely to comfort children, increase their

sense of security, or communicate that they are valued and valuable" (Hann & Borek, 2001). Teaching problem solving and mediation skills to children is important for strengthening the child's social information processing skills (Patterson et al., 1989).

Parent psychological status refers to the parents' psychological adjustment and mental health status, including serious mental health problems as well as feelings of depression, tiredness, and worries versus feelings of joy and energy. Parent self-efficacy is defined as the parent's sense of competence in dealing with their child's problems.

Representative Items for Family Well Being

As shown in Table 4.1, 63 items were mapped onto the construct of family well being by the two reviewers. These items were from six measures and are listed in Appendix D and on Table 4.6.

Construct of Quality of Parenting

Key dimensions of the quality of parenting include parenting style, parent attitudes and active involvement, use of structure and discipline, and child characteristics and behavior.

Using Baumrind's typology of parenting styles (Baumrind, 1971), the authoritative parenting style includes the setting of clear expectations regarding child behavior, the enforcement of rules and standards, the use of open communication between parents and children, and the encouragement of the child's individuality. Findings from several studies indicate that an authoritative

parenting style is most likely to result in social and cognitive competence by the ages of 8 and 9.

In the area of parent attitudes and involvement, the youths' experience of degree of parent involvement in their schools predicted their own educational involvement. In one study, both the stress-resistant youth and their parents reported more positive parent attitudes, defined as caring feelings regarding the child and appreciation of the child's strengths, and higher parental involvement in activities with their children.

Another dimension of parenting quality, use of structure and discipline, has been examined in several research studies. Higher levels of structure had a significant overall effect on child self-regulation variables, including the child's self-report of control understanding. Their results indicated that behavioral control is a contributor to the youth's psychosocial maturity, and that psychological autonomy is both a correlate and an antecedent. In a review of longitudinal and treatment studies regarding conduct disorder, Reid (1993) emphasized the importance of effective discipline strategies and supervision in the prevention of conduct disorder.

A final dimension of quality of parenting is the contribution of child characteristics and behavior. A number of studies have demonstrated that a reciprocal relationship exists between parenting quality and the child's personality and behavior (Crockenberg, 1981; Crowley & Kazdin, 1998; Steinberg, 1989; Grolnick, 1989).

Representative Items for Quality of Parenting

A total of 37 items from four measures were mapped onto the construct of quality of parenting by the two raters. The level of initial agreement between the raters was substantially lower for this construct (38%) relative to the other constructs (see Table 4.1). The lower level of rater agreement raises the issue of construct validity and potential problems with either specificity of the construct definition and/or a lack of fit of the items with the construct. If the items are not good indicators of the construct, there may be problems with factoring of the items and lower levels of internal consistency of the subscales. The specific items for quality of parenting are listed by measure in Appendix E and in Table 4.2.

Scale Development

The purpose of the conceptual mapping activity was to construct a theory-based set of items to represent each of the three independent constructs (i.e., social support, family well being, quality of parenting). The second step was an empirical analysis of the conceptually developed item sets. A series of statistical analyses were conducted to examine the degree of variability in the data, the relationships of items within each construct and an empirical analysis of how the items within each construct cluster together. The outcome of this activity was a set of subscales and total scale representing each predictor construct that is derived from both theory and scientific analysis. A description of the method and standards used for scale development are found in Chapter 3.

Construction of the Dataset

First, the 151 items assigned to one of the three distinct theoretical constructs through the concept mapping exercise were selected as the variables for further analysis. Second, the cases to retain in the dataset for analysis were identified. Two types of cases from the Bronx study were eliminated: early termination and boosters. Early terminations (n=46) include families who were referred to an intervention but declined services, families who refused to consent to participate in the research study, families whose child was hospitalized or placed in another out-of-home placement, families who moved, and families whose child ran away. These cases were eliminated because the families are likely to be qualitatively different from those who were enrolled and completed the intervention and, more importantly for this study, there was a substantial amount of missing or incomplete data on these families. Boosters (n=13) were the second type of case eliminated from the analysis. Boosters are families who were readmitted to one of the interventions during the course of the research study. The data associated with these families' second admission to the program were omitted from analysis in order to preserve independence of observations. Only data from the initial enrollment in a program were used for booster families. These inclusionary and exclusionary decisions resulted in a dataset containing 222 children and families.

The elimination of cases from the analysis raises the question of whether the youth who have been removed are qualitatively different from those retained

for subsequent analysis. To address this issue, the individuals retained were compared with those who were eliminated on a number of demographic and clinical indicators. There were no significant differences between youth retained and those removed on gender, race, or age although the youth eliminated from the analysis tended to be slightly older (13.0 versus 12.2 years of age, respectively). On the clinical indicators examined, there were no differences between groups regarding number of previous psychiatric hospitalizations or whether the youth had received mental health treatment in the past. However, the youth removed from the analysis were significantly more likely to be identified as seriously emotionally disturbed (76%) compared to youth retained in the analysis (51%) $\chi 2$ (1, n = 238) = 4.211, $p < .05$. In addition, the youth eliminated from the analysis were identified as having significantly more functional impairments (mean = 1.94, s.d. = 1.25) than those youth retained for analysis (mean = 1.29, s.d. = 1.17) t (236) = 2.191, $p < .05$). The differences regarding the number of functional impairments and the percentage identified as seriously emotionally disturbed are not surprising, given that many of the youth who were eliminated either needed to be readmitted to an intervention or were hospitalized or placed in another out-of-home setting.

Scale Development - Social Support

Descriptive Statistics

The first analysis (see Table 4.2) examined the amount of missing data among the 51 items representing the construct of social support. The amount of

missing data generally was low (i.e., less than 5%) with the exception of one item from the Parent Self-Efficacy Scale with 5% of the data missing, one item from the Emergency Services Assessment with 5.9% missing data, and one item from the Client Description Form Supplement (number of children in family identified as at risk of placement) with 15.3% of the data missing. These three items were retained in the dataset with the assumption that they may be removed during subsequent analyses.

Descriptive statistics were examined on the responses to the 51 items representing social support. As shown in the skewness statistics presented in Table 4.2, item responses were not all normally distributed. Using the standard that any skewness more than twice its standard error represents some departure from symmetry, 13 items were identified with significant departure from symmetry. Four of the 13 items are yes/no questions having little variability in their responses. As noted earlier, items not meeting this standard were retained in the dataset at this point with the assumption that they may be eliminated during future analyses.

Table 4.2

Descriptive Statistics for Social Support Items (n=51)

Items	Potential Range	Actual Range	Mean	Standard Deviation	Skew-ness	Standard Error	Missing Data (%)
Looked after family member while away	1-5	1-5	1.95	1.241	1.213	.165	2.3
Was there physically in stressful situation	1-5	1-5	2.45	1.484	.612	.166	3.2
Provided a place to get away for a while	1-5	1-5	1.48	.918	2.256	.165	2.3

Items	Potential Range	Actual Range	Mean	Standard Deviation	Skew-ness	Standard Error	Missing Data (%)
Watched after possessions while away	1-5	1-5	1.69	1.221	1.783	.166	2.7
Told about similar situations	1-5	1-5	1.74	1.053	1.685	.165	2.3
Did activity together to get mind off things	1-5	1-5	2.04	1.154	1.058	.165	2.3
Talked about your interests	1-5	1-5	2.18	1.257	.935	.165	2.3
Let you know you did something well	1-5	1-5	2.49	1.353	.615	.166	3.2
Went w/you to someone who could take action	1-5	1-5	1.54	.852	2.081	.166	3.2
Told you you're ok just the way you are	1-5	1-5	2.44	1.431	.601	.167	4.1
Would keep things private	1-5	1-5	2.42	1.425	.641	.166	3.2
Assisted in setting goal for yourself	1-5	1-5	1.90	1.238	1.338	.165	2.3
Made clear what's expected of you	1-5	1-5	1.88	1.277	1.430	.166	2.7
Expressed esteem re your personal quality	1-5	1-5	2.47	1.333	.578	.165	2.3
Gave information on how to do something	1-5	1-5	2.24	1.183	.978	.166	2.7
Suggested action you should take	1-5	1-5	2.25	1.180	.923	.166	3.2
Gave you over $25.00	1-5	1-5	1.53	.899	2.125	.166	2.7
Comforted you physically	1-5	1-5	2.47	1.430	.504	.166	2.7
Gave info to help you understand a situation	1-5	1-5	2.13	1.203	1.039	.165	2.3
Provided transportation	1-5	1-5	1.92	1.172	1.365	.165	2.3
Checked back to see if you followed advice	1-5	1-5	1.95	1.182	1.229	.165	2.3
Gave you under $25.00	1-5	1-5	1.50	.826	2.030	.166	3.6
Helped you understand why you didn't do something well	1-5	1-5	1.75	1.131	1.586	.166	2.7
Listened to you talk about your private feelings	1-5	1-5	2.62	1.373	.391	.165	2.3
Loaned/gave physical object (not $)	1-5	1-5	1.63	.977	1.837	.166	3.2
Agreed what you wanted to do was right	1-5	1-5	2.47	1.257	.577	.166	2.7
Made situation clearer/easier to understand	1-5	1-5	2.33	1.221	.604	.165	2.3
Told how s/he felt in similar situation	1-5	1-5	2.04	1.167	1.089	.166	2.7

Items	Potential Range	Actual Range	Mean	Standard Deviation	Skew-ness	Standard Error	Missing Data (%)
Lets you know s/he will always be around if needed	1-5	1-5	2.98	1.480	.135	.165	2.3
Expressed interest/concern in your well being	1-5	1-5	3.0	1.442	.083	.165	2.3
Told you s/he feels very close to you	1-5	1-5	2.89	1.480	.178	.166	3.6
Told you who to see for assistance	1-5	1-5	2.03	1.174	1.127	.166	3.2
Told you what to expect in situation about to happen	1-5	1-5	1.95	1.165	1.103	.166	3.2
Loaned over $25.00	1-5	1-5	1.39	.774	2.518	.167	4.1
Taught you how to do something	1-5	1-5	1.87	1.202	1.436	.166	3.2
Gave feedback without saying good or bad	1-5	1-5	2.10	1.278	1.059	.166	2.7
Joked/kidded to cheer you up	1-5	1-5	3.02	1.396	-.011	.166	3.2
Provided a place to stay	1-5	1-5	1.45	.982	2.653	.167	4.1
Pitched in to help get something done	1-5	1-5	2.29	1.286	.790	.166	3.2
Loaned under $25.00	1-5	1-5	1.39	.715	2.309	.166	3.6
Talk with friends and family about child	1-4	1-4	2.89	1.099	.547	.166	3.6
Ask friends/family for help with child if needed	1-4	1-4	2.43	1.129	.044	.167	5.0
Family's supportive in difficult times	1-5	1-5	3.63	1.350	-.541	.164	.9
Ability to transport child for services	0-1	0-1	.73	.443	-1.061	.164	.5
Family use informal community supports	1-2	1-2	1.65	.477	-.645	.167	4.1
Is transportation available to family	1-2	1-2	1.03	.164	5.830	.164	1.4
Is transportation that is available safe	1-2	1-2	1.07	.248	3.540	.166	3.6
Can family afford available transportation	1-2	1-2	1.14	.345	2.126	.164	1.4
Family has unmet transportation needs	1-2	1-2	1.91	.281	-2.972	.168	5.9
Number of adults residing in household	0-?	1-13	1.86	1.352	4.928	.167	4.5
Number of children identified at risk of placement	0-?	0-8	.87	.856	3.820	.177	15.3

Standardization and Re-coding of Items

As discussed previously, one issue in the scale development for this study is that the items are from a variety of measures that employ a variety of different response options. To address this issue, the 51 items were standardized into *z* scores to permit more direct comparison. A related issue in this study is that the different measures use different scoring directions (i.e., high vs. low). The solution for this issue was to re-code items so that a higher score represents more of the same trait than a lower score.

Correlational Analyses

In this phase of scale development, Pearson product-moment correlations were performed to assess the degree of relationship among items within the construct of social support. The standard used in examining the results was that the correlation coefficients should typically range from .25 to .70. An examination of the correlations among these 51 items indicated that 46% of the correlations fell within this range and 4 of the 1275 correlations (.3%)were greater than .70. Another 30% of the correlations were statistically significant although they did not meet this standard. The items that did not meet the standard were kept in the dataset with the assumption that these items may be eliminated during later analyses.

Factor Analysis

Principal components analysis (PCA) was then conducted to empirically evaluate the number of factors underlying the construct of social support. As

previously noted, the objective of this analysis was to reduce the set of 51 items to a smaller number of underlying components that represent unidimensional sub classifications or facets (i.e., subscales) of the construct of social support. Factors were extracted by PCA before the solution was rotated, and the 12 factors with eigenvalues larger than one were selected (Kim & Mueller, 1978) for further analyses. The scree plot, constructed with the components on the x-axis and the percentage of variance accounted for by each component on the y-axis, was also examined. A visual review of the scree plot suggested a solution between three and five factors would be appropriate to explain this construct. Separate PCAs were then run to examine the three, four and five factors solutions. Each solution was analyzed using as the bases for interpretation a .45 criterion to determine if an item loaded on a factor as well as the conceptual definition of the construct of social support. The four-component PCA solution was judged as the most parsimonious solution, providing the best empirical and theoretical fit with the original conceptual definition of social support discussed in Chapter 2. This solution accounts for 44% of the total variance in the original correlation matrix (See Table 4.3).

Table 4.3

Rotated Component Pattern Matrix for Social Support

Factor	1	2	3	4
Item				
Looked after family member while away		.397		
Was there physically in stressful situation		.482		

Item	Factor 1	2	3	4
Provided a place to get away for a while		*.428*		
Watched after possessions while away		.513		
Told about similar situations	.620			
Did activity together to get mind off things	.495			
Talked about your interests	.708			
Let you know you did something well	.667			
Went w/you to someone who could take action	*.446*			
Told you you're ok just the way you are	.462			
Would keep things private	.545			
Assisted in setting goal for yourself	.736			
Made clear what's expected of you	.670			
Expressed esteem re your personal quality	.630			
Gave information on how to do something	.745			
Suggested action you should take	.693			
Gave you over $25.00		.679		
Comforted you physically	*.437*		*.406*	
Gave info to help you understand a situation	.781			
Provided transportation		.590		
Checked back to see if you followed advice	.761			
Gave you under $25.00		.587		
Helped you understand why you didn't do something well	.741			
Listened to you talk about your private feelings	.542		.453	

Item \ Factor	1	2	3	4
Loaned/gave physical object (not $)		.573		
Agreed what you wanted to do was right	.621			
Made situation clearer/easier to understand	.746			
Told how s/he felt in similar situation	.699			
Lets you know s/he will always be around if needed	.487		.692	
Expressed interest/concern in your well being			.705	
Told you s/he feels very close to you	.511		.651	
Told you who to see for assistance	.549			
Told you what to expect in situation about to happen	.659			
Loaned over $25.00		.709		
Taught you how to do something	.668			
Gave feedback without saying good or bad	.667			
Joked/kidded to cheer you up	.549		.509	
Provided a place to stay				
Pitched in to help get something done	.481			
Loaned under $25.00		.714		
Talk with friends and family about child			*.409*	
Ask friends/family for help with child if needed				
Family's supportive in difficult times				
Ability to transport child for services				.500
Family use informal community supports *				
Is transportation available to family *				*.361*

Item	Factor 1	2	3	4
Is transportation that is available safe *				.531
Can family afford available transportation *				.735
Family has unmet transportation needs				.523
Number of adults residing in household				
Number of children identified at risk of placement *				.506

* = Recoded Items
Italics = Items that approximate factor loading criterion of .45

An examination of the component patterns (Table 4.3) revealed two issues. First, a large number of items (28) load onto the first factor; and second, some items loaded onto more than one factor using the .45 criterion. The large number of items on Factor 1 may be related to the use of the Inventory of Socially Supportive Behaviors, an instrument designed to measure social support. An item loading onto more than one factor indicates that the item is factorially complex. The first component accounted for 24% of the total variance and was labeled Personal Social Support as the items loading on this component generally referred to supporting the parent as a person rather than support directed towards particular problems. The second component, labeled Concrete Assistance, consisted of 10 items and represented 9.2% of the total variance. This component included self-reports on such items as "was there with you (physically) in a stressful situation", "watched after possessions while away", "provided a place to get away for a while", and four items related to giving and/or loaning money. Emotional Support was the title given to the third component,

which accounted for 6.7% of the total variance and included seven items. This component included items that refer to receiving emotional support, such as "expressed interest and concern for you", "comforted you physically", and "ability to talk with family and friends about your child". Access to Transportation was the fourth component, which consisted of six items and accounted for 4.5% of the variance. This factor included items regarding the family's ability to use transportation that is safe and affordable. This factor also included the item, "number of children in family at risk of placement". It is unclear why this item loaded onto the 4th factor; possibly because the use of public transportation is much more challenging when the family includes children at risk of residential placement.

Table 4.3 also includes in italics items that approximated the factor-loading criterion of .45. These items were kept in the dataset at this point to determine whether their inclusion increases the internal consistency of the subscales. Five items did not load onto any factor using the .45 criterion and were removed from the dataset. A re-examination of the descriptive statistics and correlational analyses was conducted after the final item selection. Two of the five deleted items were items with a significant departure from symmetry. In addition, 34% of the correlations that did not meet the desired standard (i.e., between .25 and .70) were correlations associated with these five items. The items eliminated were:

1. Ask friends and family for help with your child if you need it.
2. Family members are supportive of each other in difficult times.
3. Number of adults residing in household.
4. Provided you with a place to stay.
5. Does the family use informal community supports.

Internal Consistency of Subscales

The internal consistency of the four social support subscales as well as the total scale was examined using Cronbach's alpha. Given the high number of items that loaded onto Factor 1, when items loaded onto Factor 1 and another factor, the decision rule was to delete the item from Factor 1 with the assumption that items could be removed from this subscale without much loss of information. To maximize the subscale reliabilities, various analyses were conducted that included or excluded certain items, including some that approximated but did not meet the .45 or higher factor loading criterion. For example, the four items that loaded onto Factors 1 and 3 were kept on the 3rd subscale. As noted earlier, in the review of alphas when deleting certain items, in situations where the increase in alpha was minimal the decision was to retain the item if it was theoretically important. As previously noted, the decision to be inclusive was to capture as much data as possible regarding each independent construct. After item selection for each subscale, the total scale for social support consisted of 46 items.

As shown in Table 4.4, the alpha coefficients for the completed subscales range from a high of .95 for Personal Social Support to a low of .60 for Access to Transportation. The lower alpha (.60) for the Access to Transportation subscale may be related to the small number of items (6) because coefficient alpha depends on both the correlation among the items and the number of items (Nunnally, 1978). Alpha coefficient for the entire scale is .93.

Table 4.4

Internal Consistency of Social Support Subscales

Subscale	Cases n	Items n	Alpha Coefficient
Personal Social Support	201	23	.95
Concrete Assistance	206	10	.82
Emotional Support	210	7	.86
Access to Transportation	171	6	.60
Total Scale	147	46	.93

Finally, the intercorrelations among the four social support subscales were examined as well as their association with the total score to assess the relative independence of the subscales. Scale subscores were calculated using an additive model (i.e., the sum of the *z* scores of the items comprising that scale). The scores were re-standardized by converting them into *z* scores and the imputation method of mean substitution was used to handle missing data. The

expectation was that the interscale correlations should be modest but significant because each subscale should make a unique yet meaningful contribution to the understanding of the construct. As shown in Table 4.5, the correlations for the first three subscales range from .44 to .74 and all correlations were statistically significant. The fourth subscale, Access to Transportation, had dramatically lower correlations (.00 to .01) that were not significantly associated with the other subscales. The lower correlations for the Access to Transportation subscale are likely the result of the limited amount of variability in the item distributions. As would be expected, the correlations of the total scale with the subscales are significant and higher than the correlations among the subscales because the total scale includes items from all the subscales.

Table 4.5

Interscale Correlations of Social Support Subscales

Social Support Subscale	1	2	3	4
1. Personal Social Support				
2. Concrete Assistance	.51			
3. Emotional Support	.74	.44		
4. Access to Transportation	.01	.01	.00	
Total Scale	.94	.67	.81	.15

Bold = correlations significant at $p < .05$

The total scale correlations with the first three subscales were statistically significant and ranged from .94 with the first subscale (Personal Social Support)

to .67 with the second subscale (Concrete Assistance). As was noted above, the correlation of the total scale with the fourth subscale (Access to Transportation) was lower (.15) and not statistically significant. Despite the low correlations of the fourth subscale, the scale was retained for two reasons. First, the subscale may contribute important information regarding one aspect of social support and, second, the subscale does not appear to negatively affect the internal consistency of the total scale.

Scale Development - Family Well Being

Descriptive Statistics

The first analysis (see Table 4.6) examined the amount of missing data among the 63 items representing the construct of family well being. The amount of missing data was low with the exception of three items from the Emergency Services Assessment regarding a second caregiver in the home. Two of these items focused on problem behaviors of the father figure (i.e. mental illness and spouse abuse); data were missing for 55% of the cases. The third item, referring to the relationship between the primary caregiver and spouse or significant other, had missing data for 30.2% of the cases. As noted earlier, fathers were seldom present in the home in the Bronx study. These three items were eliminated from further analyses. Once these items were removed, the amount of missing data for the 60 items was 4.5% or less, with the exception of one item from the Parent Self-Efficacy Scale which had 5.4% of the data missing.

Table 4.6

Descriptive Statistics for Family Well Being Items (n=60)

Items	Potential Range	Actual Range	Mean	Standard Deviation	Skew-ness	Standard Error	Missing Data (%)
Easy to express opinion in family	1-5	1-5	3.24	1.350	-.174	.164	.5
Easier to discuss problems w/non-family	1-5	1-5	3.03	1.313	.010	.164	.9
Each member has input in decisions	1-5	1-5	2.97	1.438	-.018	.164	.9
Family gathers together in same room	1-5	1-5	3.23	1.454	-.205	.164	1.4
Family does things together	1-5	1-5	3.25	1.296	-.265	.165	1.8
Members discuss problems & feel good about solutions	1-5	1-5	2.81	1.281	.077	.164	.9
Everyone goes own way	1-5	1-5	2.60	1.469	.425	.165	1.8
Household responsibilities shift person to person	1-5	1-5	2.60	1.481	.290	.165	1.8
Members know each other's close friends	1-5	1-5	3.45	1.440	-.512	.164	1.4
Members consult other members on decisions	1-5	1-5	2.70	1.347	.203	.164	1.4
Members say what they want	1-5	1-5	3.60	1.265	-.490	.164	.9
Difficulty thinking of things to do as family	1-5	1-5	2.47	1.345	.474	.164	1.4
In solving problems, children's suggestions followed	1-5	1-5	2.60	1.118	.269	.165	2.3
Members feel close to each other	1-5	1-5	3.81	1.287	-.752	.164	1.4
Members feel closer to non-family	1-5	1-5	2.56	1.424	.354	.164	.9
Members go along with family decisions	1-5	1-5	3.37	1.237	-.351	.164	.9
In family, everyone shares responsibilities	1-5	1-5	3.19	1.462	-.213	.164	1.4
Like to spend free time with each other	1-5	1-5	3.07	1.273	-.111	.164	.9
In family, difficult to get a rule changed	1-5	1-5	2.65	1.306	.376	.164	1.4
Members avoid each other at home	1-5	1-5	2.11	1.243	.784	.164	1.4
Members compromise when problems arise	1-5	1-5	3.24	1.215	-.155	.164	1.4
Approve of each other's friends	1-5	1-5	2.98	1.232	.005	.165	2.3
Members afraid to say what's on their minds	1-5	1-5	2.24	1.274	.631	.166	3.2

Items	Potential Range	Actual Range	Mean	Standard Deviation	Skew-ness	Standard Error	Missing Data (%)
Pair up rather than do things as total family	1-5	1-5	2.39	1.239	.428	.166	3.6
Share interests and hobbies with each other	1-5	1-5	2.95	1.347	-.041	.164	1.4
Explain to others the kind of help child needs	1-4	1-4	2.94	1.122	-.604	.166	3.6
Cope with frustrations about child's problems	1-4	1-4	2.42	1.002	-.063	.166	3.6
Identify services that may help child	1-4	1-4	2.98	1.053	-.614	.167	4.1
Meet child's medical needs	1-4	1-4	3.67	.749	-2.418	.166	3.6
Provide safe home environment for child	1-4	1-4	3.69	.685	-2.334	.166	3.6
Advocate for your child's rights	1-4	1-4	3.49	.806	-1.506	.167	4.5
Participate in school activities with child	1-4	1-4	2.68	1.137	-.226	.168	5.4
Deal with stress at home	1-4	1-4	2.67	1.035	-.286	.167	4.1
Understand your child's problems	1-4	1-4	2.91	.958	-.501	.166	3.6
Provide food, clothing, and shelter	1-4	1-4	3.78	.645	-3.287	.167	4.1
Take child someplace just for fun	1-4	1-4	3.17	1.020	-.920	.167	4.1
Take care of your child	1-4	1-4	3.76	.642	-2.972	.167	4.1
Mother-mental illness	1-2	1-2	1.91	.280	-2.989	.172	3.2
Mother-spouse abuse, current	1-2	1-2	1.98	.122	-8.020	.172	4.1
Relationships among family members	1-4	1-4	2.56	.763	.063	.163	.0
Cooperation of primary caregiver in treatment process	1-4	1-4	2.17	.747	.245	.164	.5
Ability to implement treatment recommendations	0-1	0-1	.57	.496	-.285	.164	.5
Willingness to call upon team members	0-1	0-1	.76	.425	-1.257	.164	.5
Ability to recognize need for respite	0-1	0-1	.38	.487	.497	.164	.5
Family plans leisure activities together	1-2	1-2	1.37	.484	.535	.165	1.8
Family spends quality time together	1-2	1-2	1.38	.486	.515	.165	1.8
Plenty of time/attention for everyone in family	1-5	1-5	3.55	1.265	-.484	.165	2.3
Blow off steam without upsetting others	1-5	1-5	2.68	1.347	.236	.164	1.4
Money/paying bills talked about openly	1-5	1-5	3.12	1.575	-.156	.165	2.3
Family members become openly angry	1-5	1-5	3.36	1.239	-.364	.164	1.4

Items	Potential Range	Actual Range	Mean	Standard Deviation	Skew-ness	Standard Error	Missing Data (%)
Get so angry they throw things	1-5	1-5	2.39	1.372	.487	.164	.9
Family members hit each other	1-5	1-5	2.35	1.310	.476	.164	1.4
Hard to find things when needed in house	1-5	1-5	2.49	1.359	.445	.164	1.4
Family members are on time	1-5	1-5	3.03	1.308	-.047	.164	.9
Family members change minds often	1-5	1-5	2.82	1.139	.112	.165	2.3
Family members are ordered around	1-5	1-5	2.45	1.322	.372	.165	2.3
Caregiver resources: Basic needs	0-30	0-30	2.93	5.940	2.025	.163	.0
Child: Thinking	0-30	0-30	9.19	9.547	.512	.164	.5
Take/use other's things without permission	1-5	1-5	2.41	1.413	.432	.164	.9
Family members listen without interrupting	1-5	1-5	2.63	1.266	.201	.164	1.4

Next, descriptive statistics were examined on the responses to the 60 family well being items. As shown by the skewness statistics presented in Table 4.6, some item responses deviated from normalcy. Using the standard that any skewness more than twice its standard error represents some departure from symmetry, 7 items were identified with significant departure from symmetry. These items were retained in the analyses at this point under the assumption that they may be eliminated in subsequent steps in scale development. As discussed earlier, the 60 items were standardized into *z* scores to produce a consistent metric and permit more direct comparison across items.

Correlational Analyses

This phase of scale development examined the Pearson product-moment correlations to assess the degree of relationship among items within the construct of family well being. As previously discussed, the standard used in

examining the results was that the correlation coefficients should typically range from .25 to .70. Examination of the correlations among the 60 items indicated that none of the correlations were greater than .70 and 16% of the correlations were within the .25 to .70 range. Another 28% of the correlations were statistically significant although they did not meet the standard. The items that did not meet the standard were kept in the analyses at this point with the understanding that they may be eliminated during subsequent analyses.

Factor Analysis

Principal components analysis (PCA) was then conducted to empirically evaluate the number of factors underlying the construct of family well being. As previously discussed, the goal of analysis was to reduce the set of 60 items to a smaller number of underlying components that represent unidimensional subscales of family well being. Factors were extracted by PCA before the solution was rotated, and the 18 factors with eigenvalues larger than one were selected (Kim & Mueller, 1978) for further examination. A visual inspection of the scree plot suggested a solution between four and seven factors would be appropriate to explain this construct. Separate PCAs were then run to examine the various solutions. The 7-factor solution failed to converge at 25, 30, or 35 iterations. The other solutions were interpreted using a .45 criterion to determine if an item loaded on a factor. In addition, a qualitative review of the items determined whether they fit the conceptual definition of the construct of family well being. The five-component PCA solution accounted for 35% of the total

variance and was judged as the most parsimonious solution, providing the best empirical and theoretical fit with the original conceptual definition of family well being summarized in Chapter 2. The results of the PCA are presented in Table 4.7.

Table 4.7

Rotated Component Pattern Matrix for Family Well Being

Item \ Factor	1	2	3	4	5
Easy to express opinion in family *	.490				
Easier to discuss problems w/non-family					.508
Each member has input in decisions	.546				
Family gathers together in same room	.606				
Family does things together	.698				
Members discuss problems & feel good about solutions	.694				
Everyone goes own way *	.465				
Household responsibilities shift person to person	.504				
Members know each other's close friends	.586				
Members consult other members on decisions	.453				
Members say what they want	*.422*				
Difficulty thinking of things to do as family *					*.391*
In solving problems, children's suggestions followed	*.420*				
Members feel close to each other	.693				
Members feel closer to non-family *					.619
Members go along with family decisions	.617				

Item	Factor 1	2	3	4	5
In family, everyone shares responsibilities	.650				
Like to spend free time with each other	.684				
In family, difficult to get a rule changed *					
Members avoid each other at home *			*.373*		
Members compromise when problems arise	.649				
Approve of each other's friends	.548				
Members afraid to say what's on their minds*					.557
Pair up rather than do things as total family*			*.375*		
Share interests and hobbies with each other	.689				
Explain to others the kind of help child needs		*.436*			
Cope with frustrations about child's problems		.578			
Identify services that may help child		.650			
Meet child's medical needs		.634			
Provide safe home environment for child		.498			
Advocate for your child's rights		.618			
Participate in school activities with child		*.367*			
Deal with stress at home		.570			
Understand your child's problems		.511			
Provide food, clothing, and shelter				.452	
Take child someplace just for fun		.515			
Take care of your child		*.395*			
Mother-mental illness *					

Item	Factor 1	2	3	4	5
Mother-spouse abuse, current *					
Relationships among family members *				.660	
Cooperation of primary caregiver in treatment process *				.652	
Ability to implement treatment recommendations					
Willingness to call upon team members				*.425*	
Ability to recognize need for respite					
Family plans leisure activities together *				.644	
Family spends quality time together *				.629	
Plenty of time/attention for everyone in family	.627				
Blow off steam without upsetting others	*.411*		*.397*		
Money/paying bills talked about openly	.510				
Family members become openly angry *			.483		
Get so angry they throw things *			.662		
Family members hit each other *			.672		
Hard to find things when needed in house *			.525		
Family members are on time					*.324*
Family members change minds often *					*.394*
Family members are ordered around			*.422*		
Caregiver resources: Basic needs *				*.407*	
Child: Thinking *					
Take/use other's things without permission *			.569		
Family members listen without interrupting			*.414*		

* = Recoded Items

Italics = Items that approximate factor loading criterion of .45

The first component consisted of 18 items, was labeled Family Organizational Structure, and accounted for 13.6% of the total variance. The items loading on this component included family members input in decision-making, members share household responsibilities, and members go along with family decisions. The second component, characterized as Parent Self-Efficacy, represented 6.3% of the total variance and contained 8 items. This component included parent self-reports on such items as ability to identify services that may help child, deal with stress at home, meet child's medical needs, and advocate for child's rights. Family Relationships-Respect for Boundaries was the title given to the third component (5 items) that accounted for 5.8% of the total variance. This component includes items that refer to boundaries within a family, such as "family members become so angry they throw things", "members hit each other", "throw things", and "use others' things without permission". Provider Perceptions of Family Well Being (5 items) was the fourth component and accounted for 5.1% of the variance. This factor consisted of items focused on providers' views of relationships among family members, whether family plans leisure activities together, and whether family spends quality time together. The fifth component was limited to three items and named Locus of Support. This component accounted for 4.5% of the variance and included these items: "easier to discuss problems with people outside the family", "members feel closer to those outside the family", and "family members are afraid to say what's on their minds".

Table 4.7 includes in italics items that approximated the desired factor-loading criterion of .45 but did not reach it. These items were retained at this point to determine whether their inclusion increases the internal consistency of the subscales. Six items did not load onto any factor using this standard and were dropped from further analyses. A re-examination of the descriptive and correlational analyses was conducted after these items were eliminated. Two of the six deleted items had significant departures from symmetry. In addition, 24% of the correlations that did not fall between .25 and .70 were associated with these six items. The items eliminated after the PCA analysis were:

1. It is difficult to get a rule changed in our family.
2. Mother figure: Presence of mental illness.
3. Mother figure: Spouse abuse (current).
4. Ability to implement treatment recommendations.
5. Ability to recognize need for respite.
6. CAFAS Thinking (child).

Internal Consistency of Subscales

The internal consistency of the five family well being subscales as well as the total scale was examined using Cronbach's alpha. To maximize the subscale reliabilities, various analyses were conducted that included or excluded items that approximated but did not meet the desired factor loading of .45. As discussed earlier, in the review of alphas when deleting certain items, in situations where the gain was minimal, the decision was to retain the item

whenever the item fit conceptually. After item selection for each subscale, the total scale for family well being consisted of 54 items.

As shown in Table 4.8, the alpha coefficients for the final subscales range from a high of .90 for Family Organizational Structure to a low of .67 for Locus of Support. The alpha coefficient for the entire 54-item scale was .88.

Table 4.8

Internal Consistency of Family Well Being Subscales

Subscale	Cases n	Items n	Alpha Coefficient
Family Organizational Structure	196	21	.90
Parent Self-Efficacy	207	11	.77
Family Relationships-Respect for Boundaries	208	9	.70
Provider Perceptions-Family Well Being	205	7	.70
Locus of Support	211	6	.67
Total Scale	167	54	.88

Finally, the intercorrelations among the five family well being subscales were examined as well as their association with the total score to assess the relative independence of the subscales. Scale subscores were calculated by summing the *z* scores of the items comprising that scale. The scale subscores were then re-standardized by converting them into *z* scores. The imputation method of mean substitution was used to handle missing data. As noted earlier,

the expectation was that the interscale correlations should be modest but significant because each subscale should make a unique yet meaningful contribution to the understanding of the construct. As shown in Table 4.9, the correlations for the first two subscales (Family Organizational Structure and Parent Self-Efficacy) range from .10 to .50. All correlations were statistically significant with the exception of the correlation with the subscale Provider Perceptions-Family Well Being. The third subscale, Family Relationships-Respect for Boundaries has correlations ranging from .47 to -.07. The correlations for the fourth subscale, Provider Perceptions-Family Well Being, range from .31 to .05. The fifth subscale, Locus of Support, has correlations ranging from .50 to .05.

As would be expected, the correlations of the total scale with the subscales are significant and higher than the correlations among the subscales because the total scale includes items from all the subscales. The total scale correlations with the subscales were statistically significant and ranged from .85 with the first subscale (Family Organizational Structure) to .42 with the fourth subscale (Provider Perceptions-Family Well Being).

Table 4.9

Interscale Correlations of Family Well Being Subscales

Family Well Being Subscale	1	2	3	4	5
1. Family Organizational Structure					
2. Parent Self-Efficacy	.21				

Family Well Being Subscale	1	2	3	4	5
3. Family Relationships-Respect for Boundaries	.31	-.07			
4. Provider Perceptions-Family Well Being	.10	.31	.16		
5. Locus of Support	.50	.07	.47	.05	
Total Scale	.85	.45	.55	.42	.64

Bold = correlations significant at $p < .05$

Scale Development - Quality of Parenting

Descriptive Statistics

First, the amount of missing data was examined and is summarized in Table 4.10. The amount of missing data for the 37 items was generally low (i.e., 5% or less) with the exception of 6 items from the Emergency Services Assessment regarding problem behaviors of the "father figure in the home". For these items, data was missing for 55% of the cases because fathers were not present in most of the families. Despite the recognition of the theoretical importance of fathers' problems in quality of parenting, the reality for the majority of families in the Bronx study was that fathers were not present in the home. Therefore, these 6 items were eliminated from the dataset. Once these items were eliminated, the percentage of missing data for the 31 remaining items ranged from 0% to 5%.

Table 4.10

Descriptive Statistics for Quality of Parenting Items (n=31)

Items	Potential Range	Actual Range	Mean	Standard Deviation	Skew-ness	Standard Error	Missing Data (%)
Control child's behavior	1-4	1-4	2.45	1.034	-.061	.167	4.1
Know what child is doing at school	1-4	1-4	2.82	1.110	-.408	.167	5.0
Get child to act the way you want	1-4	1-4	2.39	1.016	.018	.167	4.1
Praise child for good behavior	1-4	1-4	3.36	.875	-1.160	.167	5.0
Control anger with child	1-4	1-4	2.96	.907	-.573	.167	5.0
Discipline child when necessary	1-4	1-4	3.20	.893	-.814	.167	4.5
Discuss child with school personnel	1-4	1-4	3.39	.902	-1.367	.168	5.4
Help child with homework	1-4	1-4	3.04	1.043	-.682	.167	4.5
Set limits with child	1-4	1-4	3.03	.958	-.611	.167	4.5
Say no to child	1-4	1-4	3.08	.930	-.599	.167	4.5
Spend time with child	1-4	1-4	3.40	.914	-1.401	.167	4.1
Kids have say in their discipline	1-5	1-5	2.50	1.345	.478	.165	1.8
Hard to know what the rules are	1-5	1-5	2.38	1.496	.632	.165	2.3
Discipline is fair	1-5	1-5	3.69	1.285	-.645	.165	1.8
Family tries new ways to deal with problems	1-5	1-5	3.34	1.172	-.297	.164	1.4
Parent recognition of problems	1-3	1-3	1.82	.610	.118	.165	.0
Parent motivation to solve problems	1-5	1-5	2.08	.888	.827	.164	.0
Parent acceptance of children	1-4	1-4	1.84	.824	.755	.165	.0
Parent approval of children	1-4	1-4	2.17	.707	.302	.166	.0
Parent consistency of discipline	1-4	1-4	2.36	.946	.706	.168	.5
Parent teaching of children	1-4	1-4	2.38	.890	.100	.169	.9
Mother-Physical abuse	1-2	1-2	1.97	.177	-5.338	.178	2.7
Mother-Neglect of child	1-2	1-2	1.95	.208	-4.423	.172	3.6
Mother-Sexual abuse	1-2	2-2	2.00	.000	-	-	2.7
Mother-Emotional abuse	1-2	1-2	1.91	.280	-2.997	.183	3.2
Mother-Serious alcohol abuse	1-2	2-2	2.00	.000	-	-	3.6
Mother-Serious drug abuse	1-2	1-2	1.99	.121	-8.082	.171	4.1

Items	Potential Range	Actual Range	Mean	Standard Deviation	Skew-ness	Standard Error	Missing Data (%)
Ability to understand child's problem	0-1	0-1	.61	.490	-.438	.164	.5
Ability to provide structure	0-1	0-1	.59	.493	-.372	.164	.9
Ability to identify appropriate discipline	0-1	0-1	.33	.472	.719	.164	.9
Ability to make child feel loved and wanted	0-1	0-1	.66	.476	-.669	.163	.0

Descriptive statistics were examined on the responses to the 31 items representing quality of parenting. As shown in Table 4.10, item responses were not all normally distributed. Two of the mother problem items (i.e., sexual abuse of child, and serious alcohol abuse) with extreme departure from symmetry and no variability were eliminated from further analyses. Seven additional items with significant departure from symmetry were retained at this point with the assumption that they may be eliminated during factor analysis and examination of internal consistency of the subscales. The remaining 29 items were standardized into *z* scores to permit more direct comparison across items. As noted earlier, items were reverse coded so that a higher score represented more of the same trait than a lower score.

Correlational Analyses

In this phase of scale development, correlational analyses were performed to assess the degree of relationship among items within the construct of quality of parenting. As noted earlier, the standard used was that the correlation coefficients should range from .25 to .70 most of the time. An examination of the results of the Pearson product-moment correlations among these 29 items

indicated that 14% of the items were within the range of .25 to .70 meeting the pre-established standard. Another 26% of the items were statistically significant although they did not meet the standard. None of the correlations were greater than .70. The items that did not meet the standard were kept in the dataset with the assumption that these items may be eliminated during later analyses.

Factor Analysis

Principal components analysis (PCA) was then conducted to empirically determine the number of factors underlying the construct of quality of parenting. Again, the objective of the analysis was to reduce the set of 29 items to a smaller number of independent subscales related to the construct of quality of parenting. A visual inspection of the scree plot suggested a solution between five and seven factors would be appropriate to explain this construct. Separate PCAs were then rerun to examine the five, six, and seven factors solutions. An item was considered to represent a factor if its loading was greater than or equal to .45 and the item was consistent with the conceptual definition of the construct of quality of parenting described in Chapter Two. The five-component PCA solution was judged as the most parsimonious solution, providing the best empirical and theoretical fit with the definition of quality of parenting. This solution accounted for 43% of the total variance in the original correlation matrix and is summarized in Table 4.11.

Table 4.11

Rotated Component Pattern Matrix for Quality of Parenting

Item	Factor 1	2	3	4	5
Control child's behavior		.517			
Know what child is doing at school					
Get child to act the way you want		.550			
Praise child for good behavior		*.420*		*.447*	
Control anger with child				.476	
Discipline child when necessary		.640			
Discuss child with school personnel					
Help child with homework					
Set limits with child		.691			
Say no to child		.559			
Spend time with child					.482
Kids have say in their discipline				*.445*	
Hard to know what the rules are *		.476			
Discipline is fair				.447	
Family tries new ways to deal with problems				.594	
Parent recognition of problems	.668				
Parent motivation to solve problems	.781				
Parent acceptance of children	.774				
Parent approval of children	.722				
Parent consistency of discipline	.516				

Item	Factor 1	2	3	4	5
Parent teaching of children	.570				
Mother-Physical abuse *					*.432*
Mother-Neglect of child *					.686
Mother-Emotional abuse *					
Mother-Serious drug abuse *					.555
Ability to understand child's problem			.628		
Ability to provide structure			.709		
Ability to identify appropriate discipline			.714		
Ability to make child feel loved and wanted			.572		

* = Recoded Items
Italics = Items that approximate factor loading criterion of .45

The first component consisted of six items and accounted for 12.2% of the total variance. This factor was labeled Clinician Perceptions of Parenting Capacity as the items loading on this component included those from the Parent-Child Relationship Scales such as parent recognition of problem and parent teaching/stimulation of child. The second component, labeled Parent Perceptions of Parent Ability to Provide Structure and Discipline represented 11.4% of the total variance and contained seven items. This component included parent self-reports on issues such as controlling child's behavior, saying no to child, and disciplining child when necessary. Clinician Perceptions of Parent Ability to Provide Structure and Discipline was the label given to the third component, consisting of four items and accounting for 7.6% of the total variance. This

component included items that represent clinicians' views of the parent ability to provide structure for their child's daily needs, identify appropriate punishments, and understand the child's disability. Family Participation and Flexibility, the fourth component, represented 5.5% of the variance and contained five items. This component included items concerning the family's ability to try new ways to deal with problems and parent's ability to spend time with child. The final component, Parent Problems, consisted of four items, accounted for 5.5% of the variance, and included items such as the mother's neglect of child and mother's serious substance abuse.

Internal Consistency of Subscales

The internal consistency of each of the Quality of Parenting subscales as well as the total scale was examined using Cronbach's alpha. As was the strategy in developing the other subscales, various analyses were conducted that included or excluded items approximating but not meeting the desired factor loading of .45. Similarly, in situations where the increase in alpha was minimal, it was decided to include an item whenever it had a good conceptual fit. This process resulted in a scale of 22 items.

The alpha coefficients for the five subscales ranged from a high of .82 for the Clinician Perceptions of Parenting Capacity to a low of .46 for Parent Problems and the alpha coefficient for the entire scale was .77. Upon further inspection a decision was made to eliminate the 5th subscale, Parent Problems. First, the scale consisted of only two items and the items were highly skewed

with little variability. Second, the items within a subscale should measure the same construct and these items do not; one item refers to the mother's serious drug use and the other item refers to child neglect by the mother. Third, data for this subscale is available for a smaller number of cases (170) than the other subscales. Finally, these items are related to parental personal risk factors and one decision rule was to exclude items regarding personal and environmental risk factors. As noted earlier, environmental and personal risk factors are recognized as important contributory factors in the overall conceptual model (Figure 2.1) but are not the focus of this study (Figure 3.1). As shown in Table 4.12, the alpha coefficient for the entire scale was .80 after the Parent Problems subscale was eliminated.

Table 4.12

Internal Consistency of Quality of Parenting Subscales

Subscale	Cases n	Items n	Alpha Coefficient
Clinician Perceptions of Parenting Capacity	203	6	.82
Parent Perceptions of Parent Ability to Provide Structure and Discipline	204	5	.68
Clinician Perceptions of Parent Ability to Provide Structure and Discipline	220	4	.67
Parent Perceptions of Family Flexibility and Participation	206	5	.50

Subscale	Cases n	Items n	Alpha Coefficient
Total Scale	178	20	.80

A re-examination of the descriptive statistics and correlational analyses was conducted after the final item selection. Four of the nine items had significant departure from symmetry. In addition, 69% of the correlations that failed to meet the .25 to .70 standard were associated with these nine items. These items are:

1. Parent's ability to know what child is doing at school.
2. Parent's ability to control anger with child.
3. Parent's ability to discuss child with school personnel.
4. Parent's ability to help child with homework.
5. It is hard to know what the rules are in our family.
6. Mother-physical abuse of child.
7. Mother-emotional abuse of child.
8. Mother-child neglect.
9. Mother-serious drug use.

Finally, the interscale correlations among the four quality of parenting subscales were examined as well as their association with the total score. Scale scores were derived by summing the *z* scores for the items comprising that scale. Subscale scores were then re-standardized by converting them into *z*

scores and mean substitution was used to deal with missing data. As has been stated earlier, the expectation was that the interscale correlations should have modest correlations with each other. As shown in Table 4.13, the correlations for the four subscales range from .15 to .37 and all correlations were statistically significant. As was noted with the previous constructs, the correlations of the total scale with the subscales were significantly higher than the correlations among the subscales. The correlations of the total scale with the first four subscales were statistically significant and ranged from .71 with the first subscale (Clinician Perceptions of Parenting Capacity) to .59 with the fourth subscale (Parent Perceptions of Family Flexibility and Participation).

Table 4.13

Interscale Correlations of Quality of Parenting Subscales

Quality of Parenting Subscale	1	2	3	4
1. Clinician Perceptions of Parenting Capacity				
2. Parent Perceptions of Parent Ability to Provide Structure and Discipline	.23			
3. Clinician Perceptions of Parent Ability to Provide Structure and Discipline	.37	.15		
4. Parent Perceptions of Family Flexibility and Participation	.23	.33	.19	
Total Scale	.71	.66	.62	.59

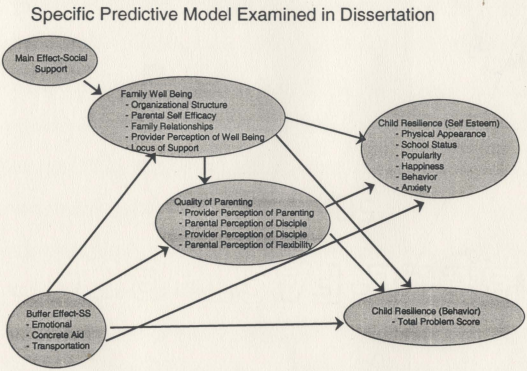
Bold = correlations significant at $p < .05$

Upon completion of scale development for the independent constructs, Figure 3.1 was revised to include the subscales for each construct (see Figure 4.1 below). In addition, upon review of the conceptual framework (Chapter 2) and examination of the subscales for social support, social support was separated into two constructs, social support-main effect and social support-buffer effect. The main effect model, represented by Social Support Subscale 1, refers to social support that comes from being embedded in social relationships and social integration (Cohen, Gottlieb, & Underwood, 2000). The main effect model proposes that support coming from social relationships has a beneficial effect on well being whether or not the person is under stress. In Figure 4.1, social support is hypothesized to have a main effect on family well being. No association is proposed between social support-main effect and quality of parenting because the effects of social relationships have been found to be limited to general well being (Cohen & Wills, 1985). The buffering effect of social support, indicated by Social Support Subscales 2, 3, and 4, is defined as functional processes and activities that buffer the parents from stressors. The buffering model hypothesizes that social support acts as a stress mediator and protects individuals from the potentially harmful effects of stressful events. At least two junctures have been identified where social support can have a buffering effect: between stressor and distress, and between stress and health or mental health outcome. Various reviewers have concluded that social embeddedness (i.e., the main effect) and the buffering effect of social support

appear to be different processes. The consistent finding of a buffering effect in stressful situations indicates that certain support processes may be activated

Figure 4.1

Specific Predictive Model Examined in Dissertation



only in the presence of stress. In Figure 4.1, the premise is that social support has a buffering effect on family well being, quality of parenting, and child resilience. The specific predictive model does not include an examination of an interaction effect, referred to in the social support literature as a moderating effect.

Relationships Between Predictor and Outcome Variables

Upon completion of the scale development analyses, the standardized scales of social support (i.e., main effect-social support and buffer effect-social

support) were correlated with the other two predictor indicators of interest (i.e., family well being, and quality of parenting) as well as with the two outcome measures of child resilience (i.e., child self esteem and child behavior) to determine the extent to which these newly constructed scales of social support were both independent of the other predictors in the model while associated with child resilience. Both Pearson product-moment and Spearman's rank-order correlations were run and the results are indicated in Table 4.14. Given the small magnitude of differences in the results, only the Pearson's correlations are discussed. The results of each of these analyses are summarized by the specific research question below.

To what degree is social support (both main effect and buffer effect) related to family well being in families with a child with serious emotional problems?

The Pearson product-moment and Spearman rank-order correlations among the main effect and buffer effect-social support indicators and family well being are presented in Table 4.14. As might be expected, both types of social support were significantly ($p < .01$) and positively associated with family well being ($r = .215$ and $r = .233$, respectively). These relationships suggest that families with greater levels of social supports also have higher levels of family well being. While statistically significant, these relationships indicate that about 4.5% to 5.5% of the variance in family well being is accounted for by these two social support indicators.

Table 4.14

Correlations among Predictors and Outcomes

			SS-M	SS-B	FWB	QP	Child Behavior
PREDICTORS	Buffer effect-social support	r	.668**				
		ρ	.671**				
		N	212				
	Family Well Being	r	.215**	.233**			
		ρ	.213**	.203**			
		N	217	212			
	Quality of Parenting	r	.111	.201**	.559**		
		ρ	.108	.176*	.523**		
		N	214	209	214		
OUTCOMES	Child Behavior	r	.220**	.182**	-.089	-.067	
		ρ	.212**	.159*	-.081	-.038	
		N	216	211	218	213	
	Child Self Esteem	r	-.082	-.052	.163*	.085	-.230**
		ρ	-.055	-.034	.163	.067	-.192**
		N	211	206	211	208	211

To what degree is social support (both main effect and buffer effect) related to quality of parenting in families with a child with serious emotional problems?

Table 4.14 contains the Pearson and Spearman correlations between the two social support indicators and quality of parenting. Main effect-social support was not found to be significantly associated with quality of parenting ($r = .111$) although the direction of the correlation was in the anticipated direction (i.e., more social support and improved quality of parenting). In contrast, the buffer effect-social support scale was significantly ($p < .01$) and positively associated with quality of parenting ($r = .201$) indicating that parents with greater levels of the buffering effect also had higher quality parenting skills. The magnitude of this

relationship indicates that about 4% of the variance in quality of parenting is accounted for by buffer effect-social support.

To what degree is social support (both main effect and buffer effect) related to child resilience in families with a child with serious emotional problems?

Table 4.14 summarizes the Pearson product-moment and Spearman rank-order correlations among the two social support indicators and the two child resilience measures. Somewhat surprisingly, main effect-social support was significantly ($p < .01$) and positively associated with child problem behaviors ($r = .220$) indicating that higher levels of familial social support were associated with more problematic behaviors in their children. A similar significant association was observed between the buffer effect-social support indicator and child problem behaviors ($r = .182$). Again, families with higher levels of social support were associated with more problematic child behaviors. These relationships, while statistically significant, indicate that about 3% to 5% of the variance in child behavior was accounted for by either of the two social support indicators.

Main effect-social support was not significantly related to child self esteem ($r = -.082$). Similarly, buffer effect-social support and child self esteem also were not significantly related ($r = -.052$). In both cases, the direction of these relationships is suggestive that higher levels of social supports are associated with poorer self-esteem among children; however, the magnitude of these relationships is extremely small.

To what degree is family well being related to child resilience in families with a child with serious emotional problems?

Table 4.14 contains the Pearson and Spearman correlations between family well being and child resilience as measured by child behavior and child self esteem. Family well being was not found to be significantly related to child behavior ($r = -.089$) although the negative relationship was in the anticipated direction (i.e., poorer family well being and more behavior problems). In contrast, family well being was significantly ($p < .05$) and positively associated with child self esteem ($r = .163$) indicating that families with higher levels of well being had children with improved self esteem. The magnitude of this relationship indicates that about 3.5% of the variance in child self esteem is accounted for by family well being.

To what degree is quality of parenting related to child resilience in families with a child with serious emotional problems?

Table 4.14 also summarizes both the Pearson and Spearman correlations between quality of parenting and the two measures of child resilience (i.e., child behaviors and child self esteem). Quality of parenting was not significantly related to either child behavior ($r = -.067$) or to child self esteem ($r = .085$). In both cases, however, the relationships were in the anticipated direction (i.e., better quality of parenting with fewer behavior problems and better quality of parenting with increased self esteem).

How do social support, family well being, and quality of parenting proportionately contribute to child resilience in families with a child with serious emotional problems?

The results for this question are presented separately for the outcomes of child self esteem and child behavior. In order to answer the final research question, the method of structural equation modeling (SEM) was used to estimate models for the relationships between the independent variables (social support-both main effect and buffer effect), family well being, and quality of parenting) and the outcomes of child self-esteem and child behavior. First, a simple regression model was analyzed with child self esteem predicted as a linear combination of the predictor variables. Second, a structural analysis was conducted that corresponds to the study's predictive model (Figure 4.1) and uses observed variables. The third step was to treat the independent variables (social support, family well being, and quality of parenting) as unobserved or latent indicators for complex constructs. The subscale scores for each latent variable were used as best estimates of the latent variables. The final SEM model used weighted observed variables for the independent variables. Finally, the total effects, direct effects, and indirect effects are shown for the models with observed variables and weighted observed variables.

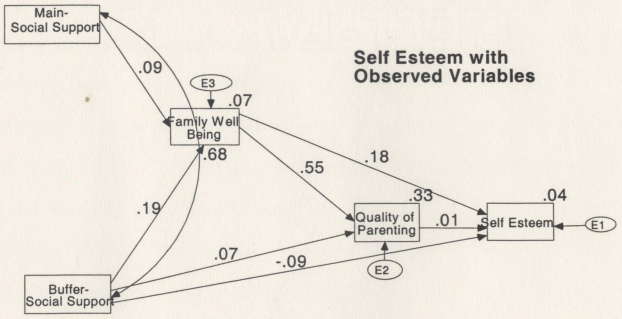
Child Self Esteem

As a first step, a simple regression model was developed where child self esteem was predicted as a linear combination of main effect-social support,

buffer effect-social support, family well being and quality of parenting. This model accounted for 4% of the variance in child self-esteem. A second structural model was diagrammed that conformed to Figure 4.1, the predictive model for the dissertation. In this model (Figure 4.2), simultaneous equation modeling was used, with main effect-social support and buffer effect-social support as the predictor variables for family well being, family well being and buffer effect-social support as predictors for quality of parenting, and quality of parenting, family well being, and buffer effect-social support as predictors for child self-esteem.

Figure 4.2

Structural Model for Self-Esteem with Observed Variables



In this analysis, 7% of the variance for family well being was explained by the two types of social support, and 33% of the variance for quality of parenting was explained by social support (main effect-social support and buffer effect-social support) and family well being. As shown on Figure 4.2, the model accounts for 4% of the variance in child self-esteem X^2 (14) = 17.81, p = .003. Both family well being and quality of parenting are positively correlated with self esteem (r = .18 and r = .01 respectively). In contrast, buffer effect-social support was negatively associated with child self esteem (r = -.09). As shown on Table 4.15 below, the indirect effects of buffer effect-social support with child esteem as the outcome variable are positive.

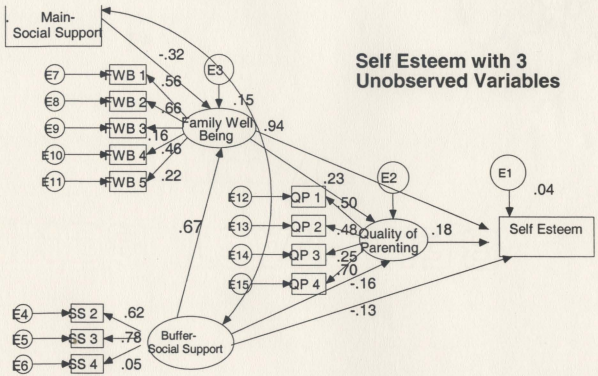
As the next step, the SEM shown in Figure 4.2 was repeated with unobserved variables, in order to examine the unreliability of the unobserved variables. Measurement error in predictor variables may lead to biased estimates of the squared multiple correlations and the regression weights. For this model (Figure 4.3), buffer effect-social support, family well being, and quality of parenting became unobserved or latent variables that were indirectly measured by their subscales developed earlier in the study. Main effect-social support remained an observed variable because only one indicator, Social Support Subscale 1, represents the main effect.

The amount of variance in child self esteem explained by the Figure 4.3 SEM model (4%) does not change when using unobserved variables for the dependent constructs. However, in this model the correlation of quality of

parenting to child self esteem increases from .01 to .18, and the correlation of family well being to self esteem increases from .18 to .94. Buffer effect-social support continues to have a small negative association with child self esteem.

Figure 4.3

Structural Model for Self Esteem with 3 Unobserved Variables

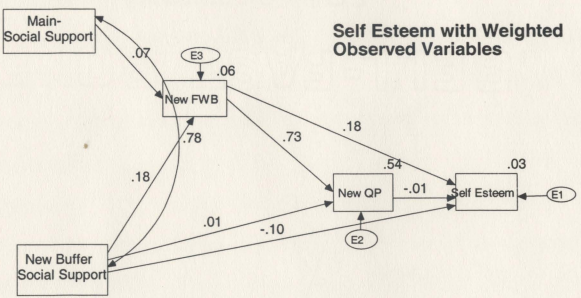


The likelihood ratio chi-square results for Figure 4.3 X^2 (77) = 337.08, p = .000 indicated that this model was not a good fit and that the results should be interpreted with caution. In this situation, the null hypothesis is that the model fits the data. If the chi-square is significant, it means that the data departs from the model, indicating poor fit. The reason for the lack of good fit is probably related to the complexity of the model and the related problem of identification. In structural equation modeling, identification refers to whether the parameters of the model

(i.e., the variances and covariances) can be expressed uniquely in terms of the covariance matrix (Kaplan, 2000). There are too few cases, and too many parameters to estimate for a model this complex when using three unobserved variables each represented by a number of subscales. Although the loadings are relatively low for some subscales, all subscales were retained because when these subscales were excluded, no substantive differences were observed in the results.

Figure 4.4

Structural Model for Self Esteem with Weighted Observed Variables



In order to resolve the identification problem and still differentially weight the subscale scores for each predictor variable, the value of each variable was recomputed by multiplying each subscale score by its regression weight from Figure 4.3. The new subscales were then added together and the new variable

was converted to a *z* score. Figure 4.4 shows the results of the model using the weighted observed variables.

The amount of variance in child self esteem explained by the Figure 4.4 SEM is slightly smaller (3%) than the previous models but the chi-square results indicate a much better model fit X^2 (2) = .92, p = .631. In this model, 6% of the variance in family well being is explained by the two social support variables, and 54% of the variance in quality of parenting is explained by the social support and family well being variables. Family well being is positively correlated (r = .18) with self esteem, and quality of parenting and buffer effect-social support are negatively correlated (r = -.01, -.10 respectively).

A comparison of the standardized direct, indirect, and total effects for buffer effect-social support, family well being, and quality of parenting for the models with unobserved variables and weighted unobserved variables is shown on Table 4.15.

Table 4.15

Standardized Direct, Indirect, and Total Effects with Child Self Esteem as Outcome Variable

Model	Effect	Buffer Effect-Social Support	Family Well Being	Quality of Parenting
4.2	Direct	-0.093	0.184	0.012
	Indirect	0.037	0.006	0.000
	Total	-0.055	0.190	0.012
4.4	Direct	-0.095	0.182	-0.008

Indirect	0.032	-0.005	0.000
Total	-0.064	0.176	-0.008

In contrast with the direct effects, the indirect effects of buffer effect-social support on the outcome variable of child self-esteem are positive for both models. The indirect effects illustrate the positive relationship of buffer effect-social support with both family well being and quality of parenting. The total effect of buffer effect-social support on child self esteem is less than 1% negative for either model.

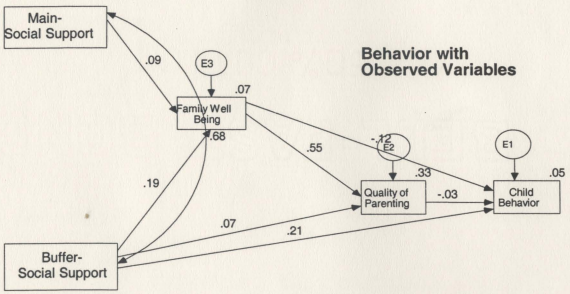
Child Behavior

A comparable simple linear regression was run with main effect-social support and buffer effect-social support as the predictor variables for family well being, family well being and buffer effect-social support as predictors for quality of parenting, and quality of parenting and buffer effect-social support as predictors for child behavior as the outcome variable X^2 (2) = 6.32, p = .042. Child behavior is represented by the Total Problem Score of the Child Behavior Checklist, and a higher score indicates more child problems. As anticipated, the relationships between the predictor variables (main effect-social support, buffer effect-social support, family well being, and quality of parenting) remained the same in Figure 4.5. Both family well being (r = -.12) and quality of parenting (r = -.03) were negatively correlated with child behavior, indicating that higher levels of family well being and parenting quality were associated with lower levels of

child problem behaviors. Buffer effect-social support was positively correlated with child behavior (r = .21), indicating that higher levels of buffer effect-social support are correlated with higher levels of child problem behaviors. The model explained 5% of the variance in child behavior.

Figure 4.5

Structural Model for Child Behavior with Observed Variables

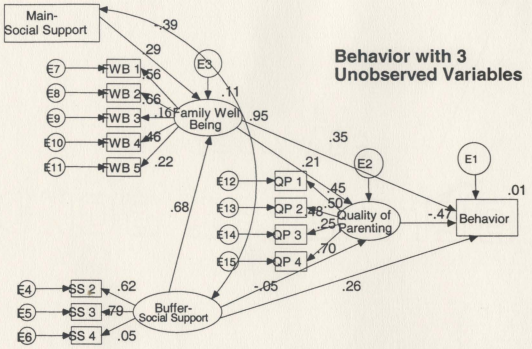


A second structural equation model was diagrammed with latent variables for buffer effect-social support, family well being, and quality of parenting. As shown in Figure 4.6, this model accounts for somewhat less (1%) of the variance in child behavior X^2 (76) = 398.63, p = .000. The primary change in this model is that family well being is positively associated with child behavior (r = .35) rather

than the negative correlation of the earlier model. As demonstrated by the chi-square results, this model is not a good fit and the results cannot be trusted.

Figure 4.6

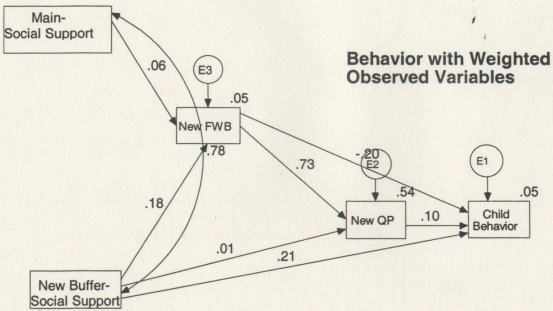
Structural Model for Child Behavior with 3 Unobserved Variables



In order to resolve the identification problem and still differentially weight the subscale scores for each predictor variable, the value of each variable was recomputed by multiplying each subscale score by its regression weight from Model 4.6, adding the new subscale scores together, and converting the new variable to a *z* score.

Figure 4.7

Structural Model for Behavior with Weighted Observed Variables



The amount of variance in child behavior explained by the Figure 4.7 model is the same as the model with observed variables (5%) and more than the model with unobserved variables but the chi-square results indicate a much better model fit X^2 (2) = 3.68, p = .159. In this model, 5% of the variance in family well being is explained by the 2 social support variables, and 54% of the variance in quality of parenting is explained by the social support and family well being variables.

A comparison of the standardized direct, indirect, and total effects for buffer effect-social support, family well being, and quality of parenting for the models with unobserved variables and weighted unobserved variables is shown on Table 4.16.

Table 4.16

Standardized Direct, Indirect, and Total Effects with Child Behavior as Outcome Variable

Model	Effect	Buffer Effect-Social Support	Family Well Being	Quality of Parenting
4.5	Direct	0.213	-0.124	-0.031
	Indirect	-0.029	-0.017	0.000
	Total	0.184	-0.141	-0.031
4.7	Direct	0.210	-0.198	0.105
	Indirect	-0.021	0.077	0.000
	Total	0.189	-0.121	0.105

As shown on Table 4.16, the indirect effects of buffer effect-social support on the outcome variable of child behavior are positive for both models and of the same magnitude as the indirect effects for child self-esteem (.03). The direct effects of process social support with child behavior as the outcome variable are the same for both models (-.21) and the total effects are similar (-.184, -189).

Summary

Chapter Four presented the results of three primary activities (i.e., conceptual mapping activity, scale development, and structural equation

modeling) used to assess the validity of the proposed model of the relationships between social support, family well being, quality of parenting, and child resilience. The conceptual mapping activity identified a theoretically based set of indicators from the Bronx dataset to be used in developing the scales to represent the independent constructs of social support, family well being, and quality of parenting. The second step was an empirical analysis of the conceptually developed item sets. A series of statistical analyses were conducted to examine the degree of variability in the data, the relationships of items within each construct and an empirical analysis of how the items within each construct cluster together. The outcome of this activity was a reasonable set of subscales and total scale representing each predictor construct that is derived from both theory and scientific analysis.

The final step of the method was to conduct a series of analyses to answer the study's research questions. To answer the first five research questions regarding the relationships between the predictor variables and the outcome variables, the standardized scales of social support (main effect-social support and buffer effect-social support) were correlated with the other two predictor indicators of interest (family well being, and quality of parenting) as well as with the two outcome measures of child resilience (child self esteem and child behavior). To answer the final research question, a series of structural equation models were developed to examine proportionately how much social support,

family well being, and quality of parenting contribute to child resilience in families with a child with serious emotional problems.

CHAPTER FIVE

INTERPRETATION, LIMITATIONS AND CONCLUSIONS

This study defined a set of constructs (social support, family well being, quality of parenting, and child resilience) and proposed a theoretical model of the relationships between these constructs (Figure 2.1). A method was proposed to address a set of research questions that examined the relationships among these constructs in families with a child with a serious emotional problem (Figure 3.1). A justification was developed for conducting a retrospective analysis of data from the Bronx Psychiatric Emergency Services study. A specific predictive model was developed for the study (Figure 4.1). Chapter Four described the results of three primary data analytic activities (i.e., conceptual mapping activity, scale development, and structural equation modeling) used to assess the validity of the predictive model. Chapter Five covers three topics: interpretation of the study findings, limitations related to methods and measurement tools, and implications and recommendations related to social work practice and social work research.

Interpretation of Findings

The research questions form the framework for the discussion and interpretation of the results presented in Chapter Four. In this section, findings about the structural equation models (SEM) refer to the two models for self esteem and child behavior with weighted observed variables because these models have the best fit. Overall, the reader should remember that the study

sample is 222 families with a child presenting at a psychiatric emergency service in the south Bronx. These typically single-parent families are ethnically limited to two racial groups (Hispanic and African-American), low-income, and have a child in acute psychiatric distress. Second, the data used in the study are cross-sectional because the data were collected at one point in time, admission to one of three in-home short-term crisis intervention programs.

To what degree is social support (both main effect and buffer effect) related to family well being in families with a child with serious emotional problems?

Overall, the relationships of the two social support indicators with family well being are in the predicted direction. The first social support indicator, main effect-social support, refers to the social support that comes from being embedded in a community and from social integration. Buffer effect-social support represents social support's functional processes and activities. The buffering model assumes that buffer effect-social support acts as a stress mediator and protects individuals from the potentially harmful effects of stressful events. Previous research indicates that main effect-social support (i.e. the main effect) and buffer effect-social support (i.e. the buffering effect) appear to be different processes (Cohen, Gottlieb, & Underwood, 2000; Cohen & Wills, 1985).

The findings of this study support previous research, and indicate that the differences between main effect and buffer effect social support are also present in families with a child with serious emotional problems. Empirically, these indicators operate as separate processes, both are associated with family well

being, and main effect-social support and buffer effect-social support each make a unique contribution to family well being. Using the Pearson product-moment correlations, main effect and buffer effect-social supports had a correlation of .67, indicating that about 44% of the meaning is shared, and that 56% of the variance is unique to each indicator. In addition, both indicators were significantly and positively associated with family well being at about the same level (r = .215 and r = .233, respectively).

Second, the amount of variance in family well being accounted for by social support is 6% with child self esteem as the outcome variable and 5% with child behavior as the outcome variable. The reliability of the three buffer effect-social support subscales ranged from .60 to .86, meaning that the most variance that could be explained by this indicator is about 64%. Buffer effect-social support and main effect-social support accounted for between 8% and 11% of the possible variance in family well being. In a discussion of measurement issues related to resilience, several authors note that effect sizes tend to be small (2% to 5%) especially when there is a buffering effect (Luthar & Cushing, 1999; Luthar, 2000). In addition, these findings are lower-bound estimates, due to the homogeneity of the sample population. Restriction of range in variability results in attenuation of correlations.

Third, in the SEM models with weighted observed variables, about two-thirds of the variance in family well being explained by the model is related to buffer effect-social support (r = .18). The protective role of social support with

family well being is consistent with previous findings that social support buffers individuals from the effects of stressful situations on well being (Belsky, 1984; Crnic, Greenberg, Ragozin, Robinson, & Basham, 1983; Dunkel-Schetter & Bennett, 1990; Vaux, 1988a) .

To what degree is social support (both main effect and buffer effect) related to quality of parenting in families with a child with serious emotional problems?

Both types of social support appear to be operating in a similar manner with quality of parenting. In the correlational analyses, both types of social support are positively associated with quality of parenting, and buffer effect-social support contributes about twice as much as main effect-social support to the variance in quality of parenting. Families with higher levels of social support had higher levels of parenting skills.

Structural equation modeling provided the opportunity to examine how the three independent variables of main effect-social support, buffer effect-social support, and family well being relate to quality of parenting. These findings are quite robust. Together, the indicators for main effect-social support, buffer effect-social support, and family well being account for 33% of the variance in quality of parenting in the models with observed variables, and for 54% of the variance in quality of parenting in the models with weighted observed variables. Clearly, for this sample of low-income minority families with a child presenting at a psychiatric emergency service in the south Bronx, there is evidence that social

support is positively associated with quality of parenting, both indirectly through its effect on family well being and directly through the positive relationship between buffer effect-social support and quality of parenting. Previous research supports the finding that social support indirectly influences the quality of parenting through its impact on family well being (Belsky, 1984; Crnic et al., 1983; Dunkel-Schetter & Bennett, 1990; Simons & Johnson, 1996; Vaux, 1988a). From the theoretical framework of the process model of stress and coping described in Chapter Two, this finding supports the supposition that social support has impact and influence at several points in the stress process (Gottlieb, 1997; Lepore, 1997; Lin, 1986; Pearlin et al., 1981; Vaux, 1988c).

The SEM models indicate that the two types of social support operate in different ways. As indicated earlier, both buffer effect and main effect-social supports are positively associated with family well being, and together explain about 6% of its variance. In addition, buffer effect-social support has a positive correlation ($r = .07$) with quality of parenting. It is possible that the buffering effect is especially obvious in this study due to the fact that these are families under high levels of stress because their child is in acute psychiatric crisis.

From a measurement perspective, these findings support one of the study premises, that concept mapping using a conceptually derived theoretical framework and scale development using empirical methods could result in a useful set of scales to represent the constructs of social support, family well being, and quality of parenting. The social support literature, for example,

repeatedly emphasizes the importance of developing measures that are theoretically based (Lakey & Cohen, 2000; Tracey & Whittaker, 1987; Vaux, 1992; Veiel, 1992).

To what degree is social support (both main effect and buffer effect) related to child resilience in families with a child with serious emotional problems?

The interpretations of the findings regarding child resilience are presented separately for child behavior and child self esteem.

In the correlational analyses, both main effect-social support and buffer effect-social support were significantly and negatively associated with child problem behaviors, indicating that greater levels of parental social support were associated with children who exhibited higher levels of problematic behaviors. One interpretation of these findings is that parents of children with higher levels of problem behaviors make use of more social support. Another possible reason for these findings is that the role of social support is primarily to protect the family's well being and quality of parenting. These findings again point to the protective role of buffer effect-social support through its impact on family well being and quality of parenting. In addition, this study did not examine social supports directed towards the children and adolescents in the sample; the study was limited to parental social supports. Future studies should examine both parental and child-directed social support.

The results of the correlational analyses indicated that neither main nor buffer effect-social supports were significantly related to child self esteem. In both

cases, the direction of these relationships suggests that higher levels of social supports are associated with poorer self-esteem among children although the magnitude of these relationships was extremely small.

There are several possible reasons for the negative relationship between buffer effect-social support and child self esteem. There are some studies that have found that measures of received support including the ISSB were positively correlated with symptomatology and/or stress (Barrera, Sandler, & Ramsay, 1981). Kessler (1992) suggests three potential reasons for this positive association. The first possible reason is that support recipients may be under high levels of stress (Barrera, 1986). Second, received support may involve a cost that outweighs the benefits of receiving support. Third, the support efforts may not be carried out effectively. The first reason appears to be highly applicable to this sample of parents. These parents had been dealing with a child in acute emotional distress, had taken this child to a psychiatric emergency service, and had admitted that their family needed intensive in-home supports. Another possible explanation is that the content and meaning of social support for parenting children with serious emotional problems may vary in different ethnic minority families. As noted earlier, more than half of the children in the sample were Hispanic, and another third were African American.

A final possible explanation for not finding a positive relationship between social support and child resilience is that this study is based upon statistical interactions rather than observations or other more naturalistic study methods

(Coyne, Ellard, & Smith, 1990). As noted earlier, social support interactions are complex transactions that involve the nature of the stressor, coping styles, matching of support with the demands of the stressor, and perceptions of the availability of support. Behavioral observations of received support and interviews with support recipients and providers are other ways of knowing that may provide different perspectives on the relationship between social support and child resilience (Reis & Collins, 2000).

To what degree is family well being related to child resilience in families with a child with serious emotional problems?

The positive effects of family well being on child resilience, both child behavior and self esteem, found in the correlational and SEM analyses are consistent with both the theoretical frameworks for child resilience (Cowen, 2000; Gilgun, 1996; Kirby & Fraser, 1997; Tebes, Kaufman, Adnopoz, & Racusin, 2001; Rutter, 1990; Sloper & Turner, 1993) and previous research findings (Gribble et al., 1993; Masten, 2001; Masten, Morison, Pellegrini, & Tellegen, 1990; Rae-Grant, Thomas, Offord, & Boyle, 1989; Rutter, 1985; Werner, 1993).

There is also research support for the higher association found between family well being and child self esteem (Hann & Borek, 2001; Reid, 1993) as compared with the relationship between family well being and child behavior. Reviews of longitudinal studies of child behavior problems such as conduct disorders indicate that the active ingredients in prevention and early intervention programs are related to parenting skills, such as parental discipline strategies,

child supervision and child monitoring outside the home. The magnitude of this relationship in the correlational analyses indicated that about twice as much of the variance in child self esteem as compared to child behavior was accounted for by family well being. Likewise, the total effects of family well being in the SEM models with weighted observed variables are higher for child self esteem than for child behavior.

To what degree is quality of parenting related to child resilience in families with a child with serious emotional problems?

In both the Pearson and Spearman correlations between quality of parenting and the two measures of child resilience (i.e., child behaviors and child self esteem), quality of parenting was not significantly related to either child behavior or self esteem, although the relationships were in the anticipated direction (i.e., better quality of parenting with fewer behavior problems and better quality of parenting with increased self esteem). In the structural equation models, the correlations of quality of parenting with the outcome variables were somewhat smaller.

These findings are somewhat puzzling, given the consistent previous research finding that quality of parenting is positively and significantly associated with child resilience (Camara & Resnick, 1987; Hann & Borek, 2001; Kraemer Tebes et al., 2001; Luthar, 1993; Masten et al., 1990; Patterson, DeBaryshe, & Ramsey, 1989; Reid, 1993; Werner, 1993; Wyman, Sandler, Wolchik, & Nelson, 2000). One explanation may be the characteristics of the relatively homogenous

sample of youth in this study. These youth all lived in the south Bronx, with low-income, single-parent families from two minority backgrounds. At the time of data collection, all the youth were in acute psychiatric crisis, and were experiencing a high number of risk factors. For example, in the preliminary analysis of the Bronx data (Appendix A), descriptive statistics were examined for the Total Problem Score of the Child Behavior Checklist (Achenbach, 1991). The theoretical range for this scale is 236; the actual range was 155 indicating that the sample youth had a restricted range on this subscale. As noted earlier, restrictiveness of variability results in attenuation and lower-bound estimates in correlational analyses. In addition, the mean score of the sample for the Total Problem Score was 77.3, with a standard deviation of 31.4, meaning that the youth in this sample scored in the clinical range. The positive effects of quality of parenting may not be directly evident when a youth is in acute psychiatric distress.

Another possible reason for the lack of a significant relationship between quality of parenting and the two outcome variables may be the properties of quality of parenting scale. As noted earlier, the level of agreement on item selection for this scale was 38%, as compared to agreement levels of 69% and 61% for the other two scales. The alpha coefficients for the three total scales are similar, ranging from .93 to .80, although the quality of parenting scale has the lowest internal consistency (.80). These results raise the issue of construct validity and the question of whether this scale adequately measures the construct of quality of parenting.

How do social support, family well being, and quality of parenting proportionately contribute to child resilience in families with a child with serious emotional problems?

The interpretations of the results for the final research question are presented separately for child self esteem and child behavior.

Child Self Esteem

The amount of variance in child self esteem accounted for by the model with weighted observed variables is 3%. In reviews of measurement issues in the study of child resilience, several researchers have addressed the issue of the magnitude of the associations, which are often less than 4% of the variance in the outcome measure (Luthar, Cicchetti, & Becker, 2000; Luthar & Cushing, 1999; Rutter, 1990). One consideration raised by the literature is the need to examine whether measures of child resilience represent the theoretical construct. In this study, new measures were developed for the predictor variables, but existing measures in the Bronx dataset were used for the outcome variables for child resilience. A second issue is the need to consider both statistical significance and the magnitude of the associations. In the SEM analysis with weighted observed variables, the findings are statistically significant although the amount of variance accounted for by the model is relatively small. A final problem with variable-based approaches is the difficulty in determining the number of individuals in a sample who both faced high risk factors and were highly competent. In this study, the small sample size precludes the possibility of

limiting the analyses to the youth who scored high in self-esteem and high on risk factors such as number of functional impairments, number of previous psychiatric hospitalizations, and presence of serious psychiatric disability.

Child Behavior

The SEM model with weighted observed variables accounted for 5% of the variance in child behavior. In addition to the possible explanations noted above regarding the child self esteem findings, it is possible that despite the importance of social support for family well being and quality of parenting, social support may not be directly related to child adaptation (Tebes et al., 2001). The assumption with a buffering effect is that social support mitigates stress by decreasing its impact on an individual's or family's psychological well being and/or response to the stress. The conceptual model for this study allowed for the possibility of a direct effect of social support on child resilience, but the findings do not support this idea. Instead, the findings support the importance of the indirect effects, that is, the effect of social support on child resilience through its protective role with family well being and quality of parenting.

Study Limitations

This section addresses the limitations found in the study, including the methods and measurement tools. Regarding method, the limitations include use of an existing dataset, cross sectional nature of the data, and homogeneity of the sample. The measurement of child resilience in the study also has limitations.

As noted in Chapter Three, many of the limitations typically associated with use of an existing dataset are not present in the study. The researcher was a member of the original Bronx study team, had access to individual level data, and the Bronx study's principal investigator and project director were available to answer any questions about the dataset and/or the study design. However, there are some limitations. First, the study sample, both the youth and their parents, are relatively homogenous. As noted earlier, the families in the study were poor, minority, and single parent families with low levels of education living in the south Bronx. As might be expected, the parents scored relatively low, for example, on the Inventory of Socially Supportive Behaviors, in comparison with other samples (Evans, Boothroyd, & Armstrong, 1997). The problem with homogeneity is lack of variability. Restricting the range of any variable lowers or attenuates the correlation. When the range is restricted, it is difficult to determine whether a low correlation is due to a lack of variability in the item or a lack of relationship among the variables (Thorne & Giesen, 2000).

A second drawback of using the Bronx dataset is the limited number of cases ($n = 222$). Given the low n, it was necessary to exclude any information regarding environmental and personal parental risk factors from the predictive model. The conceptual model (Figure 2.1) recognizes the role of environmental and personal factors in social support, family well being, and quality of parenting. Ideally these factors would be considered in any future studies of the relationships among these constructs.

Finally, the cross sectional nature of the data used in this study precludes the possibility of looking at the effects of social support as a protective mechanism over time in families with a child with serious emotional problems. The conceptual model represents a process that takes place in stages and over time. First, informal social supports need to be developed and nurtured. In time, it is expected that social support will play a protective role with family well being and in the level of parenting capacity. The effects of higher levels of family well being and parenting quality on child resilience also are temporal in nature.

A second area of limitation relates to the measurement instruments. New scales were developed for the independent constructs (social support, family well being, and quality of parenting) using items from the Bronx study. Ideally, in scale development the process would begin by developing new items for each of the domains identified conceptually. By using only the existing items from the Bronx study in scale development, the results of this study may be considered lower boundary estimates. For example, social support researchers distinguish between two types of instruments, those that measure received support and those that assess perceived social support (Dunkel-Schetter & Bennett, 1990; Sarason, Sarason, & Pierce, 1990; Vaux, 1988b, 1992). Available support refers to the individual's report of support that has occurred in interpersonal verbal or nonverbal transactions or exchanges. Perceived support refers to the individual's belief that support will be available if needed. The Inventory of Socially Supportive Behaviors (ISSB) (Barrera et al., 1981) is a widely used

instrument to measure received support, and the majority of the items in the social support subscales are items from the ISSB. There is general agreement that perceived social support rather than received social support is the type of social support that is related to health outcomes (Wills & Shinar, 2000) and that perceived rather than available support has a protective or buffering effect to stress (Kessler, 1992; Lepore, Evans, & Schneider, 1991). Ideally, the social support measure would include items representing both received and perceived social support.

Similar limitations are present in the measurement of child resilience. First, only two domains, self esteem and behavior, are included in the instruments used. Researchers in the area of child resilience identify a number of other domains including capacity to seek help from the environment, competence, effective coping skills, and mastery of stage specific developmental issues (Egeland, Carlson, & Sruofe, 1993; Garmezy, 1994; Masten, 2001; Masten et al., 1990; Murphy & Moriarity, 1976; Rutter, 1990; Werner, 1993). Second, in this study the number of child problem behaviors is used as a proxy for competence. The absence of problem behaviors is clearly a limited subset of the concept of child competence. From a developmental perspective, the concept of child competence is defined much more broadly as success in meeting expectations associated with specific developmental stages (Luthar, 1997)

Conclusions, Implications, and Recommendations

The findings of this study lead to a number of key conclusions, implications, and recommendations for future social work research, social work practice, social policy, and social work education. This section discusses a number of these implications and recommendations.

There are two major conclusions from this study. First, there is strong evidence that social support is positively associated with quality of parenting for parents with children with serious emotional problems, both indirectly through its effect on family well being and directly through the association of buffer effect-social support and quality of parenting. The second major conclusion is that social work practice needs to incorporate the role of social support in the practice acts of assessment and intervention. More specifically, social support needs to be recognized in interventions with individuals and families who experience chronic strain, such as families with a child with serious emotional problems.

Implications for Social Work Research

A basic premise of social work research is that its goal is to inform social work practice and provide social work practitioners with the knowledge needed for effective interventions (Rubin & Babbie, 2001). The implications and recommendations section is organized according to this premise. Although this study made many important contributions to understanding how social support relates with family well being, quality of parenting and child resilience, the study also points to what we still need to know and understand.

Both social work theory and empirical findings acknowledge that social support is interactional, and that personal and environmental characteristics play a key role in how social support is both received and perceived by the recipient (Blaney & Ganellen, 1990; Dean, 1986; Hobfoll & Freedy, 1990; Sarason, Pierce, & Sarason, 1990; Veiel & Baumann, 1992). As acknowledged earlier, the limited sample size did not allow the study to examine any data regarding personal and environmental risk and protective factors. In addition, the sample was limited to children in acute psychiatric crisis. Future studies should include a comparison of children in acute crisis with a second group of children who have serious emotional problems but are not in acute crisis.

In order to understand fully how social support operates in families with a child with serious emotional problems, one recommendation for future research is to collect detailed information on the support provider, the support recipient, and the nature of the social support transaction. This recommendation regarding stressor-support specificity is important in any studies of stress-related social support (Vaux, 1988c). As noted earlier, there is a growing body of empirical evidence that social support operates differently under conditions of chronic stress (Aldwin & Brustrom, 1997; Gottlieb, 1997; Lepore, 1997). The findings of this study may be quite different if the study design were longitudinal and recognized the chronic nature of stressors associated with caring for a child with serious emotional problems. Such a study could inform social work practice regarding how social support operates to protect the family's sense of well being,

the processes by which parents facing chronic stress gain new insights regarding the stressor, how parents translate these insights into new coping skills, how parents learn preplanning and other ways to manipulate their environment, and whether parents experience positive outcomes, including a sense of competence. Item development will be needed so that measures of social support cover these domains related to the chronic stress of caring for a child with a disability.

A second recommendation for future studies of social support is to include the possibility of bidirectionality, the concept that causal processes may be operating in the opposite direction, and that indicators may be operating as both dependent and independent variables. For example, it is possible that social networks are a result of rather than a construction of positive family functioning (Bronfenbrenner, 1986). As noted earlier, there is considerable agreement that risk and protective factors are found within the child, as well as within the family and the environment.

We also know that children are active players in their environment. Many studies have noted marked variations in outcomes in children with exposure to the same types of risk factors. Rutter (1985) offered a number of possible reasons: age and gender differences, child temperament, genetic factors, effective versus ineffective coping mechanisms, timing and multiplicity of risk factors, and the protective effects of compensatory positive experiences. Future research needs to

develop and use analytic methods that can capture the mutual, and perhaps reciprocal influences of child, parent, and family processes. Research that informs our understanding of these underlying processes and mechanisms can provide a framework for effective intervention strategies.

Another challenge is that both risk and protective factors may function in different ways at different developmental stages and for the same child at different phases of development. In addition, either risk or protective factors may play a mediating role, resulting in relationships between the independent variables. The interrelatedness of the independent variables points to the use of cluster analysis rather than multivariate models that emphasize which predictor variable has the strongest relationship to the dependent variable (Gore & Eckenrode, 1994).

An additional research recommendation is the development of new outcome measures of child resilience. For example, this study used the Child Behavior Checklist's Total Problem Score as a proxy of child competence. However, this instrument actually measures the absence of competence rather than its presence. In addition to problem behaviors and symptoms, measures are needed to assess child competence and well being (Tebes et al., 2001). The need to develop better measures and methods for assessing child resilience is a

focus of an ongoing international study of children with or at risk of serious emotional problems (Ungar, in press).

The existence of several outcomes across developmental domains is one of many challenges for child resilience research (Cicchetti & Garmezy, 1993). In future studies of child resilience, a number of theory-based decisions are necessary in the design of the study. First, which outcomes should be identified and studied? Second, are some outcomes given more priority than others? Third, should resilience be equated with excellence versus moderate levels of competence? Luthar et al. (2000) argued that both developmental theory and the nature of the risk factors being studied should guide how the researcher responds to these questions. In studying resilience in children with serious emotional problems, the selection of appropriate outcomes, appropriate levels of excellence, and appropriate measurement tools continue to be a struggle.

The findings of this study also point to the recommendation for social work research studies that use a mixed method approach, including more naturalistic methods for understanding the constructs of social support as a protective mechanism with child resilience and how it operates in families with a child with serious emotional problems. Buffer effect-social support, for example, could be viewed as a protective mechanism and studied over time as it operates in families through such methods as observations (Reis & Collins, 2000) and child, parent, and support provider interviews. Qualitative methods could also be used

to study whether, and how, social support and child resilience can be promoted in these families through social work interventions.

Implications for Social Work Practice

As noted earlier, the theoretical context for this study is social systems theory. From an ecological systems perspective, the goal of social work practice is to strengthen the adaptive capacities of people and to influence their environments so that transactions are more adaptive. Systems that may help people are informal or natural systems, formal systems, and social institutions. Some defining characteristics of the life model are: the relationship between client and social worker is viewed as a partnership, the focus is on personal and collective strengths, there is an emphasis on client activity and decision-making, and social and physical environments and culture are viewed as highly important (Germain & Gitterman, 1996). The focus on identification and development of individual and collective assets is also found in strengths-based social work practice (DeJong & Miller, 1995; McQuaide & Ehrenreich, 1997; Saleebey, 1996)

One major implication of this study for social work practice is the finding regarding the protective role of social support in families with a child with serious emotional problems. Consistently, the study findings emphasize the positive association of both global and buffer effect-social support with families' well being and with their capacity to parent a child with serious problems. These findings point to the importance of using a method to evaluate social support in the practice act of assessment with families, including families with a child with a

disability. One potential value of a social support assessment is that it may help the worker to pay attention to data that may otherwise be overlooked. Although social work's tradition has been directed to both persons and the environment (i.e., the person in the situation), it is recognized that in both practice and social work education the emphasis has been on "the person" rather than "the situation" (Gitterman & Germain, 1981). Tools such as genograms, ecomaps, and network maps may be useful in both instructional curriculum and practice settings to enable students and practitioners to focus on the environment. Second, given the empirical evidence in this study for the importance of social support in promoting well being and buffering the effects of stress, the identification of actual and potential social support resources would be a useful component of a social work assessment.

Within the framework of the ecological systems model, a specific practice recommendation is the use of a social support evaluation tool such as the Social Network Map (Tracy & Whittaker, 1990) during the practice act of assessment to understand better the relationships of the client and his/her social systems. This instrument attends to both the structure (the existence and quality of social relationships) and the function (the various types of supportive exchanges) of informal social supports. A circle mapping technique is used to portray network members and a grid is used to identify the supportive and non-supportive functions of relationships, e.g. who provides what types of supports, which relationships are conflicted and which are reciprocal. Specific domains in which

information is collected include network size, reciprocity, perceived availability of support, closeness, directionality, stability, and frequency of contact.

A critical analysis of the use of social support instruments identifies a number of potential drawbacks. One domain of critical analysis is the worker's decision-making ability during the assessment process. One dilemma for the practitioner is how to verify the accuracy of the data provided by the client in completing the Social Network Map. For example, how does the worker determine to what extent the network exists, how well it functions, and how beneficial it is for the client? Empirical evidence validates the importance of the individual's perceptions of the availability of social support, but in making clinical decisions it would be useful to include other perspectives, such as the worker's own observations on social support capacity and its helpfulness for the client (Dunkel-Schetter & Bennett, 1990; Lakey & Cohen, 2000).

From the perspective of risk and harm reduction, it is important to critically analyze the risks of using a social support assessment instrument, including potential dangers for clients. The first risk is that any structured instrument may miss population-specific and cultural issues. For example, in one study of social support parents with a child with a chronic disability report the unique challenge of resource maintenance of their support network (Bregman, 1980). Given the long-term nature of their child's challenges, parents' supports can "burn out" and "fade away" unless parents direct attention and resources into maintaining and re-fueling the members of their support network. In addition, reciprocity with the

social support network is difficult if not impossible because the parents' needs are so large and chronic. A structured instrument may miss these aspects, and thus ignore the risk of the client losing a support network that appears to be vibrant and functioning.

In order to make informed and accurate judgments and decisions regarding social support in the practice act of assessment, data needs to be collected and interpreted from many sources, including significant members of the individual's support network; information regarding the client's affective, cognitive, and biophysical status; observation of the client in real-life situations, and case records (Gambrill, 1990; Gambrill, 1997). In addition, the worker needs to be aware of how the use of a structured instrument may affect the text of the client's narratives, and may interfere with the worker's capacity to listen to and interpret what the client is saying.

A second set of recommendations refers to social work intervention. In reviewing what we know from social work research, including this study, the use of a structured social support assessment tool is only the beginning of a process of understanding and using social support during social work intervention. Our knowledge regarding stressor support specificity means that in treatment planning by the social work practitioner, and in the development of social work intervention programs, need to gather and make use of data concerning the specific coping needs related to various stressors, the timing of receipt of support specific to those needs, matching of the type of social support to a specific

stress, and methods for activating support (Gottlieb, 1992; Heller, Price, & Hogg, 1990; Vaux, 1988c). One example related to this study is the difference in how social support operates in day-to-day situations, times of acute crisis and under chronic stress conditions. A review of the research regarding this topic reports that close family members and friends are the most important supports for everyday needs, but that during a crisis, other persons having experience with the specific stress play an important buffer role (Laireiter & Baumann, 1992).

This finding was used in the development of one of the three in-home intervention programs during the Bronx study. In this intervention model, a parent of a child with serious emotional problems was a member of the team. Her role was to develop social support networks and activities for the parents enrolled in this intervention. The outcomes of the Bronx study indicate that these parents had higher levels of received social support than parents enrolled in either of the other in-home programs (Evans et al., in press) . In addition, the findings of this dissertation demonstrate the overall importance of the buffering role of social support in families with a child in acute psychiatric crisis.

A second major recommendation of this study for social work intervention is an understanding of how to identify and foster child resilience, including skills in the development of protective mechanisms and factors such as self-esteem. The identification of risk factors and consensus regarding their definition is a recognized component of social work practice. From the time of Mary Richmond the psychosocial assessment process has been devoted to the identification of

factors that contribute to problem-solving behaviors. It could be argued that social work's historical emphasis on pathology lead to the early conceptualization of risk factors in practice theory.

Much less emphasis, understanding, and use of the concepts of mastery and protective factors and processes are found in social work practice (DeJong & Miller, 1995). Bendor, Davidson, and Skolnik (1997) illustrate the dissonance between the strengths perspective and the concepts of pathology and deficiency in social work education. Practitioners are confronted with additional pressures to de-emphasize the use of protective factors in social work practice. Licensure standards often require knowledge of pathology, including the use of the *DSM-IV* for assessment. Many social work practitioners associate status with private practice and psychotherapy. Managed care arrangements in both the health and behavioral health fields typically require an identified patient with a diagnosis in order to receive reimbursement for services.

The use of the concept of resilience in social work intervention models is in early stages of development. Smokowski (1998) builds on the prevention and intervention model proposed by the Institute of Medicine (Mrazek & Haggerty, 1994) to develop a classification schema of risk and protective factors for typical childhood problems, such as adolescent pregnancy, substance use, and childhood depression. Dulmus and Wodarski (1997) use the concepts of child resilience to frame a discussion on the prevention and treatment of child mental health problems, including recommendations for social work practice. Fraser and

Galinsky (1997) go even further and recommend the development of a theory of resilience-based social work practice. The global interventions recommended are strategies to reduce risk and strengthen protective factors. However, social work practice theory and interventions need to incorporate recent understandings of the cumulative effect of stress, risk chains, protective mechanisms and processes, the cultural context for defining risk and protection, and the various additive and interactive models for explaining the development of child resilience. For example, multi-systemic therapy (MST), an empirically-based ecological intervention targeting children with serious emotional problems, builds the identification and use of social supports into its treatment method (Henggeler et al., 1989).

Several challenges need to be addressed if the concept of resilience is to be applied to social work theory and practice. The first major area is the utilization of protective factors or strengths and protective mechanisms in social work practice. For this to take place, social work needs to examine values, skills, and tools related to direct practice. Cowger (1989) clearly articulates the relationship between the profession's clientification process, the issues of powerlessness and dependency, and social work's resistance to the strengths perspective. Application of the concept of protective mechanisms assumes a sharing of power between the social worker and the client in a collaborative search lead by the client for growth-producing factors in his or her life. Feminist social work practice can contribute to a theoretical shift through its emphases on

listening to other voices, the empowerment perspective, paying attention to the power dynamics in helping relationships, and its recognition that the personal is always political (Land, 1995).

Implications for Social Work Education and Policy

The findings from this study regarding both social support and child resilience also have implications for social work education. In addition to theoretical reformulations regarding the role of strengths and protective mechanisms in helping relationships, teaching tools and skills need to be developed, articulated, and disseminated both in social work education and in the profession's literature. Skill competency areas and tools for identifying and using strengths and protective mechanisms are lacking in both the assessment and intervention domains of direct practice (McQuaide and Ehrenreich, 1997). At the program planning level, emphasis again is typically limited to the reduction of risk factors rather than the identification and development of protective mechanisms.

Finally, the study findings have implications for social policy. At the federal, state, and provincial levels, a clear value statement should be made regarding the importance of offering all families a full array of social support for their parenting role, including parents with a child with a disability. In addition, this value needs to be accompanied by the resources necessary to develop parental supports, such as parenting education and support groups.

In conclusion, the concepts of social support and child resilience are consistent with the historical stand within the social work profession that

emphasizes health, competence, and strengths. The identification and understanding of protective factors and mechanisms can make a substantive contribution to social work theory, practice, and social work education. Hopefully this study will promote further social work research in this arena, especially in families with a child with serious emotional problems.

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APPENDIX A

PRELIMINARY ANALYSIS OF BRONX DATASET

Review of Bronx Study Instrumentation for Indicators

The first task was a mapping exercise to determine whether the Bronx dataset included indicators in the domains of the dependent and independent constructs (social support, family well being, quality of parenting, and child resilience). Using the Chapter Two review of the theoretical and research literature on the domains, the measures and/or subscales of data collection instruments used in the Bronx study were mapped onto the domains of parental social support, family well being, quality of parenting, and child resilience. Table A.1 summarizes the results of the mapping exercise.

Table A.1

Mapping Exercise

Domain	Social Support	Family Well Being	Quality of Parenting	Child Resilience
Indicators (n = 33)	Inventory of Socially Supportive Behaviors (Total Score) Emergency Services Assessment (ESA): Family use of informal community supports (1 Question)	ESA: Family Relations Spouse Relations Leisure Activities Quality Time (4 Questions) FACES II Cohesion (1 Subscale) FACES II	ESA: Provide Structure Appropriate Discipline Child Feels Loved (3 Questions) Parent-Child Relationship Scales Acceptance Approval Consistency	CBCL Total Problem Internalizing Externalizing (3 Subscales) Piers-Harris Behavior School Status Appearance Anxiety

Domain	Social Support	Family Well Being	Quality of Parenting	Child Resilience
		Adaptability (1 Subscale)	Stimulation Recognition Motivation (6 Questions) Parental Self-Efficacy Scale- Management School Advocacy Support Provider (Total score & 5 subscales)	Popularity Happiness (Total Score & 6 subscales)

In the domain of social support, two indicators were identified, one question from the Emergency Services Assessment regarding the family's use of informal community supports (Time 1) and an instrument, the Inventory of Socially Supportive Behaviors (Time 2). The domain of family well being is represented by six indicators: the FACES II Adaptability and Cohesion Scales and by four questions from the Emergency Services Assessment (Time 1): relationships between caregivers, relationships among family members, family plans its leisure activities together, and family spends quality time together. For the domain of quality of parenting, the 15 indicators selected were three questions from the Emergency Services Assessment (ability to provide structure for child's daily needs, ability to identify appropriate discipline, ability to make child feel loved and wanted), the six Parent-Child Relationship Scales (parental acceptance/affection for children, parental approval of children, parental

consistency of discipline, parental stimulation, parental recognition of problems, and parental motivation to solve problems), and the Parental Self-Efficacy Scale, total score and the five subscales (behavior management, school, advocacy, emotional support, and ability to provide for their child). For the domain of child resilience, ten variables were identified: three from the Child Behavior Checklist (Total Problem Score, Total Internalizing Score, and Total Externalizing Score) and seven indicators from the Piers-Harris Children's Self-Concept Scale (total score and six subscale scores for behavior, intellectual and school status, physical appearance, anxiety, popularity, and happiness and satisfaction).

In summary, the mapping exercise with the Bronx dataset indicated that one necessary but not sufficient condition for use of the dataset had been met, that is, the dataset contained at least two indicators for each domain of the model. It was decided to proceed with several steps of data analysis.

Variability in Data

The first step of the analysis was to use descriptive statistics to determine how much was present in the data for each of the variables used in the Bronx study. For this step, descriptive statistics were run using SPSS for each variable that mapped onto the conceptual model at the appropriate data collection point. For example, Time 2 data (collected at the time of discharge) were used for outcome data while Time 1 data (collected at the time of intake) were used for stable personality and environmental characteristics. For consistency, the statistics collected for each instrument included the possible range of scores for

the instrument, the range of the raw scores, and the mean, standard deviation and skewness for the raw scores. A second goal was to determine the amount of missing data for each indicator. Table A.2 summarizes the findings on variability of the indicators and missing data.

Table A.2

Descriptive Statistics on Variables

Variables	Potential Range	Actual Range	Mean	Standard Deviation	Skewness	Missing Data N=238
ISSB	160	146 (40-186)	86.4	34.39	.49	22.7%
Use of supports	1	1	.34	.47	.70	6.3%
ESA: Spouse relationships	3	3 (1-4)	2.23	.95	.11	32.8%
ESA: Family relationships	3	3 (1-4)	2.42	.77	-.03	2.5%
ESA: Plan leisure activities	1	1 (0-1)	.61	.49	-.47	4.2%
ESA: Spend time together	1	1 (0-1)	.61	.49	-.47	4.2%
FACES II: Adaptability	55	40 (28-68)	51.37	7.83	-.35	23.5%
FACES II: Cohesion	65	54 (26-80)	55.05	11.26	-.12	23.5%
Parental Self-Efficacy Total Score	75	65 (35-100)	78.51	13.29	-.82	23.9%
PSE: Behavior management	18	18 (6-24)	18.27	4.21	-.71	23.9%
PSE: School	12	12 (4-16)	12.33	2.83	-.72	26.5%
PSE:	12	12	12.65	2.71	-.67	23.9%

Variables	Potential Range	Actual Range	Mean	Standard Deviation	Skewness	Missing Data N=238
Advocacy		(4-16)				
PSE: Emotional Support	15	14 (5-20)	13.78	3.55	-.17	24.4%
PSE: Provide Issues	18	17 (6-24)	21.47	3.45	-1.86	23.9%
ESA: Provide structure	1	1 (0-1)	.59	.49	-.36	3.4%
ESA: Identify appropriate discipline	1	1 (0-1)	.33	.47	-.75	3.4%
ESA: Make child feel loved	1	1 (0-1)	.65	.48	-.64	2.5%
Parent Child Relationship Scales: Acceptance	3	3 (1-4)	1.79	.84	-.93	10.0%
PCRS: Approval	3	3 (1-4)	2.87	.65	-.50	10.9%
PCRS: Consistency of Discipline	3	3 (1-4)	2.76	.97	-.80	10.0%
PCRS: Problem Recognition	3	2 (1-3)	2.34	.62	-.39	9.7%
PCRS: Problem Solving	5	4 (1-5)	4.08	.90	-1.20	9.7%
PCRS: Parental Teaching	3	3 (1-4)	2.79	.91	.47	10.9%
Piers-Harris Self-Concept: Total Score	80	59 (20-79)	53.74	12.16	-.05	31.1%
Piers-Harris: Behavior	16	14 (2-16)	10.48	3.51	-.31	31.1%
Piers-Harris: School	17	15 (2-17)	12.32	3.85	-.64	32.4%

Variables	Potential Range	Actual Range	Mean	Standard Deviation	Skewness	Missing Data N=238
Piers-Harris: Physical Appearance	13	12 (1-13)	9.85	2.86	-1.10	31.1%
Piers-Harris: Anxiety	14	14 (0-14)	8.29	3.40	.18	30.7%
Piers-Harris: Popularity	12	12 (0-12)	7.70	2.48	-.55	31.5%
Piers-Harris: Happiness	10	9 (1-10)	7.51	2.20	-1.04	31.1%
CBCL: Total Problem	236	155 (2-157)	77.26	31.39	.14	26.9%
CBCL: Internalizing	64	45 (0-45)	20.42	9.99	.20	26.9%
CBCL: Externalizing	66	60 (0-60)	27.77	12.68	.57	26.9%

The standard used for acceptability of variability was that at least 80% of the time, the actual range of scores should be at least 75% of the theoretical range of scores. This standard was met; for 88% of the indicators, the actual range was at least 75% of the potential range of scores. The amount of missing data ranged from 2.5% to 31.5%. For 11 indicators, the amount of missing data was 10% or less. Between 11% and 25% of the data was missing for 10 indicators. Twelve indicators had data missing in the range of 26% to 35%. In general, the indicators collected at Time 2 had much more missing data than those collected at Time 1. In summary, the assessment of the variability and the amount of missing data for each indicator indicated to proceed with further data analysis.

Analysis of Correlations Between Indicators Within the Same Domain

The next step in the preliminary analysis of the Bronx dataset was to determine the degree of relationships between indicators, that is, the correlations between subscales and/or total scales within each domain of social support, family well being, quality of parenting and child resilience. The standard used was that a correlation range of .3 to .7 should be present at least 60% of the time for indicators within a domain because indicators within a domain should be similar, that is, measure the same construct, but each should make a unique contribution to the meaning of the construct. The Pearson product-moment correlation coefficient was conducted with the set of 33 indicators: two indicators in the domain of social support, six indicators representing family well being, 15 in the domain of quality of parenting, and 10 indicators in the domain of child resilience.

A review of the correlations within each domain indicated that there was a minimal (less than .1) correlation between the two indicators for social support (see Table A.3). For the domain of family well being, 10 of the 15 correlations (67%) fall within the range of .2 to .7. The domain of quality of parenting includes 15 indicators. Correlations from .2 to .7 were found for 40 of the 105 correlations (38%). This finding indicates that some of the indicators for quality of parenting should be reviewed and either eliminated or moved to another domain. For child resilience, the total score and subscales of each instrument (Piers-Harris Children's Self-Concept Scale and Child Behavior Checklist) were correlated at a

moderate to high degree with one another but a small to minimal correlation (less than .1 for 19 of the 21 correlations) was found between the instruments. These findings indicate that the two instruments measure constructs, child self-esteem and competence-behavior, which are not associated with one another.

Table A.3

Correlation Matrix

mains	Social Support		Family Well Being							Quality of Parenting							
riables	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17
- ISSB (SR T2)	-																
- Family Use of Support (CR)	.08	-															
- FACES II Cohesion (SR T2)	.12	.02	-														
- FACES II Adaptability (SR)	**.28**	-.03	**.61**	-													
- Family Relations (CR T1)	-.03	.10	**.25**	**.25**	-												
- Spouse Relations (CR T1)	.16	.00	.17	**.23**	**.56**	-											
- Plan Leisure Activities (CR)	-.07	.10	**.17**	.10	**.41**	**.26**	-										
- Spend Quality Time (CR T1)	-.02	**.18**	**.15**	.08	**.44**	**.30**	**.59**	-									
- Parental Acceptance (CR T1)	-.09	-.05	**.18**	**.15**	**.38**	**.30**	**.38**	**.27**	-								
0 - Parental Approval (CR T1)	-.10	-.02	.00	-.04	**.16**	.15	**.27**	**.27**	**.56**	-							
1 - Parental Consistency (CR)	-.01	.01	.07	.02	**.28**	**.25**	**.29**	**.14**	**.54**	**.46**	-						
2 - Parental Stimulation (CR)	-.05	.09	.13	**.16**	**.32**	**.18**	**.31**	**.27**	**.52**	**.34**	**.67**	-					
3 - Problem Recognition (CR)	-.10	-.04	.13	.12	**.27**	.15	**.32**	**.21**	**.54**	**.41**	**.55**	**.54**	-				
4 - Parental Motivation (CR T1)	.01	-.01	.02	.10	**.27**	**.30**	**.31**	**.23**	**.61**	**.53**	**.62**	**.54**	**.75**	-			
5 - Parent Self-Efficacy (SR T2)	**.21**	.12	**.44**	**.46**	**.23**	.13	**.23**	**.21**	**.22**	.06	-.01	.11	.11	.06	-		
6 - PSE Management (SR T2)	**.19**	.12	**.41**	**.40**	.14	.05	**.19**	.13	.15	.05	-.02	.07	.14	.03	**.84**	-	

17 - PSE School (SR T2)	.10	.05	**.37**	**.36**	**.16**	.09	**.23**	**.23**	**.21**	.10	.04	.14	.10	.07	**.76**	**.54**	-
18 - PSE Advocacy (SR T2)	.18	.07	**.27**	**.34**	**.22**	.06	.09	**.16**	**.15**	.00	-.03	.04	.08	.05	**.80**	**.56**	**.54**
19 - PSE Support (SR T2)	**.23**	.09	**.34**	**.40**	**.19**	.09	.12	.15	**.20**	.00	-.01	.01	-.00	.04	**.80**	**.63**	**.51**
20 - PSE Provider (SR T2)	.08	.12	**.32**	**.33**	**.31**	**.20**	**.28**	**.20**	**.16**	.09	.01	.16	.14	.05	**.76**	**.50**	**.61**
21 - Provide Structure (CR T1)	-.04	.05	-.00	-.04	**.16**	.02	**.17**	**.18**	**.18**	**.16**	**.28**	**.29**	**.18**	**.17**	.05	.01	.04
22 - Appropriate Discipline (CR 1)	.03	.08	.12	.09	.12	.03	.21	-.08	.10	.06	**.30**	**.27**	**.28**	**.15**	.13	**.16**	.00
23 - Child Feel Loved (CR T1)	-.00	-.02	.05	-.00	**.28**	.13	**.30**	**.25**	**.31**	**.24**	**.18**	**.29**	**.33**	**.24**	**.18**	.14	.07
24 - Piers-Harris Total (SR T2)	-.00	**.19**	.10	.08	-.01	.07	.11	.03	.05	-.05	.06	.12	.03	.07	.04	.03	.00
25 - PH Behavior (SR T2)	-.05	.11	**.16**	.13	.06	.07	.15	.12	.16	-.01	.01	.06	.08	.01	.10	.10	.03
26 - PH School Status (SR T2)	.12	**.17**	**.20**	**.16**	-.05	-.01	.12	.11	.06	.04	.10	**.18**	.06	.13	.07	.07	.05
27 - PH Appearance (SR T2)	.03	**.22**	.09	.05	-.01	.09	.10	.05	-.03	-.02	.10	**.18**	-.01	.08	.07	.03	.06
28 - PH Anxiety (SR T2)	.03	.07	-.03	.01	-.05	-.05	.04	-.04	.05	-.03	.03	.07	.05	.08	-.03	-.02	-.06
29 - PH Popularity (SR T2)	.05	.07	-.10	.07	-.11	.09	.04	-.06	-.11	**-.17**	-.03	.06	-.07	.02	-.08	-.07	-.08
30 - PH Happiness (SR T2)	.04	.08	**.17**	.11	.04	.17	.09	.09	.05	-.12	.01	.06	-.04	.03	.08	.06	.07
31 - CBCL Total Problem (SR 2)	.01	.07	.02	.02	.03	.14	-.05	.09	.06	.06	.12	.10	-.07	.01	.03	.03	.00
32 - CBCL Internalizing (SR T2)	-.01	.05	.02	.01	-.00	.10	-.12	.04	.01	-.01	.09	.06	-.02	-.01	.03	.05	-.01
33 - CBCL Externalizing (SR T2)	.01	.05	.02	.02	.05	.13	.04	.10	.08	.10	.13	.09	-.06	.05	.04	-.00	.04

Table A.3

Correlation Matrix continued

Domains	Quality of Parenting cont.									Child Resilience						
Variables	V18	V19	V20	V2	V22	V23	V24	V25	V26	V27	V28	V29	V30	V31	V32	V33
V18 - PSE Advocacy (SR T2)	-															
V19 - PSE Support (SR T2)	**.56**	-														
V20 - PSE Provider (SR T2)	**.80**	**.41**	-													
V21 - Provide Structure (CR T1)	.06	.07	.08	-												
V22 - Appropriate Discipline (CR T1)	.07	.03	**.19**	**.34**	-											
V23 - Child Feel Loved (CR T1)	.10	**.15**	**.21**	**.34**	**.30**	-										
V24 - Piers-Harris Total (SR T2)	-.07	.14	.00	-.10	-.01	.04	-									
V25 - PH Behavior (SR T2)	.03	.16	.03	-.05	-.02	.05	**.74**	-								
V26 - PH School Status (SR T2)	-.01	.14	-.02	-.14	-.02	-.02	**.75**	**.51**	-							
V27 - PH Appearance (SR T2)	-.02	.11	.09	-.03	.04	.07	**.64**	**.22**	**.57**	-						
V28 - PH Anxiety (SR T2)	.07	.06	-.06	-.14	-.03	-.07	**.74**	**.44**	**.43**	**.32**	-					
V29 - PH Popularity (SR T2)	-.12	-.02	-.03	-.06	-.04	-.04	**.70**	**.32**	**.38**	**.41**	**.58**	-				
V30 - PH Happiness (SR T2)	-.04	.12	.07	-.04	.05	.07	**.73**	**.47**	**.49**	**.61**	**.56**	**.33**	-			
V31 - CBCL Total Problem (SR T2)	.03	-.02	-.06	.05	-.02	-.06	.07	.04	.03	.03	.13	-.03	.08	-		
V32 - CBCL Internalizing (SR T2)	.07	-.08	.07	.09	-.02	-.07	.09	.06	.07	.03	.13	.02	.08	**.84**	-	
V33 - CBCL Externalizing (SR T2)	.02	.06	.04	-.01	.00	-.03	.01	.01	-.04	.01	.07	-.07	.05	**.86**	**.52**	-

Notes. SR = Caregiver Self-Report; CR = Clinician Rated
T1 = Data collected at intake; T2 = Data collected at discharge
Bold = correlations significant at $p < .05$

Analysis of Correlations Between the Domains

The final step of correlational analysis was to examine the degree of association across the four domains of social support, family well being, quality of parenting, and child resilience (see Table A.3). The standard used was that the correlation should be minimal (<.3) and significant less than 5% of the time.

Social Support

In the area of social support one indicator was the instrument, the Inventory of Socially Supportive Behaviors (ISSB). One additional question from the Emergency Services Assessment, the family's use of informal community supports, was included as an indicator in this domain. The ISSB (Time 2) was significantly correlated with one variable from the Parental Emotional Well Being domain, the Adaptability Subscale of FACES ($r = .28$; $p < .01$) and four variables from the domain of Quality of Parenting ($r = .182$; Parenting: the Parental Self-Efficacy Scale total scale ($r = .21$; $p < .01$), and the PSES subscales of behavior management ($r = .19$; $p < .05$), advocacy $p < .05$), and emotional support ($r = .23$; $p < .01$). All other correlations with indicators in other domains were less than .3.

The question on family's use of informal community supports was significantly related to one question (family spends quality time together) from the domain of family well being ($r = .18$, $p < .01$). In the area of child resilience, this question was related to 3 of the 7 variables from the Piers-Harris Self-Concept Scale, the Total Scale ($r = .19$, $p < .05$), the Intellectual and School Status

subscale ($r = .17$, $p < .05$), and the Physical Appearance subscale ($r = .22$, $p < .01$). All correlations of this indicator with other domains were less than .3.

Family Well Being

The correlation of indicators within this domain with the domain of social support is noted above. Twenty of the 90 correlations (22%) with the domain of quality of parenting are more than .3; 17 of the 20 correlations that are greater than .3 are less than .4. Both subscales of FACES are significantly correlated with one of the six questions (parental acceptance of children) from the Parent-Child Relationship Scales (r-values of .18 for cohesion and .15 for adaptability, $p < .05$). The adaptability subscale of FACES is significantly correlated ($r = .16$, $p < .05$) with the question regarding parental teaching of children from the Parent-Child Relationship Scales. A moderate level of correlation was found with both FACES subscales and the Parental Self-Efficacy Scale (r-values of .44 and .46, $p < .01$) and all 5 of the subscales with r values ranging from .27 to .41.

The four questions from the Emergency Services Assessment (relationships among family members and between parents, plan leisure activities together, and spend quality time together) are significantly correlated with 22 of the 24 relationships with the Parent-Child Relationship Scales with r-values ranging from .14 to .38. Three of the four questions from the Emergency Services Assessment are significantly related with the Parental Self-Efficacy Scale (r-values from .205 to .267, $p < .01$). The ESA question regarding family relationships is significantly correlated with four of the five subscales of the

Parental Self-Efficacy Scale. The question regarding parental relationships is significantly correlated with the provider issues subscale ($r = .19$; $p < .05$). The question regarding planning leisure activities together is significantly correlated with three Parent Self-Efficacy subscales and the question regarding spending quality time together is significantly correlated with four subscales from the Parent Self-Efficacy Scale. A low level of correlation (r-values ranging from .16 to .30) was identified for these four questions with seven significant correlations with three other questions from the ESA (ability to provide structure, ability to provide discipline, ability to make child feel loved) in the domain of quality of parenting.

In the area of child resilience, significant correlations at a low level (r-values ranging from .16 to .20, $p < .01$) were found between the FACES cohesion score in two of seven relationships with the Piers-Harris Children's Self-Concept Scale. Only one of seven correlations was significant between the FACES adaptability scale and the Piers-Harris subscale of School Status ($r = .16$, $p < .05$).

Quality of Parenting

The correlations between this domain and the domains of social support and family well being are identified above. With the domain of child resilience, all correlations were less than .3. The only significant correlations ($p < .05$) were between one subscale of the Parent-Child Relationship Scale (parental teaching

of children) and two subscales of the Piers-Harris Self-Concept Scale(Intellectual and School Status, and Physical Appearance).

In summary, a low level of correlation (< .3) was found for indicators across the domains of social support, family well being, quality of parenting and child resilience. Very few of the correlations were significant at the .05 level. These findings are as expected, assuming that each domain and its indicators represent a unique construct.

Factor Analysis

The correlational analyses were based upon the theoretical model (Figure 1) presented in Chapter 1 on the associations between social support, family well being, quality of parenting and child resilience. The next task was to empirically evaluate how the indicators clustered together through principal components analysis. The purpose of the factor analysis was more confirmatory than exploratory, in that the goal was to test out empirically the theoretical relationships shown in Figure 1.

Principal components analysis (PCA) is a method that produces linear combinations of observed variables, with the first principal component accounting for the largest amount of variance in the data, the second component accounting for the second largest, etc. The objective of the factor analysis was to reduce the set of 33 indicators to a smaller number of hypothetical components with the assumption that the observed correlations are due to some underlying common factors. The factor pattern matrices (see Table A.4) were used for interpretation

because they represent each indicator's unique relationship to the factor, discounting the association among factors. A number of solutions were run using nine, eight and seven factors. The number of factors (seven) was selected as the most parsimonious solution using two standards: the eigenvalue greater than one rule and the criteria of interpretability of the data.

Table A.4
Rotated Component Matrix Patterns

Factors / Variables	1	2	3	4	5	6	7
ISSB							.658
Family use of supports						.552	
FACES II Cohesion	.565						
FACES II Adaptability	.580						
Family relations				.616			
Spouse relations							.679
Plan leisure activities				.706			
Spend quality time				.812			
Parental acceptance			.571				
Parental approval			.583				
Parental consistency			.788				
Parental stimulation			.678				
Problem recognition			.788				
Parental motivation			.834				
Parent Self-Efficacy Total	.975						
PSE Management	.772						
PSE School	.747						
PSE Advocacy	.741						
PSE Emotional Support	.755						
SE Providers	.628						
Ability to provide structure						.763	
Appropriate discipline						.727	
Make child feel loved				.551			
Piers-Harris Total		.966					
PH Behavior		.604					
PH School Status		.786					
PH Physical Appearance		.612					
PH Anxiety		.772					

Factors Variables	1	2	3	4	5	6	7
PH Popularity		.732					
PH Happiness		.736					
CBCL Total Problem					.980		
CBCL Internalizing					.857		
CBCL Externalizing					.882		

A scree plot was constructed with the 33 components on the x-axis and the percentage of variance accounted for by each component on the y-axis. A visual review of the scree plot indicated a factor solution somewhere between five and seven factors. A 7-component PCA with a varimax rotation method and a .5 loading rule accounted for 64.9% of the variance. The first component, accounting for 13.7% of the variance, included the FACES cohesion and adaptability scales and the total score and all five subscales from the Parental Self-Efficacy Scale. This factor was categorized as family perception of family functioning. The second factor accounted for 12.7% of the variance and included the Piers-Harris Children's Self-Concept Scale total score and the six subscales. This factor represents resilience, child perception of self-esteem. The third component (11% of the variance) includes the six Parent-Child Relationship Scales, a clinician reported measure. This component was categorized as clinician perception of quality of parenting. The 4th factor represents 8% of the variance and includes four questions from the Emergency Services Assessment (family relations, plan leisure activities together, spend quality time together, ability to make child feel loved), one Parent-Child Relationship Scale (parental acceptance of child), and the behavior subscale of the Piers-Harris Children's

Self-Concept Scale. This component generally represents clinician assessment of family functioning. The fifth factor, the three subscales of the Child Behavior Checklist, accounts for 8% of the variance and represents resilience, child behavior. The sixth component, accounting for 6% of the variance, includes the items on family's use of informal supports, ability to provide structure, ability to identify appropriate discipline, and ability to make child feel loved. This domain appears to represent clinician assessment of the domains of social support and quality of parenting. The final component, accounting for 5.2% of the variance, included the Inventory of Socially Supportive Behaviors, The FACES Adaptability Scale, the ESA item of spouse relations, and the parental approval scale from the Parent-Child Relationship Scales. This factor could be viewed as family assessment of well being.

Based on the findings from the preliminary data analyses, the construct of child resilience was divided into two domains, behavior and self-esteem. For each domain the indicators correlate highly with each other, but not with the indicators in the other domain of child resilience. In addition, for all principal component analyses conducted, the indicators representing behavior loaded onto one factor and the indicators representing self-esteem load onto another factor.

APPENDIX B

ETHICS REVIEW

Memorial
University of Newfoundland

Office of Research

June 28, 2002

ICEHR No. 2001/02-078-SW

Ms. Mary I. Armstrong
School of Social Work
Memorial University of Newfoundland

Dear Ms. Armstrong:

The Interdisciplinary Committee on Ethics in Human Research (ICEHR) has examined the proposal for the research project entitled *"An Empirical Study: A Model of the Pathways Between Social Support, Family Well Being, Parenting Quality, and Child Resilience"* in which you were listed as the principal investigator.

It is the opinion of the ICEHR that your proposed study does not involve any direct use of human participants, and is not subject to review by a Research Ethics Board.

Thank you for submitting your proposal. We wish you well with your research.

Yours sincerely,

for Gordon Inglis
Chair, Interdisciplinary Committee on
Ethics in Human Research

GI/en

APPENDIX C

REPRESENTATIVE ITEMS FOR SOCIAL SUPPORT

Inventory of Socially Supportive Behaviors (Barrera, 1981)

#1. Looked after a family member when you were away.

#2. Was right there with you (physically) in a stressful situation.

#3. Provided you with a place where you could get away for a while.

#4. Watched after your possessions when you were away (pets, plants, home, apartment, etc.)

#5. Told you what she/he did in a situation that was similar to yours.

#6. Did some activity together to help you get your mind off of things.

#7. Talked with you about some interests of yours.

#8. Let you know that you did something well.

#9. Went with you to someone who could take action.

#10. Told you that you are okay just the way you are.

#11. Told you that she/he would keep the things that you talk about private-just between the two of you.

#12. Assisted you in setting a goal for yourself.

#13. Made it clear what was expected of you.

#14. Expressed esteem or respect for a competency or personal quality of yours.

#15. Gave you some information on how to do something.

#16. Suggested some action that you should take.

#17. Gave you over $25.00.

#18. Comforted you by showing you some physical affection.

#19. Gave you some information to help you understand a situation you were in.

#20. Provided you with some transportation.

#21. Checked back with you to see if you followed the advice you were given.

#22. Gave you under $25.00.

#23. Helped you understand why you didn't do something well.

#24. Listened to you talk about your private feelings.

#25. Loaned or gave you something (a physical object other than money) that you needed.

#26. Agreed that what you wanted to do was right.

#27. Said things that made your situation clearer and easier to understand.

#28. Told you how he/she felt in a situation that was similar to yours.

#29. Let you know that he/she will always be around if you need assistance.

#30. Expressed interest and concern in your well being.

#31. Told you that she/he feels very close to you.

#32. Told you who you should see for assistance.

#33. Told you what to expect in a situation that was about to happen.

#34. Loaned you over $25.00.

#35. Taught you how to do something.

#36. Gave you feedback on how you were doing without saying it was good or bad.

#37. Joked and kidded to try and cheer you up.

#38. Provided you with a place to stay.

#39. Pitched in to help you do something that needed to get done.

#40. Loaned you under $25.00.

Parent Self-Efficacy Scale (Boothroyd & Evans, 1996)

#14. How comfortable are you with your ability to talk with friends and family about your child.

#21. How comfortable are you with your ability to ask family/friends for help with your child if you need it.

Family Adaptability and Cohesion Evaluation Scales (Olson et al., 1982)

#1. Family members are supportive of each other during difficult times.

Emergency Services Assessment (BESR, 1995)

#5d. What family strengths do you feel you will be able to utilize in helping the family get needed supports and services for their child? Ability to transport the child for services.

#13. Does the family use informal community supports (e.g. church)?

#23. Is transportation available to the family?

#24. Is the transportation that is available safe?

#25. Can the family afford whatever transportation is available?

#26. Does the family have any unmet transportation needs?

Client Description Form for Children and Adolescents Supplement (BESR, 1995)

#42. Number of adults (age 18 or older) residing in household.

#45. Number of children in family identified as at risk of placement.

APPENDIX D

REPRESENTATIVE ITEMS FOR FAMILY WELL BEING

Family Adaptability and Cohesion Evaluation Scales (Olson et al., 1982)

#2. In our family, it is easy for everyone to express his/her opinion.

#3. It is easier to discuss problems with people outside the family than with other family members.

#4. Each family member has input in major family decisions.

#5. Our family gathers together in the same room.

#7. Our family does things together.

#8. Family members discuss problems and feel good about the solutions.

#9. In our family, everyone goes his/her own way.

#10. We shift household responsibilities from person to person.

#11. Family members know each other's close friends.

#13. Family members consult other family members on their decisions.

#14. Family members say what they want.

#15. We have difficulty thinking of things to do as a family.

#16. In solving problems, the children's suggestions are followed.

#17. Family members feel very close to each other.

#19. Family members feel closer to people outside the family than to other family members.

#21. Family members go along with what the family decides to do.

#22. In our family, everyone shares responsibilities.

#23. Family members like to spend their free time with each other.

#24. It is difficult to get a rule changed in our family.

#25. Family members avoid each other at home.

#26. When problems arise, we compromise.

#27. We approve of each other's friends.

#28. Family members are afraid to say what is on their minds.

#29. Family members pair up rather than do things as a total family.

#30. Family members share interests and hobbies with each other.

Parent Self-Efficacy Scale (Boothroyd & Evans, 1996)

#3. How comfortable are you with your ability to explain to others the kind of help your child needs.

#5. How comfortable are you with your ability to cope with your frustrations about your child's problems?

#6. How comfortable are you with your ability to identify services that may help your child?

#9. How comfortable are you with your ability to meet your child's medical needs?

#10. How comfortable are you with your ability to provide a safe home environment for your child?

#12. How comfortable are you with your ability to advocate for your

child's rights?

#17. How comfortable are you with your ability to participate in school activities with your child?

#19. How comfortable are you with your ability to deal with stress at home?

#20. How comfortable are you with your ability to understand your child's problems?

#22. How comfortable are you with your ability to provide food, clothing and shelter?

#23. How comfortable are you with your ability to take your child someplace just for fun.

#25. How comfortable are you with your ability to take care of your child?

Emergency Services Assessment (BESR, 1995)

#1i. Characteristic of mother: Presence of mental illness

#1i. Characteristic of father: Presence of mental illness

#1k. Characteristic of mother: Spouse abuse (current)

#1k. Characteristic of father: Spouse abuse (current)

#2. How would you rate the relationships among family members?

#3. How would you rate the relationship between the primary caregiver and spouse or significant other?

#4. How cooperative is the primary caregiver in the treatment process?

#5b. What family strengths do you feel you will be able to utilize in helping the family get needed supports and services for their child?

Ability to implement treatment recommendations

#5c. What family strengths do you feel you will be able to utilize in helping the family get needed supports and services for their child?

Willingness to call upon treatment team members when needed

#5e. What family strengths do you feel you will be able to utilize in helping the family get needed supports and services for their child?

Ability to recognize need for respite

#14. Does the family plan its leisure activities together?

#15. Does the family spend "quality time" together?

Family Environment Scale (Moos & Moos, 1974)

#31. There is plenty of time and attention for everyone in our family.

#32. Family members can "blow off steam" at home without upsetting other family members.

#33. Money and paying bills are openly talked about in our family.

#34. Family members become openly angry.

#35. Family members get so angry they throw things.

#36. Family members hit each other.

#37. It's hard to find things when you need them in our household.

#38. People in our family are on time.

#39. People change their minds often in our family.

#40. Family members are ordered around.

Child and Adolescent Functional Assessment Scale (Hodges, 1990)

CAFAS Caregiver resources Subscale

CAFAS Thinking Subscale

Items suggested by member of Home-Based Crisis Intervention Program, Bronx, NY (Heron, 1995)

#41. We take or use other's personal belongings in our home without the owner's permission.

#42. In our family we listen to each other without interrupting.

APPENDIX E

REPRESENTATIVE ITEMS FOR QUALITY OF PARENTING

Parent Self-Efficacy Scale (Boothroyd & Evans, 1996)

#1. How comfortable are you with your ability to control your child's behavior?

#2. How comfortable are you with your ability to know what your child is doing at school?

#4. How comfortable are you with your ability to get your child to act the way you want him/her to act?

#7. How comfortable are you with your ability to praise your child for good behavior?

#8. How comfortable are you with your ability to control your anger with your child?

#11. How comfortable are you with your ability to discipline your child when necessary?

#13. How comfortable are you with your ability to discuss your child with school personnel?

#15. How comfortable are you with your ability to help your child with his/her homework?

#16. How comfortable are you with your ability to set limits with your child?

#18. How comfortable are you with your ability to say no to your child?

#24. How comfortable are you with your ability to spend time with your child?

Family Adaptability and Cohesion Evaluation Scales (Olson et al., 1982)

#6. Children have a say in their discipline.

#12. It is hard to know what the rules are in our family.

#18. Discipline is fair in our family.

#20. Our family tries new ways of dealing with problems.

Parent-Child Relationship Scales (Adapted from Child Well Being Scales, Magura & Moses, 1986)

#1. Parental recognition of problems

#2. Parental motivation to solve problems

#3. Parental acceptance/affection for children

#4. Parental approval of children

#5. Parental consistency of discipline

#6. Parental Teaching/Stimulating Children

Emergency Services Assessment (BESR, 1995)

#1a. Characteristic of mother: Physical abuse of child

#1a. Characteristic of father: Physical abuse of child

#1b. Characteristic of mother: Neglect of child

#1b. Characteristic of father: Neglect of child

#1c. Characteristic of mother: Sexual abuse of child

#1c. Characteristic of father: Sexual abuse of child

#1d. Characteristic of mother: Emotional abuse of child

#1d. Characteristic of father: Emotional abuse of child

#1f. Characteristic of mother: Serious alcohol abuse (treatment mandatory)

#1f. Characteristic of father: Serious alcohol abuse (treatment mandatory)

#1h. Characteristic of mother: Serious drug use (treatment mandatory)

#1h. Characteristic of father: Serious drug use (treatment mandatory)

#5a. What family strengths do you feel you will be able to utilize in helping the family get needed supports and services for their child?

Ability to understand the child's disability or problem

#5f. What family strengths do you feel you will be able to utilize in helping the family get needed supports and services for their child?

Ability to provide structure for child's daily needs (getting up on time, eating regularly, etc.)

#5g. What family strengths do you feel you will be able to utilize in helping the family get needed supports and services for their child?

Ability to identify appropriate punishments

#5h. What family strengths do you feel you will be able to utilize in helping the family get needed supports and services for their child?

Ability to make the child feel loved and wanted.

APPENDIX F

ITEMS NOT SELECTED AS REPRESENTATIVE OF ANY CONSTRUCT

The following items are on data collection instruments used at intake in the Bronx study but were not selected for any construct (social support, family well being, quality of parenting).

1. Are most of the fixtures (in the child's home) in working condition?
2. Indicate the child's classification according to his/her Committee on Special Education.
    a. Emotionally disturbed
    b. Learning disabled
    c. Multiply handicapped
    d. Referred, not classified
    e. Other
    f. None
3. Does the child have any unmet recreational needs? If YES, what are they?
4. Does the child participate in community recreational activities?
5. Does the family have any unmet housing needs?
6. Child custody status
    a. Biological parents
    b. Adoptive parents
    c. Other family or legal guardian

d. Local DSS

e. DFY

f. Emancipated minor

g. Unknown

7. Primary Language

a. English

b. Spanish

c. Other

d. Don't know

8. Number of children (age 0 – 17) residing in household

9. For each program listed below, indicate whether the child has ever been enrolled in the program or is currently enrolled in the program.

a. Intensive case management

b. Day treatment

c. Home based crisis intervention

d. Family support services

e. Private therapy

f. Individual therapy

g. Other

10. Date of Principal Diagnosis

11. Does the child have access to routine medical care and treatment?

12. Is the child currently on psychiatric medication?

13. Does the child have any unmet medical needs?

14. If yes, what are they?

15. How adequate is the child's educational placement?

    a. Child's educational needs are adequately met.

    b. Some problems meeting child's education needs.

    c. Serious problems meeting the child's educational needs.

16. Last school grade completed (note if ungraded)

17. Present educational placement

    a. Regular class in age appropriate grade

    b. Regular class, but behind at least one grade

    c. Special class for students with handicapping conditions

    d. Residential school for educationally (emotionally) handicapped

    e. Vocational training only

    f. Part-time vocational/educational

    g. Not enrolled in school

    h. High school graduate/GED

    i. Day treatment

    j. Home instruction

    k. Other

18. Child date of birth

19. Can food and other basic necessities be purchased nearby (family residence)?

20. Is the child of Hispanic origin?

21. Race

    a. White

    b. Black

    c. Asian/Pacific Islander

    d. Native American/native Alaskan

    e. Other

    f. Unknown

22. Admission date to program

23. Child sex

24. Sources of Family Income

25. Referral source

26. What is the child's current living situation?

27. What type of health care coverage does the client currently have?

28. Number of children in family in out-of-home placement.

29. Diagnostic system

    a. DSM-III-R

    b. DSM-III

30. Mother figure in home

    a. Age

    b. Marital Status

    c. Hispanic origin

d. Race

e. Education level

f. Employment status

31. Father figure in home

a. Age

b. Marital Status

c. Hispanic origin

d. Race

e. Education level

f. Employment status

32. Characteristic of mother and/or father

a. Alcohol abuse

33. Characteristic of mother and/or father

a. Drug use

34. Characteristic of mother and/or father

a. Mental retardation

35. What characteristics does the child possess that will assist him in school?

(Check all that apply, a check means a strong positive)

a. Is motivated to attend school or work

b. Able to express self verbally

c. Is motivated to learn

d. Learns new things easily

e. Is able to complete assigned tasks.

f. Follows instructions

g. Sets realistic goals

h. Is willing to work hard

i. Concentrates

j. Responds positively to authority

36. Substance use (of child) (Rater needs to choose among severe, moderate, mild, or average). Example (average):

a. No use of substances

b. Has only "tried" them/does not use them

c. Occasional use with no negative consequences

37. Set of questions referring to other children currently living in the same household as the identified child.

a. Age

b. Sex

c. Relationship to mother figure

d. Relationship to father figure

38. Gross annual income

$5000 and under	$15,001-$20,000	$30,001-$35,000
$5,001-$10,000	$20,001-$25,000	$35,001-and over
10,001-$15,000	$25,001-$30,000	Unknown

39. Check all areas in which the client (child) is functionally impaired due to serious emotional disturbance:

    Self-care

    Social relationships/functioning

    Cognitive functioning/communication functioning

    Self-direction

    Motor functioning

40. Has the child been served in any of the settings listed below due to psychiatric impairment? For each option, indicate if the child has been served, and the frequency of each treatment contact or placement.

    a. Emergency room contacts (for psychiatric treatment)
    b. General hospital psychiatric unit admission
    c. State-operated inpatient psychiatric center
    d. Private psychiatric facility admission
    e. Treatment for alcohol abuse
    f. Treatment for substance abuse
    g. Inpatient/outpatient treatment for mental retardation/developmental disability
    h. Foster care
    i. Group home
    j. Residential treatment center
    k. Residential treatment facility

l. Children and youth community residence

m. Family-based treatment program

n. Residential school

41. Is the family's housing safe?

42. Is the neighborhood safe?

43. Is the school building safe?

44. Is the neighborhood around the school safe?

45. Indicate whether the child currently displays the following symptoms and behaviors or has displayed them within the previous 18 months.

a. Suicidal ideation

b. Psychotic symptoms

c. Depression

d. Anxiety

e. Phobias

f. Dangerous to self

g. Dangerous to others

h. Destruction of property

i. Cruelty to animals

j. Temper tantrums

k. Fire setting

l. Sleep disorders

m. Enuresis

n. Encopresis

o. Physical complaints

p. Alcohol abuse

q. Substance abuse

r. Developmental delays

s. Sexual acting out

t. Suicide attempt

u. Verbally aggressive

v. Sexually aggressive

w. Sexually inappropriate

x. Physically aggressive

y. Eating disorder

z. Other

46. Child Behavior Toward Others/Self (Rater needs to choose among severe, moderate, mild, or average). Example (average):

    a. Relates satisfactorily to others

    b. Not impulsive; shows good judgment in life decisions

    c. Is able to establish and sustain a normal range of age-appropriate relationships.

47. Child Mood/Emotion (Rater needs to choose among severe, moderate, mild, or average). Example (average):

    a. Feels normal distress, but daily life is not interrupted.

b. Considers self a "worthy person".

c. Can express strong emotions appropriately.

48. Child Role Performance (Rater needs to choose among severe, moderate, mild, or average). Example (average):

A. Reasonably comfortable and competent in relevant roles.

B. Minor problems satisfactorily resolved.