THE COPING PROCESS OF A PARENT WHO HAS AN ADULT CHILD WITH SCHIZOPHRENIA

by

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Abstract

This exploratory study investigated the coping process of parents who have adult sons or daughters with schizophrenia. The inquiry was framed by individual stress and coping theory with attention to family context. It investigated predictive relationships among illness characteristics, demographics, individual and family level resources, situational appraisals, and coping strategies. The sample was comprised of 109 mothers and 32 fathers recruited through notices in newspapers and the Schizophrenia newsletter, and through personal appeals to support groups. Questionnaires, along with stamped, self-addressed, return envelopes, were distributed personally or by mail. Either the mother or the father of a person with schizophrenia was considered eligible for participation. Measures used for assessment were those with established psychometric properties. A correlations matrix was examined to identify those variables that were significantly associated with the dependent variables of interest. The relationships among these relevant variables were further analyzed using a standard multiple regression procedure. The results showed support for the chosen theoretical perspective. A parents' coping process was shown to be multi-determinant and interactive. Both illness characteristics and demographics were predictive of primary appraisals (perceptions of how the illness affected the parent's life) and of coping strategies; individual and family resources predicted primary appraisals, secondary appraisals of controllability, and ways of coping; predictive relationships also existed among primary appraisals, secondary appraisals, and ways of coping. The

importance of a direct influence of family members on the parental coping process was indicated.

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Chapter I

Introduction

Schizophrenia is a fundamental disturbance of personality, the mere mention of which tends to evoke public misapprehension. That the disturbance is little understood is no wonder; its manifestations are diverse and difficult to comprehend. Its most prominent symptoms are formal thought disorder, auditory hallucinations, delusions, and inappropriate or flat affect; its most frequent symptom, noted in almost all persons with the illness, is lack of insight (Straube & Oades, 1992).

Whatever the signs, schizophrenia is considered to be a devastating disorder. To have a family member with this affliction has been described as an experience of unresolved, prolonged grief (Schulz, House, & Andrews, 1986), worse than if that relative had a terminal illness (Torrey, 1983). Descriptions of the family ordeal are a litany of anguish: despair, loss, sadness, pain, guilt, anger, and resentment (Creer & Wing, 1974; Wasow, 1985).

The family relationship with schizophrenia, moreover, is not always regarded with sympathy; perceptions of parental involvement include blame, shame, and dysfunction (Johnson, 1990; Torrey, 1983). Despite this emotional onslaught, parents predominate as caregivers to persons with mental illness (Lefley, 1987c; Tausig, Fisher, & Tessler, 1992). The general question prompting this study was, "How do parents cope with such an experience?"

Coping is a process whereby people attempt, through cognitive and behavioural efforts, to manage demands they

perceive to be taxing or exceeding their resources (Lazarus & Folkman, 1984). Although an assessment of coping focuses on the management of specific demands, such an evaluation also must attend to social context and to clustering of secondary stressors (Pearlin, 1991). In order, then, to respond to the question of parental coping with schizophrenia, one must understand the circumstances within which these coping efforts transpire. One must appreciate both family resources and the demands of the situation, including the variability that exists in family (heterogeneity in family structure, family type, and family circumstance) and variation in illness (in stage, course, symptoms, and severity). An exploration of this diversity is required, not to suggest a picture of unpredictable chaos, but to provide a contextual backdrop for possible scenarios of experience within which coping efforts ensue.

It has been suggested that "coping is best understood when viewed within the larger context of the stress process" (Pearlin, 1991, p. 267). In this study, a dynamic model of family adaptation to stress is used as a meaningful framework that locates parental coping within a complex stress process and organizes the variability of family circumstance and response noted in the literature. Individual stress and coping theory is utilized to focus on parental coping efforts and their correlates.

The significance of such information on parental coping becomes apparent when we understand that for many adults with schizophrenia, parents are important caregivers and a

main source of social support (Lefley, 1987c). Parental coping in these circumstances has implications for the mental health of all family members.

Purpose

The purpose of this study is to examine parental coping efforts and their relationships to various aspects of family circumstance. Informed by coping literature, this study introduces a broadened context within which to consider mothers' and fathers' attempts to manage their situations, linking their endeavors to parental appraisals of demands and resources. To facilitate such an appreciation of parental coping, I present a brief historical overview, indicating the various ways in which the family and schizophrenia have been linked over time. I then address the diversity that is evident in both family and illness. Next, a model of family adaptation to stress is outlined that is able to incorporate the relationships that have been found within this diversity and that is able to situate individual coping within the family context. To illuminate the parental coping process and to facilitate a clarification of concepts, a model of individual stress, appraisal, and coping is employed. The empirical findings in the literature on family response to schizophrenia is identified within this latter framework.

The design of the study then is detailed along with its specific research questions, its methodology and its results. I address the study's limitations and strengths and suggest some interpretations of the findings. Some

implications for social science and for family support networks are discussed. The conclusion includes suggestions for further research in this area.

Chapter II

Schizophrenia and the Family: A Study of Diversity

Perceptions of schizophrenia, and the family's relationship to the illness, have changed dramatically over time. Diversity also is evident in the illness, its symptoms and severity, as well as in families, their type and structure.

Variation in Perceptions: Historical Overview

During colonial times, mental disturbance was considered to be punishment for past transgressions (Deutsch, 1949); families were expected to contend with mental illness, as with any act of God, with forbearance (Terkelsen, 1990). Family responsibility for the care of the mentally ill placed a great strain on the family unit which society required to be productive and economically independent (Hatfield, 1987a).

During the first half of the nineteenth century, there was a shift in social perception of mental disturbance. It was thought to result from chaotic social conditions rather than divine retribution (Terkelsen, 1990). This philosophical shift was accompanied by the establishment of institutions in which the mentally ill could be isolated and given relief from social stresses. During this period, "the family was looked on as an indirect, passive agent to the onset of mental illness. If the principle cause of insanity was the disarray of American society, the family was at fault for not having shielded the patient sufficiently " (Terkelsen, 1990, p. 6). Family contact was discouraged;

the isolation of the patient was deemed important lest relatives reinfect the patient with germs of anxiety.

By the twentieth century, the perception of the family's role in mental illness had shifted from that of passive agent to offending agent. During recent decades, other views of family involvement have arisen as well. A recent search of the social science literature by Gubman and Tessler (1987) has identified three themes in twentieth century analyses of the family-schizophrenia relationship: family interaction and communication as causal agent, family as rehabilitation agent, and family as burden-bearer.

Family as Causal Agent

Psychoanalytically based theories implicated the family in the etiology of the illness. Attention was focused on family interaction, on mother-child and spousal relationships. The interaction approach first appeared in the literature with Hadju-Gines' (1940) description of mothers of schizophrenic women as cold and sadistic, and continued later with Fromm-Reichmann's (1948) characterization of them as rejecting and schizophrenogetic (Terkelsen, 1990). Unfortunately, the term, "schizophrenogetic mother ...(became) the battle cry upon which the family was implicated as a major factor in driving family members into the fearsome world of schizophrenia" (Falloon, Boyd, & McGill, 1984, p. 4). Aspects of treatment approaches based on this paradigm are still prevalent today (Terkelsen, 1983).

The work of Lidz, Cornelison, Fleck, and Terry (1957) found families with a schizophrenic member to have distorted role structures, marital discord, and communication difficulties. Lidz and his colleagues concluded the severely disturbed marital and parental relationships contributed to the development of the illness (Falloon et al., 1984). More recently, Lidz and Fleck (1985) have acknowledged a genetic component to schizophrenia, but regard it as "a predisposition to symbolic distortion" (p. 190) that together with intrafamilial influences, contribute to the etiology of the illness.

Bowen (1961) also studied interaction patterns in families of patients diagnosed with schizophrenia. He viewed schizophrenia as the manifestation, in one member, of a process that involved the entire family system. He noted "intense conflict and emotional turmoil" in the family, a state he described as "undifferentiated ego mass" (cited in Falloon et al., 1984, p. 8).

Communication theories also have placed emphasis upon family interaction in the etiology of schizophrenia. The double bind hypothesis (Bateson, Jackson, Haley, & Weakland, 1956) focussed on the communication patterns in families that create a special type of learning context for children, requiring them to deny certain aspects of reality (Falloon et al., 1984). This theory saw schizophrenia as a learned response to incompatible messages and as a specific pattern of communication rather than a mental illness.

Studies of communication deviance, such as those of Wynne and Singer (1963) focussed attention on abnormal communication styles of parents, that were considered to cause difficulties in a child's ability to focus attention and understand meaning. These difficulties were thought to impair the development of effective reality testing and perceptual ability, thus predisposing the child to schizophrenia (Falloon et al., 1984). This theory of communication deviance saw disordered communication as the core problem of families with mentally ill relatives (Hatfield, 1987a).

More recent genetic and biological studies, however, suggest schizophrenia has an inherited component (see Straube & Oades, 1992). Twin and adoptive studies have revealed a definitive genetic link (Falloon et al., 1984), and physiological investigations have found structural and functional brain abnormalities in persons with schizophrenia (Straube & Oades, 1992; Torrey, 1983).

Currently, the consensus among most schizophrenia experts, is that a predisposition to interact with the environment in a special way is inherited, making the individual vulnerable to the disorder (Hatfield, 1987a). The illness has been characterized as "a dynamic interplay among patient, family, and the flux of life events" (Gottesman, 1991, p. 166). The most effective means to reduce the risk of schizophrenia in those who are genetically predisposed is considered to be a supportive, nurturing, problem-solving family environment; in

established cases of schizophrenia, the family environment is thought to influence the course of the condition (Falloon et al., 1984). Although the evidence of a genetic basis for schizophrenia may relieve some families of the guilt and shame associated with their role as causal agents of the illness (Terkelsen, 1990), families are still considered to be responsible for the successful rehabilitation of the mentally ill (Lefley, 1987c).

Family as Rehabilitation Agent

Research into the biological parameters of schizophrenia and the development of neuroleptic drugs have permitted community care of persons with schizophrenia. The family as caregiver to the mentally ill has been recognized, as supervision of deinstitutionalized patients has increasingly fallen upon families (Atkinson, 1986; Schulz et al., 1986). Whereas the provision of assistance and support is a normative family activity, the extraordinary care that is required by a family member who has schizophrenia calls for great amounts of time and energy in a caregiving role that is unanticipated (Biegel, Sales, & Schulz, 1991) and that requires knowledge and support for its execution. Professional concern, however, has concentrated more on levels of family stress and emotional expression and their effect on the rehospitalization of the family member than on the family's need for information and assistance with provision of care (Lefley, 1992).

The maintenance on medication of patients in the community does not preclude a reoccurrence of schizophrenic

episodes. A stress vulnerability model has been applied to schizophrenia (Goldstein & Strachan, 1987). Investigations into patient relapse have focussed on the negative features of family relationships; the term, expressed emotion (EE) has been used to describe the relatives' emotional response to the patient, their expressions of criticism, hostility, and emotional overinvolvement (Falloon & McGill, 1985). The high-EE of at least one family member has been found to be associated with more frequent relapse of the patient (Lefley, 1992; Vaughn, Snyder, Jones, Freeman, & Falloon, 1984). One very recent examination of the relationships among the components of expressed emotion and patient symptomatology, however, produced a pattern of results consistent with a more complex perspective of family interaction than that provided by the traditional diathesis/stress perspective (see Cole, Kane, Zastowny, Grolnick, & Lehman, 1993). Cole et al. found patient outcome, the number of weeks the patient remained out of hospital, to be essentially determined by patient function at discharge and not affected by the EE index.

The notion that the emotional environment of the family may be hazardous for a person who is recovering from an episode of schizophrenia is reminiscent of the above mentioned contagion theory of the early 19th century. It has led to misapplication in clinical practice (Falloon, 1986); emotionally involved families have been viewed as dysfunctional, requiring therapeutic intervention (Johnson, 1990), a perspective which has added to families' feelings

of guilt and shame (Torrey, 1983). Falloon and McGill (1985) have suggested that this perception of the family-schizophrenia relationship is yet another example of a linear causal hypothesis being applied to a complex interactional variable.

A recent consideration of the concept, expressed emotion, has queried its application to whole families, as well as its trait versus state nature, and has questioned the advisability of a focus on relapse as the sole outcome variable, ignoring the patient's social functioning and quality of life (see Lefley, 1992). Lefley asserts that little is known of the correlates of low levels of expressed emotion. It may reflect tolerance and patience; however, it also may indicate excessive permissiveness or apathy resulting in understimulation and social withdrawal. It has been suggested there may be antecedent differences in patients that are correlates of both relatives' expressed emotion and patient predisposition to relapse (Lefley, 1992), and that high levels of expressed emotion may be an understandable familial reaction to extremely difficult situations and behaviors (Lamb, 1990). Although parental overinvolvement may worsen the course of schizophrenia, the enduring positive interest of relatives is thought to prevent the affective blunting and social withdrawal of the patient (El-Islam, 1979), and the stimulation of high-EE households may be considered a contribution to his/her social rehabilitation (Falloon & McGill, 1985). This perception of reciprocal influence in the family-illness

relationship highlights the consideration of family as burden bearer.

Family as Burden Bearer

The difficulties experienced by families caring for a member with schizophrenia were long in being recognized, partly because of the isolation and stigmatization of the mentally ill and their relatives, as well as the misinterpretation of the family theories of illness etiology (Katschnig & Konieczna, 1987). Introducing the concept of "family burden" in the community care of persons with schizophrenia, Grad and Sainsbury (1963) found family members to experience severe problems of management, with social and work interference and negative effects on health and financial status (Thompson & Doll, 1982). Recognizing that families also suffered an emotional toll, Hoenig and Hamilton (1966) distinguished between objective and subjective burden. They defined subjective burden as what relatives felt about the patients' presence in the home and their feelings of being burdened. The families that were studied reported greater objective burden (80%), defined as general household disruption and financial loss, than subjective feelings of being burdened (60%). Many investigations of the family experience with schizophrenia have utilized this subjective/objective distinction, with a further delineation of the affective aspects of the subjective dimension (Thompson & Doll, 1982). Emotional reactions of family members have been found to include anxiety, guilt, depression, irritation, and anger (Creer &

Wing, 1974). The subjective burden of parents with adult children who have schizophrenia has been compared to that of adult children with parents who have Alzheimer's disease (see Lefley, 1987b; Wasow, 1985). Both include feelings of "despair, loss, sadness, pain, exhaustion, pity, guilt, resentment, helplessness, embarrassment, fear, and chronic sorrow" (Wasow, 1985, p. 714).

Other studies have found that families dealing with schizophrenia live with "severe physical and psychological drain" (Hatfield, 1978, p. 358), household disruption, and tense family relationships (Falloon, Hardesty, & McGill, 1985), and intrafamilial conflict (Creer & Wing, 1974). Thompson and Doll (1982) found the most common items having to do with families' objective burden reflected the inconveniences of the care-giving role, whereas feelings of overload, embarrassment, and entrapment expressed the subjective dimension. These authors concluded that there is a universal experience of social and emotional costs for families coping with the mentally ill.

It is interesting to consider that while the family unit, by definition, contains the family member with the illness, studies of the family and schizophrenia generally exclude this person. One inclusive study found a difference between attitudes of well family members and patients; 92% of parents compared to 25% of patients identified schizophrenia as a disorder associated with extreme burden (Schulz et al., 1982). Such a disparity in perceptions

might warrant further investigation since it would seem to have implications for "family" coping.

Although the psychosocial costs may be universal, the family experience is not uniform; within surveys, a considerable range of responses to questions of burden is apparent (Johnson, 1990). Between surveys, as well, the overall perceptions of burden vary from "generally mild to moderate" (Crotty & Kulys, 1986) to "considerable" (Winefield & Harvey, 1993). It would be useful to consider the circumstances under which greater burden is perceived.

Variability of Circumstance

Both "family" and "schizophrenia" are terms that include a wide range of variability. The investigations into family burden need to account for the stage and course of the illness (Gubman & Tessler, 1987; Rolland, 1989), the severity of the illness (Falloon et al., 1984), and the heterogeneity of families (McFarlane, 1990).

Diversity within the Illness

Schizophrenia is an illness that varies in onset, symptoms, course, and severity. Its most predictable aspect is age of onset. Three-quarters of all cases begin in the 16 to 25 age group with onset approximately 5 years earlier for men than for women (Torrey, 1983). It is important to note, however, that vulnerability for schizophrenia extends throughout the life course (Cohler & Ferrono, 1987).

Two syndromes of schizophrenia can been distinguished, the acute syndrome with florid or positive symptoms and the chronic syndrome with negative or deficit symptoms, each

with its own characteristics and implications for course and outcome (Wing, 1987b). Positive symptoms include delusions, hallucinations, and thought interference; negative symptoms include emotional withdrawal, blunting of affect, poverty of thought and speech, apathy, and underactivity (Falloon, McGill, & Hardesty, 1985). The syndromes can appear separately or together and in varying degrees of severity. The illness more often begins insidiously with negative symptoms that are difficult to distinguish from exaggerations of normal, adolescent and adult feelings and behaviours (Hardesty, Falloon, & Shirin, 1985; Torrey, 1983). Acute onset with florid symptoms is easier to recognize. Schizophrenia symptoms vary in severity; they can be slightly, moderately, severely, or absolutely disabling (Gottesman, 1991).

One cannot speak about the "natural" course of schizophrenia (Wing, 1987a). A great variety of developmental courses can be encountered, although it is most typically one of remission and exacerbation (Falloon & McGill, 1985). In most cases, a chronic onset is followed by a more chronic course and an acute onset with a more fluctuating course, but many variations have been observed (Straube & Oades, 1992).

Longitudinal studies of patient outcome vary in reported recovery rates according to the kinds of patients selected for follow-up. Generally it is thought that one-third of all patients diagnosed with schizophrenia will completely recover, one-third will improve but not

completely recover, and the final third will not improve (Torrey, 1983). Research data suggest schizophrenia is a chronic illness that may remit or ameliorate over time (Harding, 1991). A review of six major long-term studies has shown that one-half or more of the patients significantly improve and/or recover, while the illness has an episodic nature in the other half (Harding, 1991). It has been suggested, however, that those patients considered recovered may not return to a level of predisease functioning (Gottesman, 1991), and even a restoration of patients to their premorbid levels of functioning may leave gross deficits in social role performance (Falloon, McGill, & Hardesty, 1985).

Some writers take issue with the concept of chronicity (see Jimenez, 1988). Although such a conception may be accurate for some people with schizophrenia, "the assumption of chronicity accompanying a diagnosis of severe mental disorder, particularly schizophrenia, carries with it an inevitable sense of hopelessness and diminished expectation....(It) precludes the notion of recovery and therefore has critical implications for practice and policy" (Jimenez, 1988, pp. 628-629). It could be suggested that such an assumption also would have implications for parental response to a diagnosis of schizophrenia in an adult child.

This heterogeneity of symptoms, course of illness, and outcome has prompted the unanswered question of whether schizophrenia is one disease or a group of loosely connected diseases (Straube & Oades, 1992). It is generally believed,

however, to be essentially one entity with a whole continuum of manifestations (Gottesman, 1991). It can be seen that the consequences of the disorder for the family would differ according to the different manifestations of the illness (Cole et al., 1993; Gubman & Tessler, 1987).

Family Diversity

Even with similarities in the degree and type of objective burden, families have been seen to respond differently, an observation that is not surprising considering the heterogeneity of families (McFarlane, 1990). The family system can be defined very broadly with extensive boundaries including many generations. In this literature review, family will be restricted to parents and siblings of the person with schizophrenia. Interestingly, a study including data from epidemiological field surveys and clinical interviews found that of all relatives (parent, spouse, child, sibling, and extended family member) of persons with mental health problems, the highest measures of depression and anxiety, although not of psychosocial dysfunction, were reported by parents (see Arey & Warheit, 1980). Because of probable age of onset of schizophrenia, family members coping with first symptoms and diagnosis, especially that of young men, are most often those of family of origin (Falloon et al., 1984). Because an illness such as schizophrenia reduces a person's probability of marriage, parents and/or siblings may remain the family caregiving unit for those with early onset, whether or not residence is

shared (Carpentier, Lesage, Goulet, Lalonde, & Renaud, 1992; Torrey, 1983).

These families vary in form and across time. Only a single versus dual-parent distinction has been utilized in the literature on family response to schizophrenia; separated, divorced, and remarried family forms, each with its particular interactional dynamics, have not been differentiated. These families of origin may be composed of mid-life parents with other school-aged children, those with other children who have been "launched", or older parents coping with issues of their own aging. Because family role relationships vary at these different life stages, adaptation problems and coping resolutions also will differ (Biegel et al., 1991).

At any stage of family development, however, adaptation to stressful life events may be mediated by personal characteristics of family members as well as by family strengths (McCubbin & McCubbin, 1991). Some family types are considered to be more resilient to external demands. McCubbin and McCubbin (1991, p. 6) define a family's typology as "a set of basic attributes about the family system which characterizes and explains how a family system typically appraises, operates and/or behaves". Olson, Lavee, and McCubbin (1988) have developed the Circumplex Model of Family Systems based on three major family dimensions: cohesion, adaptability or flexibility, and communication. Cohesion is defined as the emotional bonding that family members have toward one another; flexibility is

defined as the ability of the family system to adapt to changing role relationships and relationship rules; communication is considered to be a facilitating factor in the family's movement along the dimensions of cohesion and flexibility.

Families can be categorized into four types depending on their levels of cohesion and flexibility: (a) flexible-separated - high in adaptability and low on cohesion, (b) structured-separated - low in both adaptability and cohesion, (c) flexible-connected - high in adaptability and cohesion, (d) structured-connected - low in adaptability and high in cohesion (Lavee & Olson, 1991). These family types are considered to differ in the resources available for response to stressful life events and normative transitions (Olson et al., 1988).

Families also vary in socio-economic status, ethnicity, and experience, all of which will affect the influence of the illness on the family. In addition, a family is not an amorphous mass with a unified reaction to a stimulus. The schizophrenia of a family member will be experienced differently according to different family role relationships, that is, mother, father, or sibling (Gubman & Tessler, 1987; Lefley, 1993).

Before examining some empirical support for the relationships within this variability, it would be helpful to consider theoretical approaches to the study of stress and coping on both the individual and family levels. Such a consideration will provide a theoretical focus for study.

This digression hopefully will add clarity through an understanding of the coping process and a definition of concepts. Stress and coping theory offers a language for a discussion of the literature in a theoretical relevant way, allows for a meaningful organization of empirical findings, situates individual coping within the family context, and identifies some areas of weakness in past research.

Chapter III

Theoretical Framework: Stress and Coping

The focus of this study is coping. As Pearlin (1991) advises, coping is best understood when viewed within the stress process. The relationships that have been found empirically to exist within the variability of family and illness, therefore, may be most meaningful when organized by stress and coping theory.

Although the concept of stress is widely used, it has been defined variously as stimulus and as response (Monat & Lazarus, 1985). This study follows the definition of Lazarus and Folkman (1984, p. 19), that specifies psychological stress to be "the relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being." Lazarus and Folkman conceptualize coping as a person's efforts to manage such stress.

The family coping response in instances of a young child's physical illness or disability, and caregiving in aging, have been widely investigated (for reviews see Horowitz, 1985; Knafl & Deatrick, 1987), and a number of stress and coping models have been applied to caregiver experience (see Biegel et al., 1991; Lefley, 1990; Pearlin, Mullan, Semple, & Skaff, 1990). These various models have agreed on many of the relevant concepts.

When choosing a theoretical model, it is important to keep in mind the purpose for which it is intended. This study required a model that would satisfy a double purpose:

(a) to organize and make more comprehensible the variability that is apparent in the literature on the family response to schizophrenia, and (b) to locate individual coping within the family context.

The Resiliency Model of Family Stress, Adjustment, and Adaptation (McCubbin & McCubbin, 1991) is able to incorporate, within a developmental framework, much of the variability that has been found to be relevant to the family experience with schizophrenia. This model is compatible with the theorizing of scholars who focus on individual stress and coping. It attends to the appraisal of demands and resources featured by Lazarus and Folkman (1984) in their work, and accommodates the pile up of demands and secondary stressors arising from the situational context that is emphasized by Pearlin (1989). Particularly, it places the individual within the family context with its important role relationships, vulnerabilities, and strengths.

The fundamental assumptions of family life upon which this model is based are the following:

(1) families face hardships and changes as a natural and predictable aspect of family life over the life cycle;

(2) families develop basic strengths and capabilities designed to foster the growth and development of family members and the family unit and to protect the family from major disruptions in the face of family transitions and changes;

(3) families develop basic and unique strengths and capabilities designed to protect the family from unexpected or non-normative stressors and strains and to foster the family's adaptation following a family crisis or major transition and change; and

(4) families benefit from and contribute to the network of relationships and resources in the community, particularly during periods of family stress and crises (McCubbin & McCubbin, 1991, p. 3).

The Resiliency Model of Family Stress, Adjustment, and Adaptation (McCubbin & McCubbin, 1991) attempts to describe the family experience of stress at two phases of response: the initial adjustment period and the later adaptation phase. In this way the model not only integrates the heterogeneity of families and their situations, and the interaction among these factors, but also accommodates the variability of these components over time. The model illustrates that family adjustment and adaptation to a stressful situation (X) is determined by the interaction among the pile-up of demands (A) and family vulnerability (V), family type (T), available resources (B), situational appraisals (C) and adaptive, problem solving coping (PSC) (see Figure E1).

The model indicates a highly interactive process with reciprocal influences among the components. Adaptation at time one can become a strength or a vulnerability at time

two. It has been cautioned elsewhere, however, that any model of the stress process should be regarded as "an heuristic device rather than as a literal reflection of realities and the pathways that join them, many of which are still unclear" (Pearlin et al., 1990, p. 591).

The Resiliency Model of Family Stress, Adjustment, and Adaptation (McCubbin & McCubbin, 1991) addresses the distinction between individual as opposed to family group resources, perceptions, and responses. It values both levels of response and sees them, in a systems perspective, as inextricably linked. Elsewhere, as well, family stress theory attends to the importance of both individual and family levels of demands and capabilities (see Boss, 1988; Patterson & Garwick, 1994). This model, therefore, can be considered a useful framework within which to view the family experience with schizophrenia, a framework which is able to locate individual and family coping efforts within a complex, interactive stress response.

As mentioned above, the work of McCubbin and McCubbin (1991) on stress and coping is compatible with that of other scholars. Although each approach has a different focus, together they share many similar concepts. I suggest through my study that these different approaches can be seen to inform and enrich one another. The work of these other scholars, therefore, is included in order to facilitate conceptual clarification.

Clarification of Concepts

Pearlin (1985) asserts that our interest in coping far exceeds our knowledge about it. He suggests that because it has been approached from a variety of perspectives and disciplines, the knowledge gained has not been cumulative. As an example of conceptual difference, consider the following. Haan (1985) distinguishes coping as an ego process separate from defense mechanisms and evaluates it more favorably; White (1985) views coping and defense both as legitimate but separate strategies of adaptation under difficult conditions; whereas Lazarus and Folkman (1984) perceive defense as one of many coping strategies.

In their theorizing about the coping process, McCubbin and McCubbin (1991) include areas of emphasis similar to and compatible with those found in the social-psychological approach of Lazarus and Folkman (1984), in the sociological perspectives of Pearlin (1989a), and Pearlin and Schooler (1978), and in the work of other family theorists. It would be helpful, then, to examine the concept of coping at both the individual and family levels, as it is explicated by these scholars. An attempt will be made to clarify the concept by examining definitions, functions, and assessment of coping.

Coping: Compatible Definitions

Lazarus and Folkman (1984, p. 141) define individual coping as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of

the person". In "unpacking" this definition, the above authors note the following characteristics: (a) coping is a process that changes in response to the situation, (b) coping is a deliberate activity with a specific focus rather than a generalized automatic response, and (c) coping is any attempt to manage the situation and is not to be confounded with outcome or mastery. In this respect, coping can include "minimizing, avoiding, tolerating, and accepting the stressful conditions" as well as attempts to master them (Lazarus & Folkman, 1984, p. 142).

This definition of coping is comparable to that of McCubbin and McCubbin (1991, p. 22) in which coping behavior is seen as "a specific effort (covert or overt) by which an individual (or a group of individuals such as the family) attempts to reduce or manage a demand on the family system".

Similarly, family system theorists, Patterson and Garwick (1994, p. 137), define family coping as "a specific effort by an individual or family that is directed at maintaining or restoring the balance between demands and resources." They see coping behaviours, along with resources, as family capabilities. These scholars do not perceive coping to be stressor specific. They see families continuously managing a pileup of demands with not a single source responsible for the imbalance between demands and resources, even though one source may be most prominent and the one that is appraised as the problem.

Boss (1988, pp. 60-61) defines family coping as "the cognitive, affective, and behavioral process by which

individuals and their family system as a whole manage rather then eradicate stressful events or situations." She insists that to be considered coping or management, this process must have no detrimental effects on any family member.

In their investigation of individuals' coping responses to normative life-problems, Pearlin and Schooler (1978, p. 3) define coping as "any response to external life-strains that serves to prevent, avoid, or control emotional distress." Coping responses may be either individuals' actions or their perceptions, elements of which may be socially learned (Pearlin, 1989a). Integral to these definitions of coping are the concepts of demands or stressors, resources, and appraisal.

Demands/Stressors

Lazarus and Folkman (1984) consider a stressor to be any environmental situation or event that is construed by the individual as taxing or overwhelming his or her resources and endangering his or her well-being. For these scholars, not all demands are stressors. They must be perceived as such by the individual. One's perception or appraisal of the situation, therefore, is a critical factor.

Pearlin and Schooler (1978, p. 3) consider stressor and strain to be interchangeable concepts that indicate "those enduring problems that have the potential for arousing threat." Pearlin (1989a) addresses two types of stressors: undesired, non-normative events, and chronic strains. He emphasizes the social character of eventful stress, pointing out that many stressful events are rooted in a person's

social and economic status. He defines chronic strains as those enduring problems, conflicts, and threats that people face in their daily lives. He asserts that these latter strains, which occur within social roles, affect people because the roles themselves are important. He suggests that these primary stressors rarely occur singly; one event or strain tends to trigger other secondary strains. Clusters of stressors may develop. In addition, stressors experienced by one person can become problems for others who share the same role sets.

This sociological approach is compatible with that of family-stress theorists (see Boss, 1988; McCubbin & McCubbin 1991; Patterson & Garwick, 1994). McCubbin and McCubbin (1991) assert that there are at least five broad types of stressors which contribute to a pile up of demands on the family system and to family vulnerability: (a) the initial stressor and its hardships, (b) normative transitions, including family life cycle changes, (c) prior strains, (d) the consequences of family efforts to cope, and (e) both intra-family and social ambiguity. Social ambiguity is thought to result from an absence of social programs and policies that guide family response in stressful situations.

In their family systems approach to chronic illness, Patterson and Garwick (1994) see similar demands arising from four aspects of the intersection of illness and family systems. (a) There are the characteristics of the chronic condition: the degree and type of incapacitation, the degree of visibility of the condition, the prognosis and course of

the illness, and the amount of distress experienced by the person who is ill. (b) There are demands arising from the impact of the illness on the family: financial strains, losses of family privacy and family time, problems with service providers, and caregiver strains. (c) There are demands associated with developmental interactions. Chronic illness can affect the developmental course of individuals within the family and of the family as a whole. (d) There also can be stress arising from other family sources that creates difficulties in managing the chronic illness.

These different approaches have in common the importance of the environment, or context, in the identification of stressors. There are similarities, as well, in the ways that resources have been conceptualized.

Resources

Lazarus and Folkman (1984) consider resources to be something one draws upon and uses to counter demands. They categorize resources into those of the person and those of the environment. Personal resources can be physical (health and energy), psychological (positive beliefs, such as positive thinking and an internal locus of control), and competencies (problem-solving and social skills). Resources of the environment are such things as social support and material resources. The availability of resources is considered to influence one's appraisal of the situation as well as one's choice of coping response.

Pearlin and Schooler (1978) also distinguish between social resources and psychological resources, and also

define resources not as what people do, but as what is available to them in developing their coping repertoires. They see social resources represented by people's interpersonal networks which may be potential sources of support. "Psychological resources are the personality characteristics that people draw upon to help them withstand threats posed by events and objects in their environment" (Pearlin & Schooler, 1978, p. 5). In their analysis, these authors focus on the personality characteristics of self-esteem, self-denigration, and mastery.

Family-stress theorists consider resources to be individual and collective strengths or assets that can be drawn upon in response to a demand or to multiple stressors (see Boss, 1988; McCubbin & McCubbin, 1991; Patterson & Garwick, 1994). They are obtainable from three potential sources: individual family members (for example, intelligence, self-esteem, and sense of mastery), the family unit (communication skills, cooperation, flexibility, cohesion), and the community (supportive relationships).

Relevant to a conceptualization of family level resources is the above discussion of family type. Family cohesion has been identified as an important dimension of family dynamics (Olson et al., 1988) with implications for family response to stressors. In a non-clinical population, more cohesive families have been found to have lower levels of strain and higher levels of well-being than do separated families (Olson et al., 1988). Flexibility, by itself, has not been found to have direct influence on family

resiliency; an interaction effect, however, has been found between flexibility and cohesion. Connected families with low flexibility and separated families with high flexibility have been seen to be more vulnerable to stress (Olson et al., 1988).

Stress vulnerability also is seen to be influenced by one's social support system. Because social support is considered to be a highly important resource, special attention to it is warranted.

Social support. Social support is generally differentiated from social network. Whereas social network is concerned with numbers and patterns of social relationships, social support implies a qualitative distinction. Lazarus and Folkman (1984) emphasize that to be considered a resource, the nature of the social relationship is important. It must be perceived as helpful; it also must be utilized. These scholars have shown that type of support-seeking changes from one stage to another of a stressful encounter, from initial information seeking to later emotional support seeking.

Pearlin (1989) acknowledges the distinction between one's totality of potential social resources and one's social support, seeing social support as the social resources that one actually uses in dealing with life problems. He stresses the importance, however, of linking the study of social supports more closely to the study of social networks, and of considering its interactional nature.

Particularly in families such attention is warranted. Family members generally are important sources of support to each other and yet they often are exposed to the same stressful circumstances. Revenson (1994, p. 123), in her discussion of marital coping with chronic illness, calls attention to the reciprocal relationship of husband and wife. "One must look not only at the passive reaction of one spouse to the other's coping behavior, but at how each spouse directly or covertly influences the other spouse's cognitions, emotions, and actions. For example, it is not enough to know that one partner was trying to be supportive; it is also critical to whether that support was perceived as helpful by the recipient". Eckenrode (1991, p. 5) suggests there may be "a certain degree of synchrony or orchestration that takes place as each person seeks to cope with a common stressor." Gottlieb and Wagner (1991, pp. 167-168) describe coping and support efforts in close relationships when both partners have been exposed to the same stressor:

> Both the supporter and the would-be recipient become involved in the process of comparing their emotional reactions to the event and responding to one another's coping efforts. They must concurrently deal with the demands imposed by the stressor and those imposed by each other's coping responses. Each faces the challenge of modulating his/her own ways of coping in order to avoid disrupting the partner's coping efforts and to gain his/her support. At the same time, as

providers of support, each must be careful not to allow his/her own needs for emotional regulation to dictate the types of support extended to the recipient.

Appraisal

Situational appraisal is an element of the stress process that is deemed to be highly important in both individual and family stress theory. Although different stress theorists assign various terms to this concept, such as, perception, appraisal, definition, or assessment, Boss (1988) suggests that all terms indicate the meaning of the event or situation for an individual or family.

The concept of appraisal has been clarified most thoroughly by Lazarus and Folkman (1984). These scholars consider individual cognitive appraisal to be "an evaluative process that determines why and to what extent a particular transaction or series of transactions between the person and the environment is stressful" (1984, p. 19). They distinguish between two types of cognitive appraisal: primary appraisal, that evaluates the significance of the person-environment relationship, and secondary appraisal, that assesses one's resources and options available to change it.

Primary appraisals that identify stressful situations include those of harm/loss, where the damage has already occurred; those of threat, which concern anticipated harms or losses; and those of challenge, which include a potential for gain or growth. These appraisals are accompanied by

characteristic emotions. "Harm/loss appraisals ... can generate feelings of sadness, anger, guilt, and relief, depending on the meaning of the harm or loss to the individual. Threat appraisals can generate feelings of worry, fear, and anxiety. Challenge can generate feelings of eagerness, hopefulness, and excitement" (Folkman et al., 1991, p. 241). These appraisals are not mutually exclusive; the same situation may be perceived as both a loss or threat and a challenge. With such complex appraisals, people are likely to report conflicting emotions. Whether a stressor is perceived as a loss, a threat, or a challenge, has been shown to have a significant effect on the choice of coping strategy (McCrae, 1984). Reappraisals occur with a changing situation or the receipt of new information.

A secondary appraisal "is a complex evaluative process that takes into account which coping options are available, the likelihood that a given coping option will accomplish what it is supposed to, and the likelihood that one can apply a particular strategy or set of strategies effectively" (Lazarus & Folkman, 1984, p. 35). The meaning and emotional quality of every encounter or situation is shaped by the convergence of primary appraisal and secondary appraisal (Folkman et al., 1991).

"Definition of the situation" is at the heart of the perspectives on which family stress theorists have built (Hansen & Johnson, 1979). Hill (1971) was the first family theorist to focus on the "meaning of the event" and later Reiss (1981) highlighted the family's "construction of

reality" (Boss, 1988). Alternatively, family theorists (see Reiss & Oliveri, 1983) have suggested the family's subjective definition of an event should be replaced by that of the community within which the family lives.

Similarly, Boss (1988, p. 19) stresses that "diverse backgrounds give us diverse perceptions." She asserts that the meaning families give to an event is the key to their appraisals of the situation, influencing both their vulnerability and their responses. Boss contends that family perceptions frequently differ from those of individual family members and insists that an appreciation of both is necessary to understand family stress.

McCubbin and McCubbin (1991) include family appraisals on three levels: (a) the family's appraisal of the specific stressor, (b) situational appraisals that include the family's assessments of their demands relative to their capabilities, and (c) global appraisals, a more stable assessment of how the family views its interrelationships among family members, as well as its relationship to the larger community. At the first level, family appraisal is the definition the family makes of the seriousness of the stressor. It is "the family's subjective definition of the stressor, accompanying hardships and their effect on the family (McCubbin & McCubbin, 1991, p. 11). This family outlook can vary from seeing a stressor as a challenge to be met or as an uncontrollable situation. At the third level, a global appraisal, or family schema, is a family's set of beliefs or assumptions about how its members relate to one

another and to the community. McCubbbin and McCubbin assert that although appraisals are held individually, they can be shared by a group and, similar to Reiss and Oliveri (1983) above, believe they are formed and shaped by the social context.

More recently, McCubbin, Thompson, Thompson, Elver, and McCubbin (1994) have drawn up a hierarchical ordering of five levels of appraisal processes for families in crisis.

Level 5. Family schema. An overarching, generalized informational structure of shared values, beliefs, goals, expectations, and priorities through which experiences are filtered.

Level 4. Family coherence. A dispositional world view that expresses the family's confidence that the world is comprehensible, manageable, and meaningful [following Antonovsky (1979, 1987)]. It shapes the degree to which the family is able to utilize its potential resources.

Level 3. Family paradigms. Beliefs and expectations shared by the family that guide its patterns of functioning in specific domains of family life.

Level 2. Situational appraisal. The family's shared definition of the stressor, its associated hardships, and the demands for change placed upon the family system.

Level 1. Stressor appraisal. The family's definition of the stressor and its severity.

McCubbin et al. (1994) suggest that generally families respond to stressful situations by relying upon their family paradigms, or usual patterns of functioning. In crisis

situations, however, all levels of appraisal are activated to promote changes in routines, roles, and expectations, and to attach to the experience a sense of meaning.

Patterson and Garwick (1994) emphasize three levels of family meanings, representing three levels of abstraction and stability, that shape family response. They suggest that "families, as a whole, construct and share meanings about (a) specific stressful situations, (b) their identity as a family, and (c) their view of the world" (p. 138). On the first level, "the meanings the family ascribes to what is happening to them (demands) and to what they have for dealing with it (capabilities) are critical factors in achieving balanced functioning" (p. 132). Individual family members, the family as a whole, as well as the community, are sources of demands and capabilities and together shape the meaning of a situation.

In his sociological perspective of stress, Pearlin (1989) attests to the importance of meanings attached to circumstances that render them powerful stressors for some individuals but not others. He believes that a person's values shape the importance and meaning of an experience. In other words, an experience is perceived to be a threat when it attacks what one defines "as important, desirable or to be cherished" (Pearlin, 1989, p. 249).

Influences on appraisal. Lazarus and Folkman (1984) suggest two, personal factors that influence one's appraisal: commitment, or what is important to an individual, and beliefs (similar to Pearlin's, 1989, values

and social role importance). Beliefs about personal control are said to be generally stress reducing and "existential beliefs enable people to create meaning and maintain hope in difficult circumstances" (Lazarus & Folkman, 1984, p. 80).

Family theorists and sociologists consider social values and belief systems to be highly influential in shaping the meaning of the situation (see Boss, 1988; Pearlin, 1989a). One's values and belief system are thought to be influenced by one's membership in a social group (Boss, 1988; McCubbin & McCubbin, 1991; Pearlin, 1989a; Reiss & Oliveri, 1983).

Relevant situational factors influencing appraisal are the novelty, predictability, and probability of the event, the temporal factors of imminence and duration, the ambiguity of the event/situation, and its timing in relation to the life cycle (Lazarus & Folkman, 1984). Hansen and Johnson (1979), in their reconceptualization of family stress theory, assert that the cognitive and/or evaluative uncertainty in situations is among their most stressful qualities. Some initial stress experienced by family members in difficult situations can result from such ambiguity precluding consistent coping efforts (Boss, 1988; McCubbin & McCubbin, 1991). Lazarus and Folkman (1984), however, suggest that ambiguity within a situation has a dual nature; it can intensify one's anxiety but also can be used to reduce threat by allowing different interpretations of a situation.

Appraisal operationalized. Boss (1988) asserts that although the family's perception of the situation is the most important part of the stress equation, it has been the least studied. It may be helpful to consider the ways in which the concept of appraisal has been operationalized by various scholars.

Folkman, Lazarus, Dunkel-Schetter, DeLongis, and Gruen (1986) operationalize primary appraisal as "the stakes a person has in a stressful encounter." From a review of subjects' responses to open-ended questions (see Folkman & Lazarus, 1980) and a review of the literature, six primary appraisal factors are identified: (a) threats to self-esteem, (b) threats to loved one's well being, (c) the threat of not achieving an important goal at work, (d) harm to one's own health, safety, or physical well-being, (e) financial strain, and (f) losing respect for someone else. Secondary appraisal is operationalized by Folkman et al. as "coping options." Subjects indicate the extent to which they perceive the situation to be one that they (a) could change or do something about, (b) had to accept, (c) needed to know more before they could act, or (d) had to hold back from doing what they wanted to do. This operationalization then, attempts to capture the individual's perceptions of the controllability of the situation.

Walker (1985, p. 832) asserts "those who study family stress continue to postulate the existence and importance of the family's definition of the event, even though it has yet to be operationalized or measured." There have, however,

been some recent attempts in this regard. For example, McCubbin and McCubbin (1991) discuss the family's definition of the seriousness of the stressor in terms of "positive appraisal" or "reframing." Yet there appears to be some conceptual overlap because coping scales developed by McCubbin and colleagues include items such as "reframing", and "maintaining an optimistic definition of the situation." Patterson and Garwick (1994), as well, in a qualitative analysis of families and chronic illness, speak of the family's attribution of meaning in terms of selective attention to positive aspects of the situation, while minimizing limitations or problems. There does not appear to be the maintenance of a clear distinction between the concepts of appraisal and coping.

At the more abstract levels of family appraisal, McCubbin and McCubbin (1991), McCubbin et al. (1994), and Patterson and Garwick (1994), following Antonovsky (1979, 1987), discuss "sense of coherence." Sense of coherence at the individual level has been operationally defined by Antonovsky (1979) as (a) comprehensibility (a predictable environment), (b) manageability (available resources), and (c) meaningfulness (demands worthy of engagement). In a study of army families' adaptation to relocation, Lavee, McCubbin, and Patterson (1985) operationalized coherence as a composite of family members' commitment to the Army mission, their sense of predictability, and the perception of "fit" between the family and the Army lifestyle. Family coherence also has been operationalized as the degree to

which families call upon their appraisal skills (in terms of acceptance, reframing, and belief in God) to manage stressful events and situations (McCubbin, Larsen, & Olson, 1982).

In their work on families and chronic illness, Patterson and Garwick (1994) have attempted through qualitative methods to understand the meanings that family members share about the illness and its impact on their lives. These scholars point out the need for new methods to operationalize family system variables. They mention the work of Reiss, Steinglass, and Howe (1993) in which "family paradigm" is operationalized through family interaction in a laboratory, problem-solving task. They assert we need further studies of how families share and construct meanings about illness and disability. This assertion is not far removed from that of Walker (1985, p. 833) who stresses that "what is important is not the 'family's ' definition of the stressor but an understanding of individual perspectives regarding stressful situations, how these perspectives relate to behavior, and the influences of members' perspectives in combination."

This brief overview indicates that both individual and family stress theorists have attempted to capture situational appraisal, at one level or another, through perceptions of demands and resources, perceptions of controllability, and attention to meanings. Whereas the operationalizations of appraisal by Folkman et al. (1986) and Antonovsky (1979) maintain the distinction between the

concepts of appraisal and coping, other operationalizations appear to contain some conceptual overlap.

Coping

Compatible definitions of coping were reviewed at length above. Attention now is directed to coping functions, assessment methods, and outcomes.

Coping Functions.

In their study of responses to normative life-strains, Pearlin and Schooler (1978) identified categories of coping differentiated by the nature of their function. They noted three different functions of coping responses: (a) those that were aimed at modifying the situation, (b) those that were intended to control the meaning of the problem, and (c) those responses that functioned to control the emotional response to the situation, "to accommodate to existing stress without being overwhelmed by it" (Pearlin & Schooler, 1978, p. 7).

These coping functions are present in the coping efforts described by McCubbin and McCubbin (1991) and Patterson and Garwick (1994). Five examples are given of these problem-solving efforts: (a) direct action to reduce demands, (b) direct action to acquire additional resources, (c) maintaining and reallocating existing resources (maintaining and enriching social networks), (d) managing the tension associated with ongoing strains, and (e) reappraising a situation in order to make it more manageable (lowering performance expectations).

Lazarus and Folkman (1984) agree that an important distinction in the functions of coping is between the

efforts that are directed at managing or altering the problem (problem-focussed coping) and those efforts aimed at regulating one's emotional response to it (emotion-focussed coping). Strategies of emotion-focussed coping can be cognitive (a deliberate reappraisal of the situation) or behavioural (exercise or seeking information and social support). Problem-focussed coping is similar to, but greater than, problem solving (Lazarus & Folkman, 1984). It includes strategies that are directed at both the environment and the self. An example of the latter is cognitive change that assists the individual in managing the problem. Folkman et al. (1991) note that in general, problem-focussed coping is appropriate in situations that have a potential for change, whereas emotion-focussed coping is more appropriate in situations with little controllability.

In his discussion of family coping, Klein (1983) also suggests problem solving and coping differ mainly in degree. Whereas a family solves its problems by eliminating or completely overcoming them, a family copes with more severely stressful situations by accepting and managing them.

Coping Assessment. Some coping scales are designed for wide applicability, whereas others are intended to measure coping only within a particular context (Cohen, 1987). Lazarus and Folkman (1984) developed a Ways of Coping Checklist containing 67 general coping items that indicate what an individual thinks, feels, or does in response to a

specific situation. Factor analysis by Folkman et al. (1986) has yielded the following eight scales differentiated by type of response: confrontive coping, distancing, self-control, seeking social support, accepting responsibility, escape-avoidance, planful problem solving and positive reappraisal. Some investigators have added items to the Ways of Coping Scale to more accurately assess coping strategies within a particular context (Cohen, 1987).

Pearlin and Schooler (1978) examined 17 coping strategies, representing the three functions mentioned above, in the four role areas of marriage, parenting, household economics, and occupation. Although the functions of coping were found to be the same in all areas, the strategies used and their effectiveness varied according to social context. For example, whereas the manipulation of goals and values was an effective coping strategy in the occupational and economic areas, it was not so in the area of family relationships. In marriage and parenthood, a continuing commitment and involvement in these relationships is less likely to result in distress.

McCubbin and colleagues have developed inventories for the assessment of family coping in specific situations. These measures concentrate on coping strategies in crises, in cases of serious child illness, or in spousal separation. Because of their specificity, they are not as widely applicable to a variety of situations.

Thoits (1991) gives us a good example of the way in which the work of various stress theorists can be brought

together to facilitate a more complete understanding of a phenomenon. Thoits has examined coping through subjects' written descriptions of their responses to emotional experiences, accounts which were coded according to a model of coping the author developed. Flowing from the work of Pearlin and Schooler (1978) and Lazarus and Folkman (1984), coping responses are seen to be either cognitive or behavioural. Also borrowing from these scholars, the model distinguishes between responses that are problem-focussed and emotion-focussed. Therefore her model differentiates coping responses on two dimensions, the mode of response (behavioural or cognitive), and the target of the response (situation-focussed or emotion-focussed). Based upon Thoits' (1984) work on the nature of emotion, the emotion-focussed strategies are further divided into those concerned with physiological changes, expressive gestures, and emotional labels. Thoits (1991) points out this model is able to accommodate all the coping strategies that have been identified in previous research, and has been shown to be useful in comparing gender differences in coping.

Coping Outcomes. In her overview of the measurement of coping, Cohen (1987) identifies three areas of outcome effects: psychological, social, and physiological. The psychological effects are emotional reactions, general well-being, and task performance; social outcomes include changes in interpersonal relationships and social role performance; and physiological effects vary from short term physiological reactions to long term health changes. Cohen points out

that a particular coping mode can have different effects in the three outcome domains.

Similarly, Lazarus and Folkman (1984) identify three basic adaptational outcomes: social functioning, morale, and somatic health. They see social functioning as both the manner in which an individual fulfills his or her social roles, and also as one's satisfaction with interpersonal relationships. Morale is considered to be a multidimensional concept that is concerned with how people see themselves and their conditions of life. The link between coping and health is based on the premise that appraisals of situations as stressful are accompanied by strong emotional states. These intense emotions are assumed to be causal factors in illness.

Pearlin (1989) identifies multiple indicators that have been chosen as outcome measures in sociological studies of the stress process: physical health, a variety of dimensions of mental health, social role functioning, and the maintenance of social relationships. Pearlin (1991) calls attention to the distinction between direct and indirect effects of coping. He states that generally, researchers look at the dependent variable, such as depression, to ascertain coping effectiveness. Pearlin (1991) points out that if coping efforts inhibit the development of other, secondary stressors, they can indirectly influence this depression. He suggests that by restricting our focus to direct effects of coping, we may miss an accurate assessment of coping efficacy.

The McCubbin and McCubbin (1991) model views family adjustment and adaptation as outcomes over time of family efforts, in a stressful situation, to achieve a "new level of balance and fit" between demands and capabilities (McCubbin & McCubbin, 1991, p. 15). When interaction of the relevant components results in productive problem solving, successful family adaptation to the stressful situation results (restored functional stability and/or improved family satisfaction); when the family is unable to respond in a constructive manner, a crisis situation ensues. These authors emphasize that "a family 'in crisis' does not carry the stigmatizing value judgement that somehow the family has failed, is dysfunctional, or is in need of professional counseling" (McCubbin & McCubbin, 1991, p. 14).

Patterson and Garwick (1994) also conceptualize the outcome of family efforts to achieve balanced functioning as family adjustment and adaptation. They see good outcomes reflected in (a) positive physical and mental health of family members, (b) optimal role functioning of family members, and (c) the maintenance of a family unit that can accomplish its life cycle tasks.

The theoretical overview above facilitates a clear comprehension of what is meant by the key concepts, "stress" and "coping"; it gives a shared language for a meaningful discussion of the empirical literature. The overview with its integration of various theoretical approaches, has shown that different theorists discuss the stress process in compatible ways. It has shown that whether the approach is

social-psychological (i.e., Lazarus & Folkman, 1984), sociological (i.e., Pearlin, 1989; Pearlin & Schooler 1978), or specifically family focussed (i.e., Boss, 1988; McCubbin & McCubbin, 1991; Patterson & Garwick, 1994), theorizing about coping in stressful situations categorizes significant elements of the process as demands, intervening constructs, and outcome. Such a categorization is able to accommodate the relevant factors identified by the literature on family response to chronic illness (see Biegel et al., 1991; Cole & Reiss, 1993; Hatfield, 1987b; Johnson, 1990; Rolland, 1989).

Chapter IV

Review of Empirical Findings

As previously mentioned, a theoretical understanding of the stress process enables us to appreciate the empirical relationships found within the variability of family and illness. A theoretical focus also alerts one to research limitations. Applying stress and coping theory to the family experience with schizophrenia, I categorized the variability as follows:

1. Demands
(a) situational stress
(b) societal stress
(c) iatrogenic stress
2. Intervening Constructs
(a) caregiver characteristics: individual and family
(b) characteristics of person with schizophrenia
(c) social support and community resources
(d) family and individual perceptions of schizophrenia
(e) the coping efforts of family members - attempts to manage the situation
3. Outcome
(a) physical and mental health, social functioning
4. Limitations of past research

Demands

Lefley (1990) conceptualizes three main sources of cumulative stress in families of persons with schizophrenia: situational, societal, and iatrogenic. She sees the

variability of context as an important influence on family response.

Situational Stress

In assessing family response to stress, "the starting point ... is not the occurrence of a stressor event but the seemingly normal state of family disorder" (Lavee, McCubbin, & Olson, 1987, p. 871). Against this "background noise" (Aldous & Klein, 1988) of normative transitions and events, families of persons with schizophrenia may experience ongoing problems in the areas of employment, housing, health, childrearing, and marriage (McGill, 1990) that together with the illness, contribute to the demands upon the family.

Other situational stress may result from the intersection of the illness with the developmental stage of the family. The onset of chronic illness can cause a "permanent stuckness" at the phase of development at which it occurs (Rolland, 1989, p. 449). Expectations are that young adults will not only establish their independence, their own source of income and coherent set of values, but also prove able to get along with others, establish intimacy, and develop a social network (Ireys & Burr, 1984). The onset of schizophrenia early in adulthood, interrupts this developmental trend. While continuing to desire independence, persons with schizophrenia find it difficult to interact with others and to maintain employment (Torrey, 1983). They remain dependent upon others, often parents and/or siblings, both financially and emotionally, whether

or not they remain in the parental home. Parents are required to readjust their expectations for their son or daughter and negotiate new role relationships (Ireys & Burr, 1984), working to establish a balance between stimulation and passive acceptance (Falloon, McGill, & Hardesty, 1985). At the same time, they must negotiate limits on behaviour.

Middle-aged parents may be required to resume an active parenting role at a time when perhaps they were anticipating freedom from the responsibilities of caring for offspring, a circumstance that may create difficulties for parents in relating to their peers (Hatfield, 1987b). Mothers in particular have expressed concern and disappointment over the lack of independence of their mentally ill adult children (Cook, 1988). Mid-life parents may find themselves caught between the continued dependence of these children and responsibilities to elderly parents (Hatfield, 1990).

A study of persons with schizophrenia in 1956 showed that three-quarters of parental caregivers were over the age of 60 and 40% over the age of 70 (Wing, 1987a). Although older parents may have adjusted to the continued dependence of an adult child with schizophrenia, they are "at a time in life when they have the least energy to invest in this type of emotionally and physically draining effort. This demand may be an unrecognized mental health risk for older persons" (Lefley, 1990, p. 146). An assessment of burden felt by elderly relatives of persons with schizophrenia has shown a dependence on parents of pensionable age, with considerable financial and emotional burden (Stevens, 1972). In

addition, older parents may be particularly concerned about who will provide care and support to the son or daughter with schizophrenia when they, themselves, are gone (Grunebaum, 1986; Hatfield, 1987b; Lefley, 1987b).

Despite the illness of an adult child, family members continue to have their own needs that must be met. Studies have shown divisive effects of schizophrenia on the family, with conflicts, jealousy, and divided loyalties among family members and strained spousal relationships (Creer & Wing, 1974; Vaughn et al., 1984).

Siblings must deal with the confusion, fear, and feelings of entrapment resulting from a diagnosis of schizophrenia in a sister or brother (Carlisle, 1984). They have specific needs that may differ from those of other family members (Landeen et al., 1992), developmental needs that often are not being met (Carlisle, 1984). Young siblings still at home have been found to be affected in different ways by the mental illness of a brother or sister; some felt more focus and expectations from parents, others felt neglected and lonely, while the majority reported they took sides and shifted allegiances in the inevitable conflicts (Carlisle, 1984). They have expressed embarrassment at the peculiar behaviours of the mentally ill sibling and fear for their own mental health (Torrey, 1983).

The impact of schizophrenia on adult siblings' lives has been found to range from pervasive to discrete, with three patterns of sibling response: ongoing collaboration with other family members, crisis oriented, and detached

(Gerace, Camilleri, & Ayres, 1993). Older married siblings have registered concern about the hereditary risk for their own children; they desire information about the prognosis of schizophrenia, and express concerns over the sibling's ability to live independently and to have an adequate level of financial support (Landeen et al., 1992). Their concerns appear to be well founded for it has been shown that siblings replace parental caregivers over the life course (Horwitz, 1993).

In her description of living with a sister who has schizophrenia, Margaret Moorman (1992) reveals her feelings of hopelessness in achieving any balance between her sister's consuming need and that of the family. She eloquently speaks of her deep sadness and fear as her "private iceberg."

Other aspects of situational stress vary according to the stage and severity of the illness and types of symptoms expressed. Some family members report finding a gradual, insidious onset greatly distressing (Carlisle, 1984; Moorman, 1992), whereas research on family experience of first episode schizophrenia has identified florid symptoms associated with high levels of distress (McCreadie et al., 1987).

Reviews of research on family burden show it to be strongly related to the level and type of symptomatology (for reviews see Biegel et al., 1991; Johnson, 1990). Some studies reviewed found greater family distress to be associated with bizarre thought and behaviour, and

aggressive, uncooperative behaviour, and other research showed negative symptoms of social withdrawal to be of more concern. Other reports suggest that the unpredictability of patient responses, particularly those of an offensive or threatening nature are most difficult to tolerate (Gibbons, Horn, Powell, & Gibbons, 1984; Falloon & McGill, 1985). Runions and Prudo (1983) found that by far the most frequent problems were those concerned with negative symptoms (flattening of affect, poverty of speech, loss of volition), whereas the problems most difficult to manage included those with insight compliance and positive symptoms (delusions, hallucinations, thought disorder).

Interestingly, differences in perceptions of most bothersome behaviours were noted between family caregivers and mental health professionals; although nurses perceived suicidal behavior to be most distressing to families, the families themselves indicated the relative's inability to achieve his or her potential to be of most concern (McElroy, 1987). Evidence for the effect of duration of illness is also equivocal with some studies showing decreasing levels of burden over time and others indicating that burden continues and stress levels increase (Gibbons et al., 1984; Johnson, 1990). All studies indicate that whatever the symptoms, their number and severity strongly predict levels of family burden.

Possibly connected to the severity and course of the illness is residence of the person with schizophrenia. At the time of onset, most young people live with their

families; if rejection by the parents occurs, it is usually after several episodes of illness and associated behaviour disturbance (Falloon et al., 1984). Parents feel a burden of care, however, whether or not the son or daughter resides with them. In fact, one study reported that more behavioral problems and greater need for services was expressed by parents whose offspring lived outside the home (Carpentier et al., 1992). Other research found that patients who had moved out of the home and who lived alone continued to be a burden for the family whereas those patients who were in supervised accommodations presented no problems (Grad & Sainsbury, 1963). Despite the heterogeneity in type and amount of family contact, most people with schizophrenia rely on the family of origin for a sense of connectedness and belonging (Doane, 1991), as well as a sense of life purpose and protection (McGlashan, 1987); they maintain considerable face-to-face contact, and often overwhelm parents' ability to cope (Carpentier et al., 1992).

Societal Stress

Lefley (1990) considers societal stress to come from cultural attitudes toward mental illness, stigma, and negative expectancies of recovery. It has been suggested that general ignorance in society about schizophrenia leads to societal fear of persons connected with this illness (Dearth, Labenski, Mott, & Pellegrini, 1986). Isolating and debilitating effects of the stigma of mental illness on families are widely reported (McFarlane et al., 1993; Steinwachs et al., 1992; Wahl & Harman, 1989; Wasow, 1983).

Three-quarters of all members of the National Alliance for the Mentally Ill identified stigma as having a large unfavorable impact on their mentally ill relatives, and one-half of the members believed families in general were negatively affected (Wahl & Harman, 1989). Although one-half to three-quarters of them felt it had little or no impact on aspects of their own life, awareness of negative public reactions to their ill relative could be construed as a societal contribution to the concerns of the family.

Less industrialized cultures are thought to be more accepting of mental patients, not to blame them for their condition, and to accommodate them more readily within society; China, which has very strong stigma attached to the mentally ill and their families, is one exception (Lin & Kleinman, 1988; Torrey, 1983). Cultures that stress the interdependence rather than the independence of family members are thought to influence parents' expectancies for offspring, with implications for family adjustment to schizophrenia. Such interdependent families are more likely to accept the need of the patient for a safe haven, either at home or in other community care, and less likely to entertain the high-expectancy objective of independent living, an expectation that may exacerbate the feelings of anxiety so central to the illness (Lefley, 1987a).

Iatrogenic Stress

Much of the thinking and language of the "new" family therapies seems to be mired down in older theories that have presumably been discredited (Hatfield, 1987a). Clinicians

still perceive families within a deficit framework; if patient relapse occurs, families are blamed and made to feel guilty (Johnson, 1990; Lefley, 1990). Misunderstanding the complex interactions of the family, some therapeutic approaches erode the overburdened family system with recrimination rather then supporting it with assistance (Lefley, 1990). Clinical experience has led Terkelsen (1983) to reconceptualize the communicational aberrations, noted in families of persons with chronic schizophrenia, as adverse effects of family therapy. Family satisfaction with mental health providers is low; family members do not feel they are receiving enough information, support, or practical management techniques to enable them to cope with caregiving (Brooker, Tarrier, Barrowclough, Butterworth, & Goldberg, 1992; Hanson & Rapp, 1992; Hatfield, 1979; Johnson, 1990; McElroy, 1987).

Intervening Constructs

Caregiver characteristics, both individual and family, along with community services, social support, and perception of the situation interact with the coping efforts of family members and influence their experiences with schizophrenia. As well, characteristics of the person with schizophrenia have been found to be an important influence on the family experience.

Caregiver Characteristics: Individual level

Caregiver demographics and personality characteristics have been included as independent variables in research on the family experience with schizophrenia. A random sample

of 125 families who had a post-hospital member at home found caregiver burden to be unrelated to social class, race, education, and the age or sex of the relative (Thompson & Doll, 1982). Data from large epidemiologic surveys and clinical interviews, however, showed race, sex, and social class to be relevant to caregiver experience; blacks and females scored higher on the various symptom scales, and relatives in low socioeconomic groups were three times more prevalent in the high range of depression, anxiety, and psychosocial dysfunction (Arey & Warheit, 1980). Financial costs incurred by the family can be considerable. Families low on the socioeconomic scale are especially vulnerable to this type of stressor (Glynn & Liberman, 1990).

In a small study of 30 households, parents were found to be acutely aware and concerned with the downward mobility of their mentally ill sons and daughters (Gubman & Tessler, 1987). Considering the possibility of higher expectations in parents of higher socioeconomic standing, distress over the offspring's failure to fulfill his or her potential could be greater for these parents, although the capability of providing financial assistance would be less of a problem. The ability of the parents to develop realistic expectations for the functional capacities of their children with schizophrenia is considered to be a protective factor in shielding them against stress (Glynn & Liberman, 1990).

Other protectors, identified by relatives of persons with schizophrenia, are personal physical health, energy, optimism, ability to maintain outside interests, and sense

of humour (Dearth et al., 1986). Because of the genetic component in schizophrenia, vulnerability in a small percentage of relatives can come from a coinherited predisposition to mental illness (Glynn & Liberman, 1990).

Personality characteristics of family members do seem to influence their experience with the illness. Research has found that the personal attribute of resilience acts as a protective factor in relatives of persons who have psychotic disorders (Lefley, 1990). Because education about schizophrenia and information about medication and the health status of the relative are considered by caregivers to be highly important (Atkinson, 1986; Hatfield, 1990; Patrila & Sadoff, 1992; Torrey, 1983), the ability and inclination of a family member to seek out this information could be considered a resource. Chronic strain does appear to be significantly related to distress among caregivers relatively low in mastery (Lefley, 1987b). A significant correlation also has been found between the related concept, locus of control, and relatives' expressions of critical comment (Lefley, 1992). Relatives who were more critical of the patient tended to believe in the importance of internal factors in controlling events and behaviors; they believed in the patients' ability to control their symptoms and would pressure them accordingly. Knowledge about the illness, reflected in relatives' expectations and attributions for patient behavior, could be considered an important coping resource.

Caregiver Characteristics: Family Level

Pre-crisis level of family functioning appears to be a factor central to a family's ability to cope with schizophrenia. Not only the absence of negative attitudes but also effective communication, problem-solving skills, and flexible role relationships, are considered to be beneficial strengths (Biegel et al., 1991; Falloon & McGill, 1985).

Recent interventions with families have focused on efforts to bolster family resources by increasing family knowledge about schizophrenia and promoting effective communication, problem-solving, and coping skills (see Bentley, 1990; Cole et al., 1993; Falloon, Hardesty, & McGill, 1985; Hatfield, 1990; MacFarlane et al., 1993) with salutary impact on both the patient and the family. Both Bentley (1990) and Doane (1991) have advised, however, that increased interpersonal contact for disengaged (separated) families may increase stress, and for these families an intensive intervention schedule may not be appropriate.

Family structure also is relevant to the caregiver experience (Lefley, 1992). Single parents have been found to experience greater burden of care and be in greater need of services and support than married parents (Carpentier et al., 1992; Falloon et al., 1984).

Characteristics of the Person with Schizophrenia

There is a lack of information on the association between family burden and sex of the mentally ill person. Johnson's (1990) review of research found only three studies

reporting on this relationship: Grad and Sainsbury (1963) and Thompson and Doll (1982) found no sex differences in level of burden, whereas Hoenig and Hamilton (1969) found that male patients presented a greater burden to the family. A more recent study by Winefield and Harvey (1993) has reported greater distress in those caring for females with schizophrenia. Findings may be confounded by the fact that relatives surveyed are the spouses and the parents of persons with schizophrenia. Family support of female patients is more likely to be spousal or sibling whereas family support of males is more often parental (Atkinson, 1986). Spouses and parents may perceive burden differently.

Seeman's (1986) review of the literature found that daughters with schizophrenia, rather than sons, tend to be less aggressive, less likely to commit suicide, less likely to be involved with the law, and more likely to adhere to a treatment regime. Seeman's inquiry found that for women, frequency of acute episodes is lower, duration of hospitalization is shorter, and quality of remission is superior. The relapse rate for men has been found in other research to be more than triple the rate for women (Vaughn et al., 1984). These differences would seem to lighten the burden for parents of daughters with schizophrenia.

Social Support and Community Services

Diminished self-worth leaves one especially vulnerable to experiencing symptoms of stress; interventions of coping assistance and social support bolster self esteem and help prevent this negative experience (Pearlin, Lieberman,

Menaghan, & Mullan, 1981). The social stigma and community neglect perceived by families of the mentally ill can be isolating and stress promoting. Parents often find in self-help/mutual support groups the informational and emotional social support that they require (Atkinson, 1986; Biegel & Yamatami, 1986; Johnson, 1990). Multigroup, supportive, psychoeducation interventions, particularly those with a problem-solving component, also have proven helpful to families (Cole et al., 1993; McFarlane et al., 1993).

In addition to family social support, the extrafamilial social support network of the family member with schizophrenia is related to family well-being; a significant relationship has been found between the availability of a confidant for that person and lower family perceptions of burden (Crotty & Kulys, 1986). Families look to the care-giving system to provide comprehensive, long-term, affordable treatment and rehabilitation programs for relatives with schizophrenia (Glynn & Liberman, 1990). Unfortunately, an essential, yet often overlooked ingredient in these community care programs is the nurturance of the patients' support systems (Falloon et al., 1984).

Family and Individual Perceptions of Schizophrenia

"A family's beliefs about illness and about what constitutes an appropriate response also serve to shape its actions" (Cole & Reiss, 1993, p. xi). As mentioned above, the onset of schizophrenia is often difficult to recognize and its symptoms extremely diverse. This ambiguity makes

the development of an effective, consistent response difficult for the family (Cole et al., 1993).

Once a diagnosis of schizophrenia has been made, the family perception of the situation will depend upon the cultural milieu (Lefley, 1987c; Reiss, 1981), and the family's prior and ongoing experience with mental illness (Terkelsen, 1987). As previously mentioned, the social context within which the family interacts will influence the appraisals made and shared by family members. Because of the genetic component to schizophrenia, the family may have had another relative with the illness. Knowledge about schizophrenia and impressions gained from this past experience will affect the family's perspective of their present situation, as will the extent to which the family has been able to cope with the exacerbations and remissions in the illness over time. The family's perception of the situation, then, could be considered a process of appraisal and reappraisals.

Coping Efforts

Coping strategies that families exhibit are both cognitive and behavioral; they include accepting, distancing, and setting limits (Spaniol, 1987). Relatives learn to accept the limitations and adjust their expectations for the person with schizophrenia, striving to achieve an adaptive balance of stimulation and laissez-faire; they separate themselves from behaviors they cannot change and learn not to argue about the delusions; they set firm limits around behaviors they do not like, knowing that

structure can communicate caring (Spaniol, 1987; Wing, 1987a). These coping skills are acquired gradually, often through trial and error, sometimes through support group interaction, other times through education programs in problem-solving techniques.

Hatfield (1990) suggests that in addition to behavioral solutions to deal with objective burden, intrapsychic coping is required to come to terms with the painful feelings associated with subjective burden. Positive coping strategies include the protection by family members of their own and each others' physical health and emotional well-being, and their procurement of empathic support from professionals and others in similar circumstances.

Outcomes

As has been shown, the family experience with schizophrenia will depend upon a variety of personal and situational characteristics. Research has investigated relationships between these situational determinants and various outcome measures, such as individual feelings of being burdened (Potasznik & Nelson, 1984; Thompson & Doll, 1982), measures of anxiety and depression (Abramowitz & Coursey, 1989; Arey & Warheit, 1980; Mattlin, Wethington, & Kessler, 1990), negative affect, and comprehensive measures of physical and emotional well-being (Winefield & Harvey, 1993). Social functioning in families of the mentally ill has long been scrutinized. Hostility, anger, and conflict have been generally noted, as well as structural change. Creer and Wing (1974) found, in some cases, total breakup of

family unity, while other families seemed able over time to devise a regime within which the patient could function and the family could achieve relative stability.

In one of the few studies to focus on coping in families of the mentally ill, Hatfield (1981) rated family coping effectiveness through three component factors: (a) emotional mastery (ability to manage emotions with minimal distortion of reality), (b) cognitive skill (realistic appraisal, information seeking, and capacity to manage disturbing situations), and (c) need fulfillment (adequate social involvement). Her data suggested a positive association between effective coping and caregiving mothers' being older and better educated.

An adaptive framework from stress and coping theory leads to different interpretations of behavior in families of the mentally ill from that of dysfunction (Hatfield, 1990). Critical remarks and hostility noted in the EE research can be viewed as legitimate reactions to disruptive and embarrassing behaviors (Lefley, 1992). Emotional overinvolvement, overprotection, and focusing on the patient to the exclusion of the rest of the family members, can be regarded as adaptive strategies employed in highly stressful conditions (Cook, 1988; Lefley, 1987a). Physical and/or psychological separation of family members from the patient can be seen as a survival mechanism whereby the family seeks to maintain its integrity in the face of overpowering demands (Spaniol, 1987).

Limitations of Past Research

Little past research on families and schizophrenia has a specific coping focus; studies that have considered the family response to the disorder have ignored the family context and/or not been grounded in stress and coping theory. Many investigations have been directed to expressed emotion and caretaker burden. Pertaining to these investigations, the literature has pointed to a number of problems and omissions. It has indicated the need for longitudinal designs involving larger and more representative samples, utilizing measures with established reliability and validity (Biegel et al., 1991); the importance of greater attention to theory (Goldstein & Strachan, 1987); the need for comparative studies to contrast the impact of mental illness with other types of disabilities (Gubman & Tessler, 1987); and the necessity for control groups and for baseline rates of family interaction (Helmersen, 1983).

Scholars have suggested that inquiries include the positive dimensions of the family experience: the positive qualities of intimate support (Falloon & McGill, 1985; Spaniol, 1987), the good times as well as the bad (Gubman & Tessler, 1987), the positive contributions of the patient to family functioning (Falloon, Hardesty, & McGill, 1985; Stevens, 1972), and the feeling of closeness and solidarity in the family that can result (Dearth et al., 1986).

Assumptions of homogeneity have pervaded many investigations into the family experience with schizophrenia

(Steinwachs et al., 1992). It has been proposed that a consideration of the family response to schizophrenia should attend to the family's coping strengths (Gubman & Tessler, 1987; Hatfield, 1987b; Lefley, 1987a; Wasow, 1983) and be informed by family life course social science (Cook & Cohler, 1986; Ireys & Burr, 1984).

Levels of Analysis

Finally, there has been confusion of level of analysis in research on the family experience with schizophrenia. Whereas much of the literature speaks of "family" burden, "family" coping, and "family" response, assessments have been elicited at the individual level. The question arises as to whether there is such a phenomenon as "family" coping or is it simply a collection of individuals who are coping in various degrees of synchronism?

As previously discussed, family stress scholars assert that "family" coping includes both individual and group aspects. Boss (1988, p. 60) clarifies this issue by stating "the cognitive appraisal of a stressful situation or event, the emotional reaction to it, and the behavioral responses to both the appraisal and the emotion all happen within the individual family member, albeit within a systems context." Similarly, Antonovsky (1994), in a discussion of "sense of coherence" at the collective level, suggests that whereas we can be aware of the influence of the collective on one's sense of coherence, it is a different matter to speak of a collective as perceiving the world as coherent.

Family stress theory is a multi-leveled approach that sees reciprocal influences between individual and family. Explorations of *family* stress and coping require assessment of distinct but interrelated levels of analysis (Menaghan, 1983; Walker, 1985). Certainly, if one were interested in the group level of analysis, a family stress model such as that of McCubbin and McCubbin (1991) would be appropriate. In addition, if one were to assess outcome measures of psychological, social, and physical well-being (at the individual level), attention to the total number of family stressors would be valuable.

The focus of this study, however, is the parental coping process. This specific focus requires close attention to individual appraisals and coping strategies in response to a particular stressor, albeit within a family context. In this study, then, the resiliency model of family stress, adjustment, and adaptation (McCubbin & McCubbin, 1991) is employed as a useful framework with which to set that context, i.e., within which to place the totality of the family experience with schizophrenia, as it appears in the literature; in this study, the McCubbins' model also is used to locate parental coping within the broader context of the family stress process.

As parental coping is embedded within the family context, so individual coping theory can be seen to fit within family stress theory. It has been shown above that the concept of coping as explicated at the individual level by Lazarus and Folkman (1984) is compatible with that of

family stress scholars. All define demands, resources, situational appraisals, coping, and outcomes in congruent terms. Unlike other theorists, however, Lazarus and Folkman not only emphasize the importance of situational appraisal, but also attend to its operationalization and measurement at the individual level, keeping it conceptually distinct from coping. In its attention to situational appraisal, therefore, this study of the coping efforts of individual mothers and fathers will follow Lazarus and Folkman. To reiterate, this appraisal at the individual level will been considered within its social context of family and community.

Methodological Issues in Stress Research

Further discussion is required concerning methodological issues in the utilization of stress and coping theory. Attention will be directed toward the problem of circularity and/or redundancy of variables and to the distinction between mediating and moderating functions of variables.

Circularity

Lazarus, DeLongis, Folkman, and Gruen (1985) have examined the problem of confounding and circularity in stress research. These authors discuss the question of redundancy/confounding among variables. They address the emphasis of Dohrenwend, Dohrenwend, Dodson, and Shrout (1984) on the value of treating stressors as environmental inputs that are independent of the psychological response or appraisal of the person, in order that the same process is

not being measured in both independent and dependent variables. Lazarus et al. (1985, p. 776) respond "that stress is best regarded as a complex *rubric*, like emotion, motivation, or cognition, rather than as a simple variable." They acknowledge that stress is an "unclean" variable that depends on a person-environment interaction. They suggest the circularity that is inevitable with a relational definition of stress can be limited through an understanding of antecedents and consequences of situational appraisals. Person variables such as, values and beliefs, self-esteem, and sense of control, interact with the environmental situation to generate appraisals of harm/loss, threat, or challenge; in turn, these appraisals generate consequent responses.

A similar discussion exists in the caregiving literature. It has been suggested that caregiver burden, as a stressor, and caregiver well-being are tautologically linked (see George, 1994; George & Gwyer, 1986). Stull, Kosloski, and Kercher (1994), however, have empirically shown that measures of caregiver well-being and caregiver burden, utilized either as predictor or outcome variables, tap different domains of experience.

Other confounding of variables is addressed by Thoits (1982) who calls attention to the interaction effects of life events and social support. She points out that support and life events have reciprocal effects on each other, even that "support ... may be a product of - if not, in some cases, operationally identical with - the occurrence of

certain types of life events" (p. 148). As Thoits suggests, longitudinal research is needed to disentangle their influence.

Mediators and Moderators

In discussions of the stress process, those constructs that are considered to intervene between the demands and outcomes of a situation have been labeled variously as mediators and/or moderators. Pearlin (1989a, pp. 149-150) refers to intervening constructs collectively as mediators because "they have been shown to govern (or mediate) the effects of stressors on stress outcomes." McCubbin and McCubbin (1991) refer to family resources and capabilities as factors that play a role in "buffering the negative impact of change or unexpected life events" (p. 3) and mention that social support is most often viewed as "one of the primary buffers or mediators between stress and health breakdown" (p. 19). Frese (1986) maintains that coping can function as both a moderator and a mediator depending upon the nature of its relationship with both stressor and stress reaction.

Baron and Kenny (1986) point out that although it is not uncommon for social psychological researchers to use the terms moderator and mediator interchangeably, it is important to distinguish between moderator and mediator functions of third variables. These authors differentiate between "(a) the moderator function of third variables, which partitions a focal independent variable into subgroups that establish its domains of maximal effectiveness in

regard to a given dependent variable, and (b) the mediator function of a third variable, which represents the generative mechanism through which the focal independent variable is able to influence the dependent variable of interest" (Baron & Kenny, 1986, p. 1173). They state that moderators explain when certain effects will hold whereas mediators tell us why and how they occur. Baron and Kenny further clarify that "moderator variables always function as independent variables, whereas mediating events shift roles from effects to causes, depending on the focus of the analysis" (p. 1174). Folkman and Lazarus (1988) agree that moderator variables are antecedent conditions that interact with other independent variables to produce some outcome whereas a mediator is considered to arise during the encounter and influence the relationship between the antecedent and outcome variable.

The mediator-moderator distinction is important statistically as well as conceptually. With moderation, the relationship between two variables changes as a function of the moderating or third variable. Statistical analyses, therefore, must include the interaction effects of the predictor and the moderator on the outcome variable. A mediating variable functions as a pathway between the predictor and outcome variables. A statistical analysis of mediation effects would include a series of regression equations to determine (a) that the independent variable affects both the mediator and the dependent variable, and

(b) that the mediator also influences the dependent variable.

Chapter V

Study Rationale

The purpose of this study is to examine, within their situational context, the coping efforts of mothers and fathers who have an adult child with schizophrenia, and to determine what factors are predictive of different coping choices. Rather than taking a clinical approach or perceiving these families in terms of dysfunction, it will embrace a "salutogenic" (Antonovsky, 1987) orientation that looks instead at individual and family strengths and resources as coping mechanisms that enable one to withstand adversity. Rather than being a study of caregiving and its burden, it is a study of the coping process and its correlates.

With its basis in family studies, my inquiry acknowledges the permanence of the parental role and the influence of the family system upon individual family members. I consider the coping responses of mothers and fathers who have a child with schizophrenia as parental efforts to manage a significant family stressor. Informed by stress and coping theory, this study includes a broad context within which to consider mothers' and fathers' management of their situations.

I draw upon literature from three areas that inform and enrich each other. Family stress theory emphasizes the importance of family system variables within whose influence the individual family member operates. Individual stress and coping theory explicates the appraisal and coping

process and how it is related to demands and resources in various types of situations. The literature on family response to schizophrenia informs us of the diversity that can exist within this one situation. Thus, parental coping can be investigated by drawing on a model of individual stress and coping theory that is enriched by an attention to family context.

The purpose of the above discussion of coping and its related constructs was intended to explicate and clarify the coping process as it is envisioned by scholars in associated fields of study. To facilitate an understanding of the constructs as they are utilized in this study, a list of definitions is presented in Appendix A.

As discussed above, it is considered important to distinguish between mediators and moderators in discussions of the stress process. Generally, what has been investigated in previous studies are the mediating effects of appraisal and coping on some outcome criterion, such as well-being. This exploratory study attempts to understand what factors are important in predicting a parent's situational appraisals and coping choices. Thus, the distinction between mediation and moderation is not a salient point that is included in the study design.

Unlike many investigations that consider appraisal and coping in different types of stressful situations, this study specifies the situation, namely, having an adult child with schizophrenia; it suggests that the variability within this circumstance permits a variety of situational

appraisals and coping responses. This study investigates these appraisals and coping strategies and their correlates. Moreover, this study seeks to place this coping process within the family context. Following McCubbin and McCubbin (1991), important family system variables are considered to influence parental perceptions and coping responses; therefore, this study investigates parental perception of such influence.

To this end, the variability of the illness, along with demographics and resources at both the individual and family system levels, are considered to be associated with a parent's primary and secondary situational appraisals, and to be predictive of parental coping strategies. This process is represented in Figure E2.

Through such an application of theory, I hope to contribute to a more complete understanding of the parental coping process through an investigation of the question, "How is the variability of the situation related to the coping efforts of parents who have an adult child with schizophrenia?"

Particularly, this study investigates relationships among (a) personal and situational variables, (b) parental perceptions of what is at stake (primary appraisal), (c) perceptions of controllability (secondary appraisal), and (d) coping strategies. Although it is assumed that there are outcome variables in the coping process (personal well-being and social functioning, as well as feedback from coping to the primary stressor, to resources, and to

situational appraisals), it is beyond the scope of this study to assess such influence. As previously mentioned, the aim of this study is to inquire into predictors of parental coping; its purpose is not to evaluate coping effectiveness.

The above review of stress and coping literature has shown that a number of scholars share the theoretical perspective that one's coping strategies are influenced by a variety of personal and situational factors. There is also agreement that coping strategies focus either on the problem, or on the way one feels about the problem. Although coping theory may not be developed sufficiently for the generation of formal propositions and specific hypotheses, the above review of stress and coping theory suggests some questions to be addressed concerning the associations of situational variables with coping choices. It is not clear how these predictors of coping might be intercorrelated, and which variables have the strongest relationships with coping strategies.

Study Inquiry

Based upon the theoretical and empirical literature reviewed above, parental coping strategies can be considered to be associated with the following factors: (a) characteristics of the illness, (b) demographic characteristics (e.g., parent's marital status, financial status, age, sex, number of dependents; child's sex, age, place of residence), (c) individual and family resources (parental mastery and self-esteem, family cohesion and

adaptability, social support), (d) primary appraisals (perceptions of what is at stake), and (e) secondary appraisals (perceptions of controllability). This study investigates the intercorrelations among these variables as well as the relationships between them and the various forms of coping. The following general questions are proposed with examples of study expectations given the foregoing empirical and theoretical review.

Study Questions

Question 1. How well do illness characteristics predict parental appraisals of the situation and parental coping strategies? Empirical studies would lead me to expect that greater symptom severity would be associated with "more at stake" and would be related positively to emotion-focussed coping strategies. These studies also would suggest that time since onset of illness would be positively related to a secondary appraisal of the situation as "one that must be accepted" and negatively related to the number of coping strategies utilized.

Question 2. What demographic characteristics predict parental appraisals and coping? From my understanding of the literature, I expect that (a) age of the parent will be positively related to a primary appraisal of "worry about the future", (b) sex of the child will be positively related to primary stressor "manifestations of the illness", that is, daughters will have higher levels of life skills, and (c) parental co-residence with child will be positively

related to primary appraisals of "problems in daily functioning" and "poor relationships within the family."

Question 3. What individual and family resources predict parental appraisals and coping strategies? Theoretically, individual personal and family system characteristics along with the availability of social support are generally presumed to affect one's response to a stressful situation. I expect that parental mastery and self-esteem will be positively related to a secondary appraisal of the situation by parents as one they can "change or do something about." I expect that family cohesion and flexibility will be negatively related to "problems in daily functioning" and "poor relationships within the family."

Question 4. What predictive relationships exist among primary appraisals (what is at stake), secondary appraisals (controllability of the situation), and coping strategies? Theory would suggest that a secondary appraisal of the situation as one that can be changed will be positively related to problem-focussed coping strategies, whereas a secondary appraisal of the situation as one that has to be accepted will be positively related to emotion-focussed strategies.

Questionnaire

A questionnaire was assembled in order to respond to these queries (see Appendix B). Following Damrosch and Lenz (1984), demographic items were divided into subsections in

order to avoid an appearance of over intrusiveness. The categories were as follows:

1. Demographics of the person with schizophrenia
2. The functioning level of the person with schizophrenia
3. Primary appraisal (how the illness has influenced the parent's life)
4. Secondary appraisal (controllability)
5. Parent's ways of coping
6. Overt influence of family members on parent's appraisals and coping strategies.
7. Demographics of the parent
8. Personal resources (mastery and self-esteem)
9. Social support
10. Family cohesion and flexibility

Chapter VI

Method

Recruitment

Respondents were recruited through notices in the newsletter of the Schizophrenia Society, in one of the major Vancouver newspapers, in two community newspapers, and via the Schizophrenia information noticeboard on the internet. Additionally, requests for participants were made by telephone to coordinators of mental health facilities in large and small urban centers in the province of British Columbia, and some personal presentations were made to support groups for families who are dealing with schizophrenia. Requests were made to both mothers and fathers, asking for the participation of either parent of a person with schizophrenia. Approximately 300 questionnaires, which included assurances of confidentiality, were distributed along with stamped, addressed, return envelopes. Respondents were offered the opportunity of obtaining an account of the main conclusions of the study through the separate return of a self-addressed postcard.

A total of 149 questionnaires were completed and returned, for a return rate of approximately 50%, along with 83 requests for study conclusions. Of these latter requests, 80 were from British Columbia, 1 from Ontario, and 2 from the United States. Of the 149 questionnaires, 8 could not be included in the analyses; 1 respondent was not a parent, 1 adult child was diagnosed with bi-polar

disorder, and 6 questionnaires contained substantial missing data.

Sample Characteristics

The sample of 141 parents is described in Table F1 along with means and standard deviations of parental characteristics, separated by sex of parent where significant differences were noted. Parental age was fairly normally distributed and all marital categories were represented. Years of formal education of these parents also approximated a normal distribution. As can be seen, there was also a broad representation of family incomes. These parents identified their ethnic/cultural backgrounds as British, including Irish and Scottish (36%), European (12%), Canadian (26%), Asian (5%) and Other (5%). The 'Other' category included Syrian, Ukrainian, East Indian, Jewish, and Dukhobors. For almost 10% of these parents, the child with schizophrenia was an only child, but most parents had between 1 and 3 other children (76%). Approximately 18% of other children lived in the parental home. Of particular note, 23% of parents said that in addition to their son or daughter with schizophrenia, they had another child with a physical or mental disability or illness; 12% of parents specified additional dependents.

Considerable variability also was found in the characteristics of the person with schizophrenia (displayed in Table F2). Ages of the sons and daughters were fairly normally distributed (M = 32.7 years, SD = 7.6). Time since the onset of the illness ranged from less than one year (2%)

to 35 years (.7%). The mean length of illness was 12.4 years (SD = 7.9); the median was 10 years. The reported number of hospitalizations varied from a minimum of 0 to a maximum of 20 (M = 4.6, SD = 4.1). The vast majority of these adult children were biological offspring (95%) and had never been married (88%). It is of interest that the only significant difference (at $p < .001$ level) in the characteristics of sons and daughters was found in marital status, as noted in Table 2, with sons much more likely to have never been married. Thirty-two percent of these adult children lived with the parent, 31% lived on their own, 19% lived in a co-op or group housing arrangement, and 5% were psychiatric inpatients; only 1.4% lived with a spouse. Financially, almost half of these persons with schizophrenia relied on social assistance and/or disability income (48%), 5.6% had some type of employment, 5.6% were financially supported only by the parent, and 36% received income from another source in addition to parental financial support.

Measures

In addition to demographics, the factors investigated were the following: (a) the functioning level of the person with schizophrenia; (b) resources (e.g., esteem, mastery, family cohesion and adaptability, and social support); (c) primary appraisal, operationalized as the impact of the illness on the respondent's life; (d) secondary appraisal or the controllability of the situation; and (e) coping, the strategies used to manage either the situation or the way the respondent felt about the situation. The measures

chosen to assess these variables were selected on the basis of their broad applicability as well as their psychometric properties, to be appropriate for use in a variety of family situations. Table F3 lists these measures and their reliabilities; Appendix C lists the questionnaire items categorized by sub-scale.

Demands

The severity of the primary demand, the illness, was assessed by the Life Skills Profile, LSP (Rosen, Hadzi-Pavlovic, & Parker, 1989). The LSP is a measure developed to assess general levels of function and disability in persons with schizophrenia. It is brief and is composed of specific, jargon-free items, assessing distinct behaviours, and therefore is capable of being completed by family members as opposed to persons with clinical training. It has 39 items that comprise 5 factor-analytically derived sub-scales, namely, self-care, nonturbulence, social contact, communication, and responsibility. One of these items (referring to the child's offensive smell) was deleted for this study in consideration of parents' sensibilities. These Likert-type scales have been labeled in positive terms in the belief that a focus on strengths as opposed to deficits would be more helpful to subjects. The response categories range from "not true" (1) to "very true" (4). Rosen et al. (p. 333) stress that "since the measure was not designed to assess schizophrenic features, per se, ... very few items ... have any distinct specificity to

schizophrenia." This aspect of the scale contributes to the wide applicability for which this study is striving.

Rosen et al. (1989) report that each sub-scale score is moderately and positively associated with each other; they considered these scales to be cumulative, reporting a total scale score that indicated a person's general level of functioning, with a higher score indicating higher function. For the most part, this study also found a moderate, positive association between sub-scales; levels of association ranged from $\underline{r}$ = .27 (responsibility and social contact) to $\underline{r}$ = .75 (responsibility and nonturbulent behaviour). The internal consistency of each scale was found to be high with Cronbach's Alpha values as follows: self-care .72, nonturbulence .81, social contact .70, communication .72, and responsibility .77 (comparable to the findings of Rosen et al. of .88, .85, .79, .67, and .77, respectively). Internal consistency for the total scale was .90. Rosen et al. have suggested the scale's validity is indicated by the scale's sensitivity to clinical realities (a negative association between age and both turbulent behaviour and irresponsibility), as well as an association between high scale scores and stability in living arrangements.

Resources

Mastery and self-esteem. Mastery and self-esteem have long been considered by stress and coping theorists to be relevant to one's coping response. These constructs have been widely used in various caregiving contexts. Pertinent

to this study, Lefley (1987b, 1990, 1992) has noted their influence on relatives' reactions to the mental illness of a family member.

Mastery was measured with a scale developed by Pearlin and Schooler (1978) for use with a community adult sample. The 7-item scale assesses the extent to which one regards one's life chances as being generally under one's control or as fatalistically determined. In a study by Folkman, Lazarus, Gruen, and DeLongis (1986) the internal consistency of the scale (alpha) was .75. The present study found a Cronbach's Alpha figure of .69.

Self-esteem was measured with a 6-item scale also developed by Pearlin and Schooler (1978), following Rosenberg (1965), for use with a community adult sample. In the present study, its internal consistency was found to be .75.

In other studies, measures of self esteem and mastery have been found to be highly correlated ($\underline{r}$ = .65) (Folkman, Lazarus, Gruen, & DeLongis, 1986). In this study, however, a moderate correlation ($\underline{r}$ = . 45) was found between esteem and mastery. In both scales, respondents indicated the extent to which they agreed with statements, using response categories ranging from "strongly disagree" (1) to "strongly agree" (6), with higher scores indicating greater levels of esteem and mastery.

Family adaptability and cohesion. Family cohesion and adaptability are considered important stress resistant resources both theoretically (e.g., Biegel et al., 1991;

McCubbin & McCubbin, 1991) and empirically (e.g., Falloon & McGill, 1985). This study assessed parental perceptions of family adaptability and cohesion using FACES II (Olson, Portner, & Bell, 1982). This measure is the second version in a series of scales developed by David Olson and his colleagues to measure family cohesion and adaptability. Adaptability, with its 14 items, assesses the extent to which the family system is flexible and able to change its power structure and role relationships in response to situational and developmental stress. The 16-item Cohesion scale measures the degree to which family members are connected in terms of emotional bonding. Respondents were asked to indicate the extent to which items applied to their family, with response categories ranging from "almost never" (1) to "almost always" (5). Both scales are scored in the positive direction with higher scores indicating higher levels of cohesion and adaptability.

FACES II (Olson, Portner, & Bell, 1982) has been used in a national survey of over 1000 "non-problem" couples and families across the family life cycle. In a FACES II update, Olson and Tiesel (1991) affirm the linear nature of FACES II scores. Olson, Bell, and Portner (n.d.) report the following psychometric properties: Cronbach Alpha figures of .87 for cohesion, and .78 for adaptability; test-retest reliabilities (4-5 weeks) of .83 for cohesion, and .80 for adaptability; and a correlation between cohesion and adaptability of .65. Olson et al. found this correlation between the two dimensions not to be problematic. They

combine cohesion and adaptability scores in a unique way to arrive at a "family type." Concurrent validity is said to have been demonstrated. Olson and his colleagues report that the dimensions of FACES II (Olson, Portner, & Bell, 1982) have been found to correlate highly with a global measure of family health assessed by the Dallas Self-Report Family Inventory (Hampson, Hulgus, & Beavers, 1991): cohesion (.93) and adaptability (.79).

The present study found very high internal consistencies for both cohesion and adaptability scales with Cronbach's Alpha = .91 (cohesion) and alpha = .87 (adaptability), as well as a very high correlation (r = .82) between the two dimensions. Although this study considers cohesion and adaptability to be separate important dimensions of family strength, their high correlation precluded the inclusion of both in the analyses. I decided not to consider them to be simply cumulative for two reasons: (a) this study wished to honor the requirements of Olson et al. (1982) in the application of their measure, and (b) I wished to retain the more widely comprehensible dimensions of cohesion and adaptability that have been noted in the literature, rather than specify a "family type".

A number of respondents (those parents who lived alone) noted difficulty in responding to some items of the adaptability scale. Also, adaptability was correlated more strongly than cohesion with the individual resources of esteem and mastery that were included in the analyses.

Based upon these ethical and methodological concerns, cohesion was chosen as a family resource variable.

Social Support. Social support is a ubiquitous concept in applications of stress and coping theory. It is considered a particularly helpful resource in situations that are characterized by feelings of confusion, isolation, and misunderstanding (Atkinson, 1986; Johnson, 1990).

The measure of expressive social support used in this study is one of multiple measures developed by Pearlin et al. (1990) from their conceptual scheme for the study of caregiver stress. Their framework is a product both of many years of research into the stress process and of considerable exploratory research among family caregivers. The measures were constructed from a multiwave study of 555 caregivers that began with open-ended exploratory interviews out of which a structured questionnaire was formed, pretested, and revised. The manner in which the measures were developed as well as their psychometric properties provide an overall sense of confidence that they are serviceable and reliable (Pearlin et al., 1990). This expressive social support measure, in a Likert-type response format, is composed of 8 items that tap the perceived availability of a person who is caring, trustworthy, uplifting, and a confidant. Respondents were asked for the extent of their agreement with the statements using response categories ranging from "strongly disagree" (1) to "strongly agree" (4), with higher scores reflecting perceptions of more social support. The internal reliability of the

scale was high (alpha = .87), matching that reported by Pearlin et al.. No validity data are available.

Following Pearlin et al. (1990) the availability of informational and instrumental support was measured by a 4-item index. These 4 items inquire about the availability of (a) support programs/groups for the parent, (b) information about the illness for the parent, (c) a confidant/support person for the adult child with schizophrenia, and (d) a day program for the adult child. The responses to these items, with their coding in brackets, was: yes (2), no or I don't know (1). A higher index score was considered to indicate a greater amount of instrumental support from the community.

Primary Appraisal

Whereas Folkman, Lazarus, Dunkel-Schetter, et al. (1986) developed a scale to investigate subjects' primary appraisals in a variety of stressful encounters, I investigated appraisals within a specific situation. As previously mentioned, a premise of this study is that the variability that is apparent in the illness and within the family context may result in different situational appraisals.

Similarly to Folkman, Lazarus, Dunkel-Schetter, et al. (1986), primary appraisal was assessed with items that identify what the respondent considers to be at stake in the stressful situation. These items, which evaluate the impact of the illness on the respondent's life, were assessed by a questionnaire developed as part of a large cross-national study of self-help groups (Chesler, Chesney, Gidron,

Hartman, & Sunderland, 1988). It followed from earlier studies examining the impact of a child's chronic illness on parents. It is reported to overlap with most of the domains addressed by subjective burden scales for families of the mentally ill, for example those of Platt (1985) and Potasznik and Nelson (1984).

In a study by Gidron (1991), the 24-item scale was factor analyzed with only items loading near or above .50 being retained. The retained 21 items loaded onto 5 factors: (a) lack of information and problems in communication, (b) relationship with the community environment, (c) problems in daily functioning, (d) relationships within the family, and (e) worry about the future. Gidron did not report reliabilities for these sub-scales.

For this study, the item "reactions of society towards mental illness and my family" (loading onto "relationship with the community environment") has been separated into the following three items: (a) reactions of society toward schizophrenia, (b) reactions of society toward my family, and (c) reactions of society toward my son/daughter. These separate items were presumed to load onto the same factor as the original item. In addition, two new items were added: (a) loss of time and energy at work (presumably loading onto "problems in daily functioning"), and (b) relations with spouse or former spouse (presumably loading onto "relationships within the family"). Respondents were asked to indicate, on a 6-point, Likert-type scale (strongly

disagree = 1, strongly agree = 6), the extent to which each item was one of concern, with higher scores indicating higher levels of concern. In this study, internal reliabilities for the factor-analyzed sub-scales were as follows: relations with the community, 5 items (alpha = .72); relations within the family, 4 items (alpha = .66); problems functioning, 6 items (alpha = .75); lack of information, 7 items (alpha = .79); and worry about the future, 2 items (correlation = .41); total aggregate scale, 24 items (alpha = .90).

Secondary Appraisal

Secondary appraisal was assessed with four discrete items that describe coping options. These items, which are theoretically based, were originally developed by Lazarus and Launier (1978) and first used by Folkman and Lazarus (1980) with a yes/no format. Folkman, Lazarus, and their colleagues have utilized this secondary appraisal assessment multiple times on large study samples, changing the response format to a 5-point Likert scale, scored in the positive direction. As previously mentioned, these items assess the extent to which respondents saw the situation as one "that you could change or do something about," "that you had to accept," "in which you needed to know more before you could act," and "in which you had to hold yourself back from doing what you wanted to do" (Folkman, Lazarus, Dunkel-Schetter, et al., 1986). This study utilized a 6-point response category from "strongly disagree" (1) to "strongly agree" (6). Of these single item appraisals, only two were found

to be significantly correlated. Seeing the situation as one in which "I needed to know more before I could act" was significantly correlated with "having to hold myself back from doing what I wanted to do" (r = .32, p < .001).

Ways of Coping

Because of its generality, the Ways of Coping (WOC; Lazarus & Folkman, 1984) can be used to assess coping in any stressful circumstance (Tennen & Herzberger, 1985). Three separate factor analyses of a revised WOC by Folkman, Lazarus, Dunkel-Schetter, et al. (1986) produced similar factor patterns (alpha scores in brackets): confrontive coping (.70), distancing (.61), self-controlling (.70), seeking social support (.76), accepting responsibility (.66), escape-avoidance (.72), planful problem-solving (.68), and positive reappraisal (.79).

In a critique of the WOC scale, Tennen and Herzberger (1985) note that a number of investigations have demonstrated the scale's internal consistency, construct, and concurrent validity. These authors point out that test-retest reliability may not be appropriate for a measure of a coping process that is seen to change according to situational demands and previous coping efforts. Also because the scale is a self-report measure, Tennen and Herzberger suggest that inter-rater reliability estimates cannot be obtained.

In some studies, investigators have added items to the WOC to assess coping more accurately in a particular illness context (Cohen, 1987). This study included items, noted in

the literature, that describe particular ways that relatives cope with an illness of a family member. These items are: "talked to someone in a similar situation" (presumably loading onto "seeking social support"); "made arrangements for the future" and "read books and articles to learn more about the situation" (presumably loading onto "planful problem-solving"); and "adjusted my expectations for the future," "concentrated on the child's positive contributions to the family," and "we grew or changed as a family in a good way" (presumably loading onto "positive reappraisal"). This latter item parallels an item already in the WOC (Folkman, Lazarus, Dunkel-Schetter, et al., 1986) that reads "I changed or grew as a person in a good way." This study found the following internal reliabilities for these sub-scales (alpha scores in brackets): confrontive coping, 6 items (.49), distancing, 6 items (.56), self-controlling, 7 items (.52), seeking social support, 7 items (.79), accepting responsibility, 4 items (.32), escape-avoidance, 8 items (.61), planful problem-solving, 8 items (.70). and positive reappraisal, 10 items (.79). All the coping scales were scored in the positive direction.

I had considered the possibility of combining the sub-scales into two aggregate scales representing problem-focussed versus emotion-focessed coping. Similar to findings of a previous study on maternal coping (see Seltzer, Greenberg, & Krauss, 1995), the individual forms of coping appeared to have unique relations with the independent variables; these important associations might be

masked by composite scoring. Therefore, individual sub-scale scores were analyzed.

Parents were instructed as follows: "We come now to the part of the questionnaire in which we ask you to indicate the various ways in which you presently cope with your situation. The word coping use here refers to any attempt to manage your situation, as you have described it above, whether or not you feel this effort is successful. Please carefully read each item and indicate, by circling the appropriate category number, the extent to which you have used it within the past three months". The responses for this 4-point Likert scale range from "not used" (1) to "used a great deal" (4).

Overt Family Influence

In accord with recent literature on spousal influence on coping and family contextual variables (e.g. Gottlieb & Wagner, 1991), an inquiry was directed to overt influence of family members on appraisal and coping in order to facilitate an interpretation of parents' choices of coping strategies. First, respondents were asked to respond Yes (1) or No (2) to the question, "Have any family members influenced **your** views of your situation or your coping responses?" Next, in an open-ended response format, respondents were asked to indicate in two or three sentences (a) *"which family members* have done or said something to influence either the way you see your situation or the way you choose to cope with it", and (b) *"how your views of your situation and/or your coping responses have changed* because

of what they have done or said". Responses to part "b" were then content coded into the following six categories: (a) feeling closer to family members, (b) accepting advice and/or encouragement, (c) being pushed to action, (d) realizing personal growth, (e) achieving a realistic acceptance, and (f) experiencing conflict/a disruption of family relationships.

Analysis Strategy

In order to respond to the study questions and to determine the predictive relationships among the many variables assessed, I decided upon the following analysis strategy. My intent was to retain as much variability as possible while eliminating any redundant or nonsignificant variables from the final analytic procedures. The analyses would proceed in a series of steps. To begin with, I would examine a large correlation matrix containing all the continuous variables assessed. Variables that could be considered redundant would be eliminated; variables showing significant associations with the dependent variables of interest would be retained for further analysis. Next, *t*-tests would be run to determine significant associations between categorical variables and dependent variables of interest. Finally, those variables identified as significant in the above procedures would be entered into standard multiple regression equations with the dependent variables. These regressions would identify those variables among illness characteristics, demographics, resources, and

appraisals that could be designated as predictors within the coping process.

Chapter VII

Results

Univariate Data Analyses

Missing Values

Univariate analyses were conducted to assess scale distributions, and to identify missing or outlying values. For the most part, missing values appeared to be randomly distributed. Missing values on sub-scale items were replaced with the mean score for the remainder of the sub-scale.

This procedure was not appropriate for two sub-scales of primary appraisal, "problems in daily functioning" and "worry about the future". Each sub-scale had one item with a considerable number of missing responses. In the former sub-scale, there were 52 missing cases attached to the item "I worry about my spouse's health (if applicable)." An investigation showing these missing cases attached to both married and unmarried respondents, suggested this item may have been unclear. Deletion of this item from the sub-scale, "problems in daily functioning," resulted in a 6-item scale with improved reliability. The item "Relations with own parents/spouse's parents have worsened" was missing 28 cases. According to Gidron (1991), this item contributed to the 3-item sub-scale "worry about the future." I found, however, that the item was not applicable to many older respondents whose own parents were no longer alive. It was inappropriate to replace this item with the mean score on the other two items because of the great difference in means

(1.88 for the problem item versus 5.14 for the other two items). This item also was deleted resulting in a sub-scale with only two items.

Distributions

Preliminary analysis revealed that variables, for the most part, were normally distributed. Some scales evidenced slight skewness and/or kurtosis. The scale that assessed a parent's worry about the future exhibited the most significant skewness (Skewness = -1.39, SE Skewness =.20). A later check of the scatterplot of residuals against predicted DV scores did show that in some instances, the assumptions of the regression analyses, specifically normality and homoscedasticity, were not met. No transformations of data were undertaken, however. Tabachnick and Fidell (1989) acknowledge that data transformations are not universally recommended because transformed variables are sometimes more difficult to interpret. They also point out that failure to meet assumptions of multiple regression does not invalidate the analysis so much as weaken it. The shapes of the distributions of scale values are discussed at length in Appendix D. The range, means, and standard deviations of scales are reported in Table F4 (Functioning Level of Daughters and Sons), and in Table F5 and F6 (Resources, Appraisals, and Coping of Mothers and Fathers).

It is of interest to note that the forms of coping most often reported by this group of parents were seeking social support, planful problem-solving, and positive reappraisal.

They reported less use of confrontational coping, a type of coping that would correspond to the "expressed emotion" that is mentioned in the literature as detrimental to the well-being of persons with schizophrenia.

Multivariate Analyses

Correlations

The questions posed by this study concerned the identification of illness, demographic, and resource variables that were predictive of appraisals and coping. The analysis strategy mentioned above was followed in the service of this effort. A correlation matrix was examined to investigate interrelationships among the variables in order (a) to eliminate redundant variables and, (b) to choose from among those theoretically relevant variables, the ones that were significantly correlated with measures of appraisal and coping. In addition, *t*-tests were conducted to investigate the associations of categorical variables (gender, marital status, residence of child, overt family influence, and having another child with disabilities) with measures of illness, resources, appraisals, and coping. Significant results for these categorical variables are reported in Tables F4 to F8.

Table F9 shows significant correlations that were noted among some of the demographic variables designated for further analysis. Significant interrelationships can be noted among "age of parent," "age of child," and "time since onset of the illness," with the levels of significance ranging from $r = .60$ to $r = .81$. In order to eliminate any

redundancies, "age of parent" was chosen as a representative variable that would capture these interrelated characteristics of the situation.

Table F10 identifies those variables significantly associated with primary appraisals. Correlation coefficients with levels of significance are included; for each categorical variable, values displayed are the differences in means between the groups, along with the 2-tailed levels of significance. It is of interest to note the absence of variables whose associations with primary appraisals might have been expected according to the literature reviewed above, for example, primary appraisals were not significantly associated with either the parent's education, marital status, or family income.

Table F11 identifies those variables that were significantly associated with secondary appraisals. Most of the variables listed were identified as significant correlates of a secondary appraisal of the situation as one in which parents felt they had to hold back from doing what they wanted to do. It can be noted, however, that of the five sub-scale measures of the son's/daughter's level of functioning, only nonturbulent behaviour and responsibility had this identification. It can be seen that the variables listed were associated in different ways with the other measures of secondary appraisal. For example, mastery, expressive support, and relationships within the family were correlated with seeing the situation as one that could be changed, whereas only self-esteem had a significant

relationship with an appraisal of the situation as one that must be accepted. Logically, a secondary appraisal of needing to know more before acting was significantly associated with a primary appraisal of a lack of information and problems in communication.

Tables F12 and F13 identify those variables that were significantly associated with a parent's coping strategies. It can be seen that demographics, resources, primary appraisals, and secondary appraisals were correlated differently with different types of coping; the greatest number and strength of associations existed between these variables and various forms of emotion-focussed coping, such as, self-control, seeking social support, and escape-avoidance strategies. Interestingly, parent's marital status (married = 1, not married = 2), which was found above to be nonsignificantly associated with measures of situational appraisal, was seen to be significantly correlated with various types of coping. Age of the parent, which was noted above to be strongly correlated with time since onset of illness, generally had stronger associations with aspects of coping than did the latter variable. With distance strategies, however, the time since onset was found to have the stronger association and therefore was the variable considered to be more appropriate for further analysis of this form of coping. To reiterate, these significant associations helped identify those variables that were appropriate choices for regression analyses.

Some interesting observations are apparent from Tables F10 to F13. Certain variables are seen to reoccur as significant correlates of both appraisals and coping, namely, sex of the parent, the responsibility and nonturbulent behaviour of the daughter/son, and the resources of esteem, mastery, and expressive support. Other variables are more specific in their associations. For example, parent's marital status is significantly correlated only with coping, not with appraisals, whereas the resource, cohesion, is seen only to be significantly associated with appraisals.

It is also interesting to note those appraisals and forms of coping that most frequently are correlated with other factors. Four of the five primary appraisals, have significant associations with demographics, child's life skills, and resources. One secondary appraisal, the perception of having to hold back, also has multiple associations that reach levels of significance. As well, certain forms of coping, particularly accepting responsibility and escape-avoidance, are significantly correlated with demographics, resources, child's life skills, and both primary and secondary appraisals.

An absence of particular significant associations also is notable. Unlike the other four primary appraisals, worry about the future has no significant associations with child's life skills. Each of two secondary appraisals, namely, viewing the situation as one that must be accepted and needing to know more before acting, has only one

significant correlation, with self-esteem and a lack of information respectively. Certain forms of coping, as well, lack significant associations in particular areas. For example, confrontive coping and positive reappraisal are not correlated significantly with any resource factor; distance coping, seeking social support, and positive reappraisal have no significant associations with measures of primary appraisal; and seeking social support (unlike other forms of coping) is not significantly correlated with any of the four secondary appraisals.

Multiple Regression

To assess relationships among variables, and answer the basic question of multiple correlation, the standard form of multiple regression is the method advised by Tabachnick and Fidell (1989). Independent variables, retained from the above analyses, were entered simultaneously into multiple regression equations to provide a more accurate assessment of their associations and to indicate their predictive power. Three series of multiple regressions were conducted to clarify the following: (a) the amounts of variance in primary appraisals that can be attributed to demographics and resources, (b) the variance in secondary appraisals that is attributable to demographics, resources, and primary appraisals, and (c) the accountability of demographics, resources, primary appraisals, and secondary appraisals for the variance in coping. Whereas the independent variables are designated as predictors, no causal inference is intended or indeed is possible. For an accurate assessment

of the importance of the independent variables, attention must be given to the intercorrelations among them, as well as their Beta values and levels of significance.

Multiple regression series 1. Tables F14 through F18 display the results of regression equations in which demographic, resource, and illness (life skills) variables were regressed on each of the five primary appraisals. Generally, at least four of the five life skills measures were candidates for entry into each of the equations, along with other variables. These life skills sub-scales, however, were moderately to highly intercorrelated; for example, the correlation of nonturbulence and responsibility was $r = .75$. The cumulative life skills measure was utilized, therefore, to capture the range of life skills influence while avoiding the multicollinearity of the sub-scales. The tables display the correlations between the variables, the unstandardized regression coefficients (B), the standardized regression coefficients (Beta), F values and the significance of F for each predictor, as well as R, R squared, adjusted R, F, significance of F, and degrees of freedom for each equation.

In equation number one (see Table F14), I entered demographics [age and sex of parent (male = 1, female = 2), sex of child (male = 1, female = 2)], life skills of the child, and resources (esteem, mastery, cohesion, and community support) as predictors of a primary appraisal of a lack of information and problems in communication. Altogether 32% (adjusted 28%) of the variability in this

primary appraisal was predicted by knowing the scores on the eight independent variables. R for regression was significantly different from zero, F = 7.65, p < .001. Only two of the independent variables contributed significantly to the variance explained, child's life skills (Beta = -.21) and community support (Beta = -.19). Both higher levels of child's life skills and greater availability of community support predicted less parental concern over a lack of information and problems in communication. Although the other IVs had been shown independently to be significantly associated with the DV, when entered in combination with other interrelated variables, their significance was diminished.

In the second equation (Table F15), sex of parent, child's life skills, and the resources of esteem, mastery, cohesion, and community support, were regressed on the primary appraisal, concern over relations with the community. Variance explained was 27% (adjusted 24%). Multiple R was significantly different from zero, F = 8.36, p < .001. Again, child's life skills was the strongest predictor (Beta = -.21), followed by mastery (Beta = -.19) and sex of parent (Beta = .18). Less parental concern over relations with the community, therefore, was predicted by higher levels of child's life skills, higher levels of parental mastery, and by being the father of the person with schizophrenia.

Table F16 displays the results of the third equation in which the life skills and sex of the child, resources, and

having another child with a disability, accounted for 38% (adjusted 34%) of the variability in the primary appraisal, concern over relations within the family. The regression coefficient was significantly different from zero, F = 10.09, $p < .001$. Of the eight IV's entered into the equation, only three were significant predictors. Lower levels of parental concern over relations within the family were predicted by higher levels of mastery (Beta = -.33), higher levels of child's life skills (Beta = -.24), and higher levels of family cohesion (-.19).

A full 46% (adjusted 43%) of the variance of the primary appraisal, problems in daily functioning, was explained by equation four (Table F17). The multiple R of .68 was significantly different from zero, F = 16.38, $p <$ .00. Four of the seven IVs entered were significant predictors of fewer problems in daily functioning: higher levels of mastery (Beta = -.36), increased age of parent (Beta = -.23), higher levels of esteem (Beta = -.16), and higher levels of child's life skills (Beta = -.14).

Only 18% (adjusted 16%) of the variance in the primary appraisal, worry about the future, was explained by equation five (Table F18). R for regression was significantly different from zero with F = 7.38, $p < .001$. Interestingly, the presence of overt family influence was the strongest predictor (Beta = -.24). Having a family member who says or does something to change the way the parent views or copes with the situation is predictive of higher levels of worry about the future ($p < .001$). Lower levels of self-esteem

(Beta = -.18) and being a mother (Beta = .17) also significantly contributed to higher levels of this concern.

The data in the tables reviewed so far show that between 18% and 46% of the variability in primary appraisals can be attributed to demographics, illness characteristics (life skills), and both individual and family resources. The intercorrelations among the independent variables are such that when regressed simultaneously on each dependent variable, their levels of significance are reduced. Each equation identifies between two and four variables that retain their levels of significance and emerge as significant predictors. Resource variables are the most frequent predictor of primary appraisals; illness characteristics are predictive of all primary appraisals excepting for worry about the future.

Multiple regression series 2. Tables F19 through F22 show the results of regression equations in which demographic, resource, and primary appraisal variables were regressed on secondary appraisals. In equation number 6 (Table F19), three IVs accounted for 15% (adjusted 14%) of the variance of the secondary appraisal, "the situation is one I can change or do something about" ($F = 8.36$, $p < .001$). Only mastery, however, with a Beta value of .21, retained a level of significance less that .05. Higher levels of mastery, then, predicted a stronger perception of the situation as one that the parent could change or do something about.

The regression of the individual resource self-esteem on the secondary appraisal, "the situation is one I have to accept," was the weakest equation of this group (Table F20). The single independent variable that had been identified previously as significantly associated with this secondary appraisal, accounted for only 5 % (adjusted 4 %) of the variance in the secondary appraisal, with an F value of 6.90, $p < 01$. Higher levels of self-esteem were predictive of a stronger perception of the situation as one that had to be accepted.

The secondary appraisal, "I needed to know more before I could act" also had only one IV regressed upon it (Table F21). This predictor, a primary appraisal of a lack of information and problems in communication accounted for the 12% (adjusted 11%) of variance explained, with an F value of 18.86, $p < .001$. A greater concern over a lack of information, then, predicted a stronger perception of needing to know more.

By contrast, Table F22 shows there were eight IVs, previously identified as significant, entered into the equation explaining 33% (adjusted 29%) of the variance of the secondary appraisal, "I had to hold back from doing what I wanted to do" ($F = 8.14$, $p < .001$). Among these variables were demographics, resources, life skills and primary appraisals. All the primary appraisals were candidates for entry because of significant associations with the dependent variable; moderate to high intercorrelations among them, generally between $r = .50$ and $r = .70$, made this inclusion

inadvisable. Rather, the aggregate measure of primary appraisal was utilized. Of the variables entered, only the aggregate primary appraisal measure emerged as a significant predictor (Beta = .36, $p < .001$). The interrelationships between this significant contributor and the other IVs entered (resources, demographics, and life skills) had been demonstrated in the previous set of equations. This equation showed that a higher level of concern over the ways the illness had affected the parent's life predicted a stronger perception of the situation as one in which the parent had to hold back from doing what was wanted.

In the equations investigating the predictors of secondary appraisals, the variance explained ranges from only 5% to 33%. Significant predictors of secondary appraisals are resources (self-esteem and mastery) and primary appraisals. Only a secondary appraisal of the situation as one in which the parent had to hold back had significant associations with multiple variables.

Multiple regression series 3. Results of the regression of illness, demographic, resource, and appraisal variables on each of the measures of coping are displayed in Tables F23 through F30. Amounts of variance explained range from 13% to 42%.

Five IVs including demographics, two primary appraisals, and a secondary appraisal, were regressed on confrontive coping (Table F23), accounting for 14% (adjusted 11%) of the variance in the DV ($F = 4.46$, $p < .001$). Only marital status contributed significantly to confrontive

coping with a Beta value of .18 and a significance level of $p < .03$. Being never married, separated, divorced, or widowed predicted a greater use of confrontive coping.

Equation number 11 (Table F24) demonstrated that two IVs, increased time since illness onset (Beta = .22) and a stronger secondary appraisal of having to hold back (Beta = .17), emerged as the significant predictors of a greater use of distance coping. Four IVs were regressed on the DV accounting for 13% (adjusted 11%) of it's variability ($F = 5.26$, $p < .001$).

Table F25 shows marital status again to be a significant predictor of coping. Being not married (never married, separated, divorced, or widowed) predicted greater use of coping through self-control. Although seven IVs were regressed on self-control coping, only marital status contributed to the 24% (adjusted 20%) of variance explained with a significance level less or equal to .05. The F value for the regression equation equalled 5.72 with a significance level of $p < .001$

Coping by seeking social support is shown in Table F26 to have a number of significant predictors. Altogether, 27% (adjusted 24%) of the variability in seeking social support was predicted by knowing the availability of expressive support (Beta = .38), the marital status of the parent (Beta = .20), the life skill, nonturbulent behaviour, of the child (Beta = -.20), and the age of the parent (Beta = -20). F for regression was 9.92, $p < .001$. A greater use of coping through seeking social support, therefore, was associated

with an increased availability of expressive support, being younger and not married, and having a child with more turbulent behaviour.

In equation 14 (Table F27), more parental coping by accepting responsibility was predicted by a stronger secondary appraisal of having to hold back from doing what the parent wanted to do (Beta = .22) and by a lower level of the child's life skill, nonturbulence (Beta = -.19). The amount of variance explained was 26% (adjusted 23%) with F = 7.81, $p < .001$.

Although eight IVs were regressed on escape-avoidance coping, the variance was explained significantly by three predictors. Table F28 demonstrates that 42% (adjusted 39%) of the variance could be predicted by knowing the scores on the aggregate primary appraisal measure (Beta = .27), the level of mastery (Beta = -.22), and the age of the parent (Beta = -.19). Interestingly, both mastery and primary appraisals were significant predictors despite their intercorrelation of -.50. Being older, having higher levels of mastery, and having lower levels of concerns predicted less use of escape-avoidance strategies. F for regression equalled 11.97, $p < .001$.

Table F29 shows that 25% (adjusted 21%) of the variance in coping through planful problem-solving is accounted for in equation 16 (F = 7.16, $p < .001$). There are four significant predictors of a greater use of planful problem-solving: a greater availability of expressive support (Beta - .24), , being not married (Beta = .20), a greater worry

about the future (Beta = .18) and a stronger secondary appraisal of needing to know more (Beta = .23).

All six IVs entered into equation 17 were demonstrated to be significant predictors of coping through positive reappraisal (Table F30), with 31% (adjusted 28%) of the variance explained. The parent's greater use of coping through positive reappraisal was associated with (a) being a mother (Beta = .24), (b) being not married (Beta = .19), (c) higher levels of the child's life skill, sociability (Beta = .20), and (d) three separate secondary appraisals, a greater need to know more before acting (Beta = .22), a stronger perception of the situation changeable (Beta = .22), and a stronger view of the situation as one that must be accepted (Beta = .18). F for regression equalled 10.04 with a level of significance, $p < .001$.

The equations just reviewed reveal that predictors of coping are multiple and varied; demographics, illness characteristics, resources, primary appraisals, and secondary appraisals account for between 13% and 42% of the variability in different forms of coping. It is of interest that the demographic, marital status of parent (married = 1, not-married = 2), which has not been significantly associated with any type of situational appraisal, is demonstrated to be a significant predictor of many forms of coping.

Life Skills, Demographics, Resources, and Appraisals as Predictors

In order to respond most directly to the questions posed by this study, however, a slight reorientation toward the regression results is required. Rather than focussing on identifying the predictors of various appraisals and forms of coping, study responses must be directed toward determining the predictive power of illness characteristics, demographics, resources, and appraisals. Figures E3 through E6 illustrate, using Beta values, the direction and strength of the predictive power of illness, demographic, resource, and appraisal variables, respectively. The relationships diagrammed are those that retained a level of significance less or equal to .05 within the regression equations. They are diagrammed in accordance with the stress and coping model reviewed above. The diagrams will be briefly described in response to the study questions.

Question 1. How well do illness characteristics predict parental appraisals of the situation and parental coping strategies?

Figure E3 shows that life skills of the son or daughter with schizophrenia are predictive of primary appraisals and of coping (Beta values in brackets), but not of secondary appraisals. The child's nonturbulent behaviour is negatively predictive of two coping strategies for parents, seeking social support (-.20) and acceptance of responsibility (-.19). Interestingly, higher levels of a child's sociability is predictive of more parental coping by

positive reappraisal (.20). A lower level of child's life skills (cumulative) is predictive of greater parental concern over (a) lack of information and problems in communication (-.21), (b) relations with the community (-.21), (c) relations within the family (-.24), and (d) problems in daily functioning (-.14). Another illness characteristic, greater time since onset, predicts greater use of distance coping (.22).

Question 2. What demographic characteristics predict parental appraisals and coping?

Figure E4 indicates that age and sex of parent (father = 1, mother = 2) are predictive of both primary appraisals and coping. Age is negatively related to a concern over problems functioning (-.23), and to coping by seeking social support (-.20) or by using escape strategies (-.19). Mothers more that fathers perceive concerns in their relations with the community (-.18) and they have higher levels of worry about the future (.17). Mothers are more likely than fathers to cope through positive reappraisal (.24). Marital status (1 = married, 2 = not married) is predictive of several coping strategies. Not being married (divorced, separated, widowed) is predictive of more coping through confrontation (.18), self control (.21), seeking social support (.20), and planful problem-solving (.20). Demographics do not appear as predictors of secondary appraisals.

Question 3. What individual and family resources predict parental appraisals and coping strategies?

Figure E5 shows that mastery is highly predictive of certain primary appraisals. Higher levels of mastery predict lower levels of concern over relations with the community (-.19), relations within the family (-.33), and problems functioning (-.36). As might be expected, mastery positively predicts a secondary appraisal of the situation as one that you could change or do something about (.21), and is negatively predictive of coping through escape-avoidance strategies (-.22).

Self-esteem, which is correlated with mastery ($\underline{r}$ = .46), is also predictive of problems functioning (-.16), even with both variables entered into the regression equation. Self-esteem also predicts worry about the future (-.18) and a secondary appraisal of the situation as one that has to be accepted (.22), but has not significant predictive power directly associated with coping strategies.

The availability of expressive support significantly predicts coping by seeking social support (.38) and by planful problem-solving (.24). The significance of community support as a predictor is noted only in its negative relationship with a primary appraisal of lack of information (-.19).

The family resource, cohesion, was found independently to be significantly correlated with several appraisals. In most instances, when regressed on these appraisals in combination with other interrelated variables, its levels of significance were not retained. In regression with one primary appraisal, however, it proved to be a significant

contributor to the variance explained. Cohesion was found to be negatively predictive of a primary appraisal of concern over relations within the family (-.19).

Overt family influence has been placed arbitrarily within the resource category for lack of a more appropriate designation. This variable has been identified as a significant positive predictor of a parent's worry about the future (.24).

Question 4. What predictive relationships exist among primary appraisals (what is at stake), secondary appraisals (the controllability of the situation), and forms of coping?

Figure E6 shows that primary appraisals predict both secondary appraisals and coping. Logically, a primary appraisal of lack of information and problems in communication significantly predicts a secondary appraisal of the situation as one in which one needed to know more before acting (.35), whereas a primary appraisal of worry about the future predicts planful problem-solving (.18). The aggregate primary appraisal measure is positively predictive of a secondary appraisal of the situation as one in which parents felt they had to hold back from doing what they wanted to do (.36) and of coping through the use of escape-avoidance strategies (.27).

Secondary appraisals, more often than primary appraisals, are demonstrated to be significant predictors of coping. A secondary appraisal of the situation as changeable predicts coping through positive reappraisal (.22); a secondary appraisal of the situation as one that

must be accepted also predicts coping through positive reappraisal (.18). Secondary appraisal of needing to know more before acting predicts both positive reappraisal (.22) and planful problem-solving (.23). The remaining secondary appraisal, having to hold back from doing what they wanted, predicts coping by distancing (.17) and accepting responsibility (.22).

Chapter VIII

Discussion

The genesis of this study was the general question, "How do parents cope when they have a son or daughter with schizophrenia?" A reading of both clinical and family studies literature revealed considerable variability within this situation. A review of theoretical frameworks dealing with coping established there were certain concepts utilized by both individual and family coping models that could assess this variability; there were demands, resources, and appraisals considered integral to the coping process. An investigation of this general question, then, needed to attend to these concepts, to operationalize and measure them, along with an assessment of coping strategies, in a substantial sample of parents.

Coping theories have led to the conceptualization of process by way of models but have not led to the derivation of clear hypotheses. In this study, I proposed some exploratory questions which, if answered, not only might increase our appreciation of parental coping with a child who has schizophrenia, but also might provide insights into parental coping in general and perhaps further our global understanding of coping by empirically identifying some predictors within the process. Along with these questions, I ventured some expectations of findings based on the theoretical and clinical literature review. This interpretation of the study's results, then, will consider each question that was posed, how it was answered, and

whether my expectations were met; I will venture some explanations for the findings. I will point out important relationships and patterns of influence that may speak to the coping model that drove the research. The discussion will continue with a consideration of the limitations and strengths of the study, and any implications there may be for theoretical and practical application.

Question 1

Question 1 queried the predictive power of illness characteristics (child's life skills and time since onset). Recall that the literature showed differing consequences of the disorder for the family according to different manifestation of the illness (Cole et al., 1993; Gubman & Tessler, 1987), with greater family distress accompanying positive symptoms in general (Runions & Prudo, 1983), and in particular, symptoms of an offensive or threatening nature (Biegal et al., 1991; Gibbons et al., 1984; Johnson, 1990). Figure E3 shows that as was expected, life skills (except for sociability) do predict all but one of the parental appraisals of what is at stake. Cumulatively, they are the strongest predictor of parental concerns about a lack of information and problems in communication and relations with the community. Particularly, the life skills of responsibility and nonturbulence of the child are influential in these parental assessments, independently having the highest correlations with primary appraisals as noted in Table F10. A child's sociability, however, has a significant association only with a parent's appraisal of

relationships with the community. Unlike the child's turbulent and irresponsible behaviour, his/her general inactivity with little social involvement and few friends promotes less disruption in family relationships and problems in daily functioning, but still impacts upon relationships with friends, neighbours, and society in general.

Interestingly, the child's life skills have no significant relationships with a parent's worry about the future. As we saw above, the sub-scale "worry about the future" was significantly skewed to the left. For the most part, the parents in this sample indicated high levels of this concern. It appears that regardless of severity of symptoms, the parent is concerned about the child's future and worried about the effect on the rest of the family should the parent die.

There were few significant associations between illness characteristics and secondary appraisals, as noted above in Table F11. Although nonturbulence was regressed along with other variables on the secondary appraisal, having to hold back, it did not emerge as a significant predictor.

Whereas for the most part the child's life skills strongly influence a parent's primary appraisals in similar ways, they are independently and less frequently predictive of coping. As was expected, lower levels of life skills predict more use of emotion-focussed forms of coping, a finding that follows suggestions by Folkman et al. (1991) that emotion-focussed coping is appropriate when demands are

less amenable to change. For example, a child's turbulent behaviour is predictive of more parental coping by seeking social support, including talking to someone to find out more about the situation, and getting professional help. This turbulent behaviour, then, appears to be the more difficult behaviour for parents to understand and to manage. This finding corresponds to that of Rosen et al. (1989) in which turbulent behaviours were ranked by parents among the highest that were "hard to take".

The child's turbulence and irresponsibility are significantly related to a parent's coping by accepting responsibility. Only turbulence, however, is found to be a significant predictor because of the intercorrelation (r = .75) between these behaviours. It is intriguing to consider the meaning of these significant relationships. Accepting responsibility by the parent includes coping by self-criticism, by apologizing or doing something to improve a relationship, and by resolving that things would be different next time. One wonders whether parents feel somehow they have failed, perhaps by not being consistent enough or tough enough, or not setting firm enough guidelines. One wonders if this could be an expression of the adverse effects of family therapy referred to by Terkelsen (1983), or the iatrogentic damage to family members reported by Lefley (1990). Alternatively, the link between the child's nonturbulent behaviour and parents' feelings of responsibility might be confounded by their joint relationship with problems in daily functioning.

Parent's acceptance of responsibility may be directed toward these daily hassles. These relationships do appear to verify the extension of an active parental role beyond the childrearing years referred to in the literature (e.g., Ascher-Svanum & Sobel, 1989; Hatfield, 1987b; Ireys & Burr, 1984).

Other illness characteristics that independently are predictive of coping are the child's sociability, and time since onset of the illness. A higher level of sociability (child's) is predictive of a parent's greater use of coping through positive reappraisal of the situation, including such strategies as believing the family has changed in a good way, adjusting expectations for the future, and concentration on the child's contribution to the family. Perhaps the child's warmth and social contact enables the parent to more readily construct the situation within a positive frame. Interestingly, the last item mentioned encouraged some volunteered comments that ranged from "You've got to be kidding" and "(my daughter's contribution is) my granddaughter" to the poignant "I thought that if he had died, there would be an emptiness in my world." This latter comment reinforces the report by Greenberg, Greenley, and Benedict (1994) that persons with mental illness contribute positively to their families by providing companionship, listening to problems, and providing news about family and friends.

Time since onset of the illness is the strongest predictor of parental use of distance coping, being

positively related to such strategies as, ignoring the situation, refusing to get too serious about it, and trying to look on the bright side of things. Spaniol (1987) reports that parents learn by trial and error what works to manage their situations, and notes that distancing is a coping skill parents utilize. Perhaps the participants of this study have learned over time that distancing techniques are ways of coping they find most appropriate.

Folkman, Lazarus, Pimley, and Novacek, (1987) in comparing age differences in coping, also found older participants to use more distancing strategies in response to their appraisals of their situations as less changeable. It makes one suspect that a variety of life experience may lead one to the recognition that some situations are either not amenable to change or too difficult to change; in such circumstances, distancing, and other emotion-focussed strategies, might be the most adaptive forms of coping (Lazarus & Folkman, 1984).

Participants write of caring for themselves by keeping busy physically and mentally. One mother mentioned that she finally realized she could not change her son but she could change herself; another commented that at first she joined the Schizophrenia Society to learn about the illness and to share her experience with others, but now participates in other activities that maintain her own mental health. These comments fit with the findings of Hatfield (1981) that of family members caring for the mentally ill, those who were older tended to have greater need fulfillment in terms of an

adequate personal life with ego-involving tasks. Parental self-care may be a way in which the parent distances her or him-self from the illness and its impact, and works with what is controllable.

Both in this study and in the clinical literature, parents report that over time, they manage to come to a realistic acceptance of the illness; they realize the limitations it has for their offspring and they adjust their expectations accordingly. One parent reported that, "As his mother, I wanted him 'well' again. Now I accept the patient, my son, the way he is and enjoy what I can and empathize with him." Other comments, as well, speak to a "realization that the outcome of the illness may not be to my liking" and "an acceptance of a 'new' ill person."

Contrary to my expectations, however, there was no significant relationship between time since onset of the illness and a parent's secondary appraisal of the situation as one that must be accepted. There appears, then, to be an important difference between acceptance of the illness with its limitations for their child and acceptance of the situation in its totality, as captured in this study by parents' primary appraisals, for example, by a lack of information, relationships within the family, and so forth.

In sum, illness characteristics (life skills) are predictive of all but one of the primary appraisals, no secondary appraisals, and three separate ways of coping. Nonturbulence and responsibility are the child's life skills with the strongest and most frequent influence upon parental

appraisals and coping, a finding that is in accord with previous studies in which offensive and uncooperative behaviour was positively related to higher levels of family distress. Time since onset of the illness is the strongest predictor of distance coping. In accord with my prior expectations, lower levels of life skills are associated with emotion-focussed rather that problem-focussed strategies.

Question 2

Question 2 considered the predictive power of demographic characteristics (Figure E4). This study shows that parent's age, sex, and marital status are significant predictors of primary appraisals and coping, but not of secondary appraisals. Age of the parent is negatively related to a primary appraisal of problems in daily functioning, problems such as concern over one's own physical, mental, and financial health, and difficulty keeping up with work and home chores. Perhaps this is because later in life, there tends to be a reduction in family, work, and financial hassles (Folkman et al., 1987). In addition, it is important to remember that age of parent and time since onset of the illness are highly correlated (r = .60). The gradual acceptance of the child's illness and the parental attention to their own care that was mentioned above may bode well for the parents' concerns over their own mental and physical condition. Comments volunteered by parents in this study speak to their gradual adjustment to this illness with its uncertainties and disruption, while

they continue to experience a profound sadness at the emptiness in the child's life.

Parent's age is negatively predictive of coping by seeking social support or by using escape-avoidance strategies, such as wishing the situation would go away, fantasizing, or trying to feel better by eating, drinking, and so forth. Less seeking of social support by older persons was also noted by Folkman et al. (1987) in their study of age differences in coping. Age related differences must be interpreted cautiously because the differences noted may be cohort related (Folkman et al., 1987). I would suggest, however, that in this study, the common factors of the illness and the parental role, along with the time related adjustment of family members that has been noted in the empirical literature, would take precedence over historical differences in cohorts.

Contrary to my expectations, age of parent was not positively related to a primary appraisal of worry about the future. Although the age range of the parents encompassed four decades, worry about what would happen to family members when the parent was gone appeared to be as great a concern to the younger parents as to those whose deaths would normatively be considered to be "on time" (see Hagestad & Neugarten, 1985). This high level of concern could be attributed to the salience of the parental role with its norms of protection and support.

Although sex of the parent was significantly associated with most of the primary appraisals and forms of coping

(with mothers' higher scores indicating greater concern and more frequent use of coping strategies), when multiple, interrelated variables were entered into the regression equations, sex of parent emerged as a significant predictor of only two primary appraisals and one coping strategy. Mothers were shown to have significantly higher concerns over relations with the community and worry about the future, and to use positive reappraisal as a coping strategy more often than fathers. Lazarus and Folkman (1984) suggest that one's appraisals are influenced by what is important to an individual; Pearlin (1991) emphasizes the importance of social roles. Women's socialization, and particularly the mother role, require a responsiveness to others' needs (Gore & Colten, 1991). Caregiving to mentally ill adults extends this culturally prescribed nurturant role beyond the child-rearing years (Ascher-Svanum & Sobel, 1989). One mother commented that she was glad her daughter lived with her because she was able to talk her out of her delusional state; another mentioned she was attempting to decrease her son's dependency upon her because she was worried what would happen when she was gone; yet another wrote that until her husband retired, she felt that coping with her son's illness was mainly her responsibility. It can be seen that parents, and particularly mothers, continue to play an active parenting role with their adult offspring and are concerned who is going to provide for the child's needs when the parent is gone.

Mothers more than fathers coped by positive reappraisal; they used such techniques as prayer, changing something about themselves, believing they have benefitted from the experience, and concentrating on the child's contributions to the family. One mother volunteered that she learned to admire the courage of persons with schizophrenia, saying it strengthened her love and admiration for her daughter.

Parent's marital status was predictive only of coping strategies. Being married or remarried (as opposed to separated, divorced, widowed and never married) predicted less use of five coping strategies: confrontation, self-control, seeking social support, planful problem solving, and positive reappraisal. It is interesting to speculate on the reason for this finding. It does not appear that a married parent has less with which to cope, for there is no relationship between marital status and primary appraisals of what is at stake. Could it be that a married parent relies on a spouse for some of the coping that is needed to manage the situation; or perhaps through day-to-day spousal interaction, married parents gain from one another social support and/or problem solving opportunities? An intimation of this mutual help is suggested in written comments by the participants who mention that with their spouse, "we talk things over and make decisions together" and "we're a team, we talk the problems out together". Certainly, in response to the inquiry into overt family influence, spouses were often mentioned as being supportive as well as being

influential in changing a participants views or ways of coping. Single parents are without this potential coping assistance. This interpretation would fit with observations that a marital disruption is not only the dissolution of a dyadic relationship but also the loss of a social support system (Lin & Westcott, 1991), and I would suggest it also may be the loss of a potential management partner.

My other expectations regarding the predictive power of demographics were not fulfilled. In accord with the literature, I had expected that daughters would have higher life skills scores, particularly higher levels of nonturbulent behaviour and responsibility (e.g., Seeman, 1986); on the contrary, daughters' scores were slightly but not significantly lower than sons' scores. Considering that family support of females is more likely to be spousal (Atkinson, 1986), daughters with parental support in this study may be those whose severity of symptoms caused the dissolution of their marriage and their subsequent return to parental care. The data show that daughters were more likely to have been married. The daughters with schizophrenia in this study, therefore, may not be representative of most women with schizophrenia.

Another unfulfilled expectation was that parental co-residence with child was not significantly related to primary appraisals as I had expected; it was not associated with more concern over relationships within the family or problems with daily functioning. The literature was equivocal on this issue. Arey and Warheit's (1980) study of

family support of persons with mental illness found higher levels of anxiety and depression in family members when there was co-residence; alternatively Carpentier et al. (1992) found that psychological distress in family members did not differ significantly whether the patient lived at home or not. Falloon et al. (1984), however, suggest that offspring with schizophrenia may be excluded from the household following disruptive episodes. In this study, the lack of an association between co-residence and problems in daily functioning may have been found because disruptive offspring had already been asked to leave the family residence. Those adult children remaining in the household may have been those who were more amenable.

Question 3

Question three inquired whether individual and family resources would significantly predict appraisals and coping (see Figure E5). Mastery, self-esteem, community support, and cohesion were all significant predictors of primary appraisals. Interestingly, mothers and fathers did not differ significantly on any of the resource measures.

Higher levels of mastery predicted less concern over relations with the community, relations within the family, and problems in daily functioning; a view of the situation as "one that could be changed" (as had been expected); and less use of escape-avoidance coping strategies. Mastery concerns the extent to which people regard their life chances as being under their own control as opposed to being fatalistically determined (Pearlin & Schooler, 1978). High

levels of mastery include strong beliefs, such as "what happens in the future mostly depends on me" and "there are things I can do to change many of the important things in my life." It is reasonable to assume that these beliefs would enable parents to view aspects of their situations as manageable and to rely less on coping by using avoidance strategies, such as wishing the situation away. Of interest is the positive correlation found between the nonturbulent behaviour of the child and the parent's level of mastery (r = .32). The most probable direction of influence would be from behaviour to mastery, that is, the child's offensive and reckless behaviour would affect the parental beliefs of controllability.

Higher levels of self-esteem predicted less concern over problems in daily functioning and less worry about the future; it predicted a stronger perception of the situation as one that had to be accepted (contrary to my prior expectations). Self-esteem refers to positive beliefs about oneself, such as "I feel I have a number of good qualities" and " I am able to do things as well as most people" (Pearlin & Schooler, 1978). It suggests a certain contentment with the self, a contentment that somehow enables one to accept the situation. As previously noted, self-esteem is correlated with mastery (r = .46), but unlike mastery, it is associated with the sociability of the son or daughter (r = .27). Again a reasonable assumption would be for the direction of influence to flow from the child's behaviour to parental self-esteem.

Higher levels of the family resource, cohesion, predicted less concern over relations within the family (in accordance with earlier expectations). Parents who perceive their families to have greater emotional bonding express fewer worries over how the situation is affecting the other children and over a lack of time and energy for the family. Cohesion is weakly associated with both esteem ($\underline{r}$ = .29) and mastery ($\underline{r}$ = .25). Like mastery, it is associated with the nonturbulent behaviour of the child ($\underline{r}$ = .28). It is apparent from the responses to the inquiry into family influence that parents' perceptions of the cohesiveness of their families have been affected both negatively and positively by the impact of the illness. Parents write that the criticism of family members and their refusal to accept the illness has distanced them from one another; parents also indicate that the support and encouragement given by family members makes them feel loved.

This acknowledgement highlights the issue of reciprocal influence. One wonders about the direction of influence between levels of resources and relations within the family. Do resources facilitate family functioning or does disruption within the family deplete resources? The cross-sectional design of this study precludes this determination. It would seem, however, that by controlling for time since the onset of the illness, this study might arrive at a more accurate understanding of the interaction. Data show, however, that the associations between time since onset and other relevant variables were negligible. Correlations with

time since onset were as follows: mastery (r = .01), esteem (r = .10), cohesion (r = .05), relations within the family (r = -.05).

The two social support resources, expressive and community support, behaved differently as predictors. Community support was significantly related to a primary appraisal of a lack of information and problems in communication, with higher levels of support predicting less of this concern. The community support measure assessed the availability of organized support and information group activity; it is gratifying that this information access appeared to predict improved communication. Alternatively, expressive support was related to two different coping strategies, with greater availability of support predicting greater use of coping through seeking social support and planful problem-solving. The link between social support and problem-solving can be noticed in the narratives of the parents. With various family members they speak of talking things over, accepting advice, making decisions together, and acting on suggestions regarding alternative housing, respite care, and day programs for their son or daughter. They also mention sharing and learning from the experiences of parents in like-situations. Incidentally, self-esteem and the availability of expressive support were correlated (r = .30). This relationship may validate the assertion of Pearlin et al. (1981) that social support bolsters self-esteem; alternatively it may show that individuals with higher self-esteem seek more emotional support or that such

support is volunteered more often to individuals with high self-esteem (Dunkel-Schetter, Folkman, & Lazarus, 1987).

Overt family influence was allocated to the resource category for want of a more appropriate designation. Interestingly, parents' perceptions that a family member has done or said something to change the way they view or cope with their situation predicts a higher level of worry about the future. This family influence appears to be not always reassuring, a finding that corresponds to the observations of Gottlieb and Wagner (1991) mentioned previously. Many respondents reported that family members helped them to a realistic acceptance of the illness; this may have been accompanied by realistically decreased expectations for the child's future independence. Other parents mention being urged to make alternative housing arrangements for the child; yet others report receiving criticism, lack of support, and a discounting of the illness by family members. One mother mentioned her other children have made it clear they will not provide her level of support for the sibling when the parent is gone. These accounts are similar to those of other studies in which there was found to be an ongoing collaboration of siblings with other family members (see Gerace et al., 1993) and in which participants expressed concerns over the future independence and financial support of their sibling (see Landeen et al, 1992). Worry about the future may be a response to such influence. These findings seem to indicate that through overt family influence, family members negotiate new

"definitions of the situation" (Menaghan, 1983). Such negotiations may speak to the issue raised by Patterson and Garwick (1994) of the need for studies on how families share and construct meanings about illness.

Both money and knowledge are resources that can affect one's options for coping (Folkman et al., 1991). As noted above, there was a wide range of both income and education. The data showed that many parents assisted their sons and daughters financially; one mother shared her sense of hurt that she was unable to help her son in this way. Just over 50% of respondents agreed to some degree that the illness has created financial problems for the family. Yet surprisingly, neither family income nor parent's level of education were significantly related to any of the appraisals or to coping. One wonders if this finding would hold were there not the existing system of health and social services in British Columbia, a system that has been found to of higher quality than that of any of the American states (Torrey, Bigelow, & Sladen-Dew, 1993), albeit less than some might wish.

In sum, there are six individual and family resources that are predictive of appraisals and coping: mastery, self-esteem, expressive support, community support, cohesion, and overt family influence. Mastery and self-esteem each predict multiple primary appraisals and one secondary appraisal. The other resources are more selective in their influence, predicting either primary appraisals or coping. Interrelationships were noted among the resource variables

and between parental resources and some life skill behaviours of the child.

Question 4

Question four inquired into significant relationships among primary appraisals, secondary appraisals, and coping (see Figure E6). Secondary appraisals, more often than primary appraisals, were demonstrated to be significant predictors of coping. There were fewer links between secondary appraisals and coping, however, than theory would lead us to expect.

Individually, the primary appraisal, worry about the future, directly predicted greater use of planful problem-solving, including such strategies as concentrating on what to do next, reading books or articles to learn more about the situation, and making some arrangements for the child's future. This relationship is particularly understandable in the context of the above discussion of family influence. It indicates that whereas these data reflect the intrafamilial conflict found in other studies (Creer & Wing, 1974; Falloon, Hardesty, & McGill, 1985), they show that intrafamilial influence, though not always reassuring, can move parents to action.

The primary appraisal, lack of information, initiates a process that could be described as a cognitive or information chain. A lack of information predicts a secondary appraisal of needing to know more, which in turn predicts coping by planful problem-solving and positive reappraisal. Positive reappraisal includes believing

oneself or one's family has benefitted from the experience, adjusting expectations for the future, and concentrating on the child's contributions to the family. It's interesting to consider the link between an appraisal of needing to know more, and coping through positive reappraisal. It may reflect the observation by Lazarus and Folkman (1984) that ambiguity in situations can be used to reduce threat by allowing different interpretations of a predicament. Folkman, Lazarus, Dunkel-Schetter, et al. (1986) found that in encounters appraised as requiring more information, subjects also used planful problem-solving, in addition to seeking more social support, and using more self-control.

Cumulatively, primary appraisals predicted a secondary appraisal of having to hold back from what one wants to do. This secondary appraisal predicted coping by distancing and accepting responsibility. Distancing techniques, such as refusing to get too serious about the situation, appear to be very different from accepting responsibility by doing something to improve a relationship or promising oneself things would be different next time. The age of the parent could influence his/her choice of coping strategy. Age of parent has been seen to be positively related to time since the onset of the illness (and indirectly to distance coping), and negatively related to problems in daily functioning. Older parents, therefore, might more readily choose distance coping whereas younger parents might accept responsibility for their daily hassles. Folkman, Lazarus, Dunkel-Schetter, et al. (1986) also found subjects to use a

variety of techniques in response to an appraisal of having to hold back; they used more confrontational coping, self-control, and escape-avoidance. The data in this study also pointed to a significant relationship between a secondary appraisal of having to hold back and escape-avoidance coping; when entered simultaneously into the equation with the cumulative primary appraisal measure, however, the latter was identified as the more significant predictor.

Both secondary appraisals of the situation as one that could be changed and as one that had to be accepted predicted coping through positive reappraisal, which according to Lazarus and Folkman (1984), is an emotion-focussed form of coping. My prior expectations, therefore, were not completely supported. Theory suggests, and I had expected, that seeing the situation as one that could be changed would predict some form of problem-focussed coping. Folkman, Lazarus, Dunkel-Schetter, et al. (1986) also found positive reappraisal, along with confrontational coping and planful problem-solving, to be used in encounters appraised as changeable; they found that subjects used distancing and escape-avoidance in situations appraised as having to be accepted. Interestingly, Carver, Schier, and Weintraub (1989) suggest that positive reappraisal (which they call positive reinterpretation and growth) is not limited to managing distress (therefore is not only emotion-focussed) but should enable the person to continue problem-focussed coping actions. Seltzer, Greenberg, and Krauss (1995)

consider it a problem-focussed form of coping. One might conclude that its status is in question.

In accord with theoretical projections, viewing the situation as changeable had a significant negative correlation with escape-avoidance coping (r = -.22) but because of its intercorrelation with other variables, particularly mastery, it was not found in the regression equation to be a significant predictor of this form of coping.

Overall, the links between appraisals and coping were fewer than theory would suggest. Folkman, Lazarus, Dunkel-Schetter, et al. (1986) had found each of the assessed stakes (primary appraisals) and coping options (secondary appraisals) to have significant coping correlates. In their analyses, however, the procedure used was a multivariate analysis of variance for repeated measures, to compare coping scores in several encounters for each particular stake and each coping option. In this present study, the stakes (primary appraisals) and coping options (secondary appraisals) were regressed on ways of coping simultaneously with other variables (e.g., child's life skills, demographics, resources). These data show two of the primary appraisals independently to have predictive relationships, one with a secondary appraisal and one with coping. Cumulatively, primary appraisals predict one secondary appraisal and one form of coping. Each secondary appraisal has a predictive relationship with one or more forms of coping. It is important to reiterate that many

relationships between the relevant variables lost significance in the standard multiple regression procedure because of the intercorrelations of the independent variables.

Summary of Findings

To summarize these findings, some general patterns can be noted in the presence and absence of significant predictive relationships. Whereas cumulatively, a child's life skills are predictive of a parent's primary appraisals, responsibility and nonturbulence appear to be the more influential behaviours. Life skills, however, are notably absent as predictors of the primary appraisal, worry about the future. Of the demographic variables, age and sex of parent predict both primary appraisals and coping, whereas the predictive power of parent's marital status is directed only towards coping strategies. Mastery and self-esteem are the resources that were found to be predictive of several primary and secondary appraisals, retaining their significance in equations with other variables. As well, mastery predicted one form of coping. Of the secondary appraisals, only viewing the situation as one in which you had to hold back was significantly interrelated with demographics, resources, life skills, and primary appraisals; the other secondary appraisals had fewer associations. They each were predictive of at least one form of coping. In addition to the variables that were identified as predictors, it is important to attend to the significant relationships noted in the correlation matrix,

the significance of which diminished in the regression equations because of the multicollinearity of the variables.

Previously it was mentioned that no causality can be attributed to these predictive relationships, and above there was a brief discussion of direction of influence. Yet again, caution is advised in the interpretation of the data. For example, it was shown that higher levels of mastery predict less concern over relations within the family and problems in daily functioning. It also could be said that fewer problems and concerns are related to a greater perception of mastery. Coping theory acknowledges a "network of reciprocal effects" (Pearlin & Schooler, 1978, p. 18) that requires longitudinal studies to disentangle. I choose to interpret the predictive relationships according to the theoretical model of coping reviewed above in which demands and resources are considered important influences upon appraisals and coping, while at the same time I remain aware that coping is an ongoing process of reciprocal influence and reappraisal.

There appears to be a reasonable fit between the model and the data gathered in this study. The data show that in some instances, more than one-third of the variability in appraisals and coping was attributed to demands and resources (illness characteristics, demographics, individual and family level resources). The amounts of variability explained range from a low of 5% to a high of 46%; of the other percentages, 5 were between 11% and 19%, 5 ranged between 20% and 29%, 4 were between 30% and 39%, and 1 was

42%. Although these amounts of variance are not comparable because they have different predictors, the majority of these percentages are acceptable amounts of variance for social science research with its complex multivariate nature.

In addition to *amounts* of variability explained, the the multi-determinant nature of the model of stress and coping is able to account for multiple sources of this variability. Folkman et al. (1991, p. 242) assert that "appraisals ... are influenced by psychological, sociological, health, and contextual variables" and that coping is influenced by available resources (social, psychological, physical, institutional, cultural, political) and also is determined by the person's appraisal of the demands of a particular situation. The data show support for this multi-determinant model.

With simultaneous entry into multiple regression equations, the interrelationships among the independent variables often resulted in their loss of significance with the dependent variable of interest. Particularly, the links between secondary appraisals and coping, which had been significant, were eclipsed by other stronger relationships. Whereas secondary appraisals were significantly associated with all but one forms of coping, they were identified as predictive of only four of the eight strategies. Illness characteristics, demographics (particularly marital status), and resources were all identified as other significant predictors of coping strategies.

Much of the variability, however, was not explained. Obviously, there were many influential factors this study could not incorporate. An in-depth qualitative inquiry with probing questions might help solve this puzzle of unexplained variance.

Limitations and Strengths

Limitations

This study dealt with a complex coping process of multiple concepts and reciprocal influences, yet in its cross-sectional design is a mere snapshot of this ongoing process; as such, it is unable to fully capture its richness or understand its complexity. Folkman, Lazarus, Dunkel-Schetter, et al. (1986) caution that whereas it is tempting to infer, as theory suggest, there is a temporal ordering in the coping process, a cross-sectional study design precludes such an assumption. Additionally, while attempting to increase our understanding of the correlates of situational appraisals and coping strategies, this study is limited in the number of variables it considers, and is unable to investigate all of the interactions among them. Many important factors and interrelationships have been necessarily excluded.

A limitation of this study is its self-selected nature. Although a specific effort was made to include participants of different cultures, it was restricted to those parents who could read and write English. The majority of parents were contacted though support groups or through their associations with mental health units. Those mothers and

fathers who responded to the request for participants might be an unrepresentative group of parents who have an adult child with schizophrenia. Inferences from the sample statistics to the population therefore are not possible or are tenuous at best.

The unequal number of sons (111) and daughters (30) requires an attempt at explanation. Schizophrenia affects males and females with equal frequency but males are more likely to be younger and single at first diagnosis (Çetingök, Chu, & Park, 1990). As mentioned above, the daughters in this study were much more likely than sons to have been married. When a child marries, the parent-child role relationship changes (Greene & Boxer, 1986). Social expectations are for the parent to relinquish control (Aldous, 1978); the spousal unit becomes the primary source of mutual support. It would be logical to venture that more daughters with schizophrenia would be living with their spouses and no longer considered the primary responsibility of parents.

The unequal numbers of mothers (109) and fathers (32) in this inquiry is common to studies of families of the mentally ill (see Arey & Warheit, 1980; Tausig et al., 1992). As noted above, the care of mentally ill offspring is often regarded by mothers as a natural extension of their parental role.

The series of multiple regressions necessitated by the multiple dependent variables increases the liability of committing a Type I error, that is, relationships may be

shown to be significant merely by chance. One might decide to lower the significance level to avoid this problem. Because of the exploratory nature of this study, however, this danger must be balanced against the problem presented by a Type II error in which important relationships might be disregarded. A significance level of $p \leq .05$ was retained.

As mentioned above, not all of the variables, independently and/or in combination, met the assumptions of multiple regression of normality, linearity, and homoscedasticity. The analyses, therefore, are weakened. Again caution is advised in the interpretation of the study results.

The study attempted to use measures with established reliability and validity. There is the issue, however, of operationalization of the constructs. There was an explanation given above regarding the choice of resources to be assessed; it was based upon those resources that were theoretically and empirically considered to be relevant to the coping process. Following Folkman, Lazarus, Dunkel-Schetter, et al. (1986), secondary appraisals were assessed with singe items. One can not be assured that the participants had a similar understanding of the phrasing of the appraisal questions. For example, when they were asked indicate their level of agreement with the statement "my situation is one that I have to accept", did they have a shared understanding of "situation?" Although my instructions had included the explanation that it was "your situation, as you have described it above," they may have

been considering different aspects of this situation when they replied to the question.

The operationalization of primary appraisals, as well, needs to be addressed. Folkman, Lazarus, Dunkel-Schetter, et al. (1986) considered primary appraisals to be "what was at stake in a stressful encounter". They assessed six factors: (a) threats to self-esteem (6 items), (b) threats to loved one's well-being (3 items), and four single items, (c) not achieving an important goal at work, (d) harm to own health or physical well-being, (e) a strain on your financial resources, and (f) losing respect for someone else. I could find no mention of interrelationships among these items, although these relationships can be seen to be possible. In my study, I wished to assess what was at stake in the stressful situation of having a son or daughter with schizophrenia. It seemed logical to assess the ways in which the illness had affected different aspects of their lives, what Pearlin (1989) would call secondary stressors. The scale chosen assessed five factors, each with multiple items: (a) lack of information, (b) relationship with the community, (c) relationships within the family, (d) problems in daily functioning, and (e) worry about the future. These five factors were interrelated. The data show that for most parents there were multiple stakes within their situations. While this scale may accurately represent parents' situations, one wonders if it is true to the concept of primary appraisal as it is conceived in Lazarus and Folkman's (1984) model of coping.

Self-care for relatives is an important principle advocated by support systems for family members coping with schizophrenia (see Alexander, 1991). Parents are advised to take very good care of themselves emotionally and physically in order that they might participate fully in their social roles and find enjoyment in life. The Ways of Coping Scale (Lazarus & Folkman, 1984) did not appear to be have a category that adequately captured this aspect of coping. These sorts of strategies, such as exercise, hobbies, and activities, have been categorized as "self-distraction" (Carver et al., 1993), "disengagement" (Carver et al., 1989), and "avoidance" (Amirkhan, 1994). None of these categories appear to capture the positive, active nature of these coping efforts, that essentially bolster or replenish one's personal resources. This deficiency may have restricted the participants' coping choices.

There is always a concern in a questionnaire whether the responses accurately reflect how the participant defines the situation. For example, one father indicated little concern over society's reactions to the illness, to the family, or to the child with schizophrenia; yet he volunteered that the illness of his child is kept private "so that friends and relatives will not look down on her." This man's ethnicity brought to the fore China's stigma against mental illness. Again it seems probable that an interview process with probing questions would have yielded valuable information; the father may have been able to clarify the seeming incongruity of his responses.

Strengths

This study adopts some of the recommendations noted previously for research in the area of schizophrenia and the family, namely, that it should have a theoretical grounding, address the variability in family experience with the illness, attend to families' coping strengths, and utilize measures with established reliability and validity. This inquiry is theoretically grounded in theory on individual stress and coping enriched with the attention to family context that is afforded by family stress theory. It attends to the heterogeneity of both family and illness; its central premise is that variability in manifestations of the illness, individual family members, and family contexts, results in different situational appraisals and coping strategies. This study attends to positive coping strengths, seeing both individual and family system resources as facilitators of the coping process. It includes positive dimensions of parental experience, accommodating expressions of family solidarity and growth. The measures that were used in its assessments have established reliability and validity, with only one idiosyncratic index employed, namely, the index of community support.

Another strength of this study is its attention to levels of analysis. Whereas it does speak of "family" response to schizophrenia when reviewing the empirical literature, the study design has an explicit focus on the individual level of coping. All responses are those of the

individual, but most importantly, the individual within the family context. Family context is assessed with demographic variables and individual perceptions of family strengths and influence.

This study attempts to maintain a clear distinction among concepts. It is suggested here that because its focus and outcome of interest is coping, this study will avoid the circularity that critics have argued is present when the independent variable is "burden" and the dependent variable is "well-being".

An additional strength is its integration of literature from three different but related fields of endeavor which can inform and enrich each other. The first area of literature drawn upon is that of schizophrenia and the family. This literature informs us of the great diversity in all aspects of the illness. It is an area of multiple perspectives, one of which directs attention to a consideration of families' efforts to cope with the disorder. Second, family stress theory deals with the stress process in all its complexity. It alerts us to important family system influence such as the strengths and capabilities of families, to reciprocal relationships among variables, and to the feedback over time which is so important in the developmental course of many stressors. It situates individuals within influential and variable family contexts. Third, individual stress and coping theory with its clearly defined concepts, facilitates a focus on these individuals, their situational appraisals, and coping

responses. It has elaborated methods of appraisal assessment, and has demonstrated relationships between these appraisals and coping strategies while keeping the concepts conceptually distinct. What promotes an integration of these areas is a family perspective which is cognizant of family diversity, the salience of family roles, and the importance of viewing the individual within the family context.

This study informs our understanding of coping in general, verifying the multideterminant nature of the coping model. It also has implications for coping within the family context, highlighting the importance of family system variables.

Implications

In addition to support for the model of coping as a highly interactive multi-determinant process, the data suggest possible implications for a general understanding of coping. It must be recognized, however, that these data come from parents who were dealing with a situation that directly affected the whole family. These implications may not apply to coping in situations where there is little involvement of other family members.

The suggestions implied by these data appear to pertain to three somewhat different levels of speculation: the individual level of appraisals and coping choices, the family system level of family structure and intrafamilial influence, and the societal level of gender socialization.

1. On the individual level, a parent's perception of the situation as changeable was not predictive of problem-focussed coping as theory would suggest, but to increased positive reappraisal (an emotion-focussed strategy according to Folkman & Lazarus, 1984). This may lend support to Carver et al.'s (1989) contention that positive reappraisal enables one to undertake problem-focussed coping.

2. At the level of the family system, both family structure and family dynamics were shown to be influential in the coping process. Marital status was shown to be an important variable directly affecting one's coping choices, with single parents making more use of multiple forms of coping. In addition, these data show that parents' appraisals and their coping choices are modified by the direct influence of a family member. It may be important to consider this family interaction if one's coping choices are to be understood. Walker (1985) does suggest that to understand a family's response to stress, we need an understanding of the individual perspectives of family members in combination.

3. At the societal level, these data may speak to the ongoing discussion of gender differences in coping. Thoits (1991) comments that the generally reported higher levels of psychological distress in women have been explained in a number of ways. In addition to women's greater expressivity, the explanations include: (a) women face more stressors in general (e.g., Aneshensel & Pearlin, 1987), and (b) they lack coping resources, such as high self-esteem and

mastery, or appropriate coping responses (Pearlin & Schooler, 1978). It also has been suggested that women experience uncontrollable social forces, such as sexism and limited access to power that limit their coping process (e.g., Banyard & Graham-Bermann, 1993). Concerning point (a), both men and women in this study faced objectively the same type of stressor. Within this situation, however, mothers did perceive higher levels of concern in four of the five primary appraisals, that is, mothers perceived more to be at stake than did fathers (see table 5). Both fathers and mothers had similar levels of concern over relationships within the family, a finding that is consistent with the discussion by Gore and Colten (1991) in which they related that women were no more reactive than men to the stresses in family life. There were aspects, however, within this stressful situation to which mothers were more reactive than fathers, particularly to relationships with the community and worry about the future. The explanation ventured here is that the gender difference in levels of concern is due to social role importance. As discussed above, women's socialization, and particularly the mother role, generates a set of values that alerts mothers to concerns that others may not recognize.

There were no gender differences in secondary appraisals. Mothers and fathers did not differ appreciably in their assessments of controllability of the situation (consistent with the findings of Thoits, 1991).

Regarding coping resources, data from this study show no significant differences in psychological or social resources (except for income) for women and men. Mothers did report lower income, but as stated above, income was not shown to be significantly related to any aspect of appraisal or coping.

Corresponding to the findings of Thoits (1991), which showed that women used more coping strategies than men when dealing with distress, this study found that mothers reported greater use of all forms of coping, both problem-focussed and emotion-focussed, except for distancing. The differences were slight but significant. It has been suggested that women use more strategies because the techniques they use are less effective (see Pearlin & Schooler, 1978); alternatively, I suggest their greater use might be seen as an appropriate response to mothers' primary appraisals of more at stake. The data from this study, then, showed no gender differences in the availability of coping resources, or in any of the secondary appraisals, such as the controllability of the situation. Mothers perceived more concerns than did fathers and responded with greater use of both problem and emotion-focussed coping strategies.

Along with possibilities for a more informed understanding of coping theory, the results of this study may have implications for parents. These findings might corroborate parents' experiences and may inform the service providers for these families.

1. The child's behavioural characteristics that have the strongest influence on appraisal and coping were shown to be irresponsibility and turbulence. Higher levels of these behaviours were related to higher levels of concern regarding lack of information, problems with the community, relationships within the family, and problems with daily functioning, and were associated with increased coping by seeking social support, accepting responsibility, and using escape-avoidance strategies. Extra care and services seem warranted for these families. It may be more difficult for these parents to cope through positive reappraisal as they might if their child had higher levels of warmth and social contact.

2. Self-esteem and mastery appear to be strong coping facilitators. With some assistance these resources may be developed by the individual. Because expressive support has been shown to be positively related to self-esteem, and the direction of influence is unclear, the availability of both of these resources could be bolstered. Outreach programs may be advisable for those parents who feel disinclined to attend mutual support groups.

3. Sixty percent of parents reported direct influence, positive and negative, from family members that affected the ways they viewed and/or coped with their situations. The comments suggested that even if the influence was critical, the conflict often spurred the parent to some positive action. It may be useful for parents to be aware of such

possible outcomes and helpful for service providers to attend to this family interaction.

4. Service providers might find it helpful to take a multi-faceted approach in their work with parents, using the five primary appraisals as specific areas of concern that require attention. This approach could follow a model of intervention suggested by Folkman et al, (1991). They propose that people can be assisted in their efforts to cope with a difficult situation by separating this situation, or global stressor, into specific stressors; these can then be categorized into changeable and unchangeable aspects. For example, the global stressor, having a son or daughter with schizophrenia, could be separated into the following concerns: lack of information, problems in daily functioning, relations with the community, relationships within the family, and worry about the future. Other concerns identified by the parents could also be included, for example, their sense of sadness over their child's quality of life. For each of these concerns, parents could be encouraged to isolate specific aspects they consider important. These could be categorized according to whether they are seen as changeable or unchangeable. Various emotion-focussed strategies might be discussed to manage the specific stressors with little potential for change; various problem-focussed efforts could be considered to manage changeable aspects of the situation. By breaking a global stressor down into its smaller, more manageable aspects,

multiple forms of coping, each with a specific focus, could be utilized.

Families in other types of stressful situations also might be regarded beneficially within a stress and coping framework. The need has been identified to examine the effects upon family life of a child's deviant behaviour (Bahr, 1987; Geis & Binder, 1991). Parents with delinquent children have experiences that appear to parallel those of parents who have offspring with mental illness. They must deal with a legal system in which a lack of information and problems in communication may be a problem; there may be difficult relationships with the community as well as within the family, problems with daily functioning and worry about the future. Irresponsibility and/or turbulent behaviour of the child might well be influential aspects of the situation. Parents are often seen to be responsible for their child's delinquency (Geis & Binder, 1991) and yet juveniles are released into their parents' custody. Focussing on the coping process of such families might ameliorate their distress and benefit the child's rehabilitation.

Conclusion

Parents who have an adult child with schizophrenia have been regarded over time as causal agents, as rehabilitation agents, then as burden bearers. This study has viewed these parents as managers of difficult but variable situations. In taking this perspective, I found that parents made use of many forms of coping that were related to the variability of

their situations. An understanding of this variability may facilitate a better provision of service to these parents.

This inquiry found that parents were very willing to share their experiences, adding their comments to enrich the content and help explain the findings of the study; many expressed gratitude for such an opportunity. Their cooperation leads one to speculate whether a questionnaire was the correct design format. An interview would have given these parents greater opportunities to tell their stories. Such a format, however, would have limited the numbers of participants, and restricted them to one geographical area. The number of included variables, and therefore the variability, assessed by the study would have been greatly reduced.

This study hinted at the power of intrafamilial influence in shaping the coping process. This is an area of family interaction for which further study has been recommended (see Patterson & Garwick, 1994; Walker, 1985). Gottlieb and Wagner (1991) have such studies planned. I endorse these efforts and would propose they be conducted within a multicultural context. We could learn much from various cultural perspectives on the ways that family members perceive, share, and respond to family distress.

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Appendix A

Definitions per Lazarus and Folkman (1984)

Stress: The relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his/her well-being.

Coping: Constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person.

Demand/Stressor: Any environmental situation or event that is construed by the individual as taxing or overwhelming her/his resources and endangering her/his well-being.

Resource: Something one draws upon and uses to counter demands. Resources can be categorized into those of the person (positive beliefs and competences) and those of the environment (social support and material resources).

Appraisal: An evaluative process that determines why and to what extent a particular transaction or series of transactions between the person and the environment is stressful.

Primary appraisal: An evaluation of the significance of the person-environment relationship.

Secondary appraisal: A complex evaluative process that takes into account which coping options are available, the likelihood that a given coping option will accomplish what it is supposed to, and the likelihood that one can apply a particular strategy or set of strategies effectively.

Appendix B

THE COPING PROCESS OF PARENTS WHO HAVE AN ADULT CHILD WITH SCHIZOPHRENIA

We require participants for a study of the coping efforts used by parents who have an adult child with schizophrenia. Our use of the term "adult child" is simply recognition that parents continue to consider their offspring as their children regardless of age. Allow us to share with you some objectives of this project.

This study is part of a Master's thesis in the department of Family Studies at the University of British Columbia. We regard parents who cope with having a son or daughter with schizophrenia as we would parents who deal with any devastating family stressor. By "coping" we mean any attempt to manage a difficult situation or to manage the feelings aroused by stressful circumstances, regardless of its effectiveness. From this study we hope to learn more about the influences upon parental coping efforts so as to better understand how to offer coping assistance.

This study asks you to express your views of your situation and the ways in which you respond to it. We hope your reflection upon your ways of coping may verify for you that your efforts are understandable responses to your particular situation. By providing you an opportunity to receive feedback on the main conclusions of the study, we hope to share with you a greater understanding of coping with stressful situations.

Please be assured that as we read your responses to this questionnaire we will have no knowledge of your identity; your confidentiality is assured. At the conclusion of the study all data collected will be destroyed.

The time needed to complete the questionnaire is approximately 1 hour. We are very interested in the ways that you see and respond to your situation, as it has been within the last three months, so please take your time to carefully respond, on your own, to the questions. As soon as you have completed the questionnaire, please return it to us in the large, stamped, addressed envelope.

If you wish to receive a brief account of the main findings of this study at its completion, please return the enclosed stamped, self-addressed postcard SEPARATELY from the questionnaire. This request attends to our concern to treat your data with confidentiality.

You may decide not to participate. We hope, however, that you will agree to assist us in our efforts to add to a general understanding of parental coping so as to increase our understanding of effective coping assistance. The return of this completed questionnaire will assure us of your consent to participate.

Rose DallaLana Brian de Vries PhD

QUESTIONNAIRE

SECTION 1: INFORMATION ABOUT YOUR CHILD

To begin, we would like some information concerning your child who has been diagnosed with schizophrenia. Please check the appropriate answers as they apply to your son/daughter with schizophrenia.

1. Sex of child. male ____ female ____

2. Relationship to you.

   biological child ____adopted child ____step-child _____

3. His/her year of birth. _____

4. His/her marital status.

   never married _____ married (or common-law) _____

   separated _____ divorced _____ widowed _____

5. Does your child live with you at present? Yes ___No___

   If no, please indicate his/her current living arrangements._____

6. Approximate length of time since onset of illness.

   _____

7. Number of hospitalizations since diagnosis. _____

8. Son's/daughter's source(s) of income. Please check all that apply.

   employment _____social assistance _____disability ____

   parent(s) _____other - please specify_____

SECTION 2: CHILD'S GENERAL LEVEL OF FUNCTIONING

We would now like you to tell us your impressions of your daughter's/son's general levels of functioning as it has been overall within the last three months, to the best of your knowledge. Please respond to the 38 items below, using the categories provided. If you feel that the statement is not true, you would circle **NT**; if you feel that it is only slightly true, you would circle **ST**; moderately true is indicated by **MT**, and very true by **VT**. Please circle one response only.

	N T not true	**S T** slightly true	**M T** moderately true	**V T** very true
1.	My child wears clean clothes.	NT	ST	MT	VT
2.	He/she is capable of budgeting.	NT	ST	MT	VT
3.	She/he intrudes on other's conversations	NT	ST	MT	VT
4.	She/he chooses a good diet.	NT	ST	MT	VT
5.	He/she neglects physical problems.	NT	ST	MT	VT
6.	He/she has unsociable habits.	NT	ST	MT	VT
7.	She/he bathes regularly.	NT	ST	MT	VT
8.	She/he displays reckless behaviour.	NT	ST	MT	VT
9.	He/she shows violence to others.	NT	ST	MT	VT
10.	He/she is capable of employment.	NT	ST	MT	VT
11.	He/she has problems with other household members.	NT	ST	MT	VT
12.	Displays offensive behaviour	NT	ST	MT	VT
13.	Is capable of food preparation.	NT	ST	MT	VT
14.	Has been in trouble with police.	NT	ST	MT	VT
15.	She/he shows warmth to others.	NT	ST	MT	VT
16.	He/she abuses alcohol and/or drugs.	NT	ST	MT	VT
17.	She/he is intrusive toward others.	NT	ST	MT	VT

	N T not true	S T slightly true	M T moderately true	V T very true
18.	Shows responsible behaviour.	NT	ST	MT	VT
19.	She/he is angry toward others.	NT	ST	MT	VT
20.	He/she has some social organization involvement.	NT	ST	MT	VT
21.	She/he takes offense readily.	NT	ST	MT	VT
22.	He/she is generally active.	NT	ST	MT	VT
23.	She/he displays odd ideas in talk.	NT	ST	MT	VT
24.	He/she shows reduced eye contact.	NT	ST	MT	VT
25.	He/she shows poor compliance with medication.	NT	ST	MT	VT
26.	She/he is violent to her/himself.	NT	ST	MT	VT
27.	She/he has friendships.	NT	ST	MT	VT
28.	He/she is well groomed.	NT	ST	MT	VT
29.	His/her speech is disordered.	NT	ST	MT	VT
30.	Has some definite interests.	NT	ST	MT	VT
31.	She/he uses bizarre or inappropriate gestures.	NT	ST	MT	VT
32.	Withdraws from social contact.	NT	ST	MT	VT
33.	He/she destroys property.	NT	ST	MT	VT
34.	He/she generally has difficulty with conversation.	NT	ST	MT	VT
35.	She/he takes others possessions.	NT	ST	MT	VT
36.	She/he loses personal property.	NT	ST	MT	VT
37.	She/he is uncooperative with health workers.	NT	ST	MT	VT
38.	Is reliable with own medication.	NT	ST	MT	VT

SECTION 3: HOW THE ILLNESS HAS INFLUENCED YOUR LIFE

Now we would like you to read carefully the following list of items that describe some concerns that have been identified by parents as ways in which the illness of their children has influenced various aspects of their lives. Please circle only one response indicating the extent to which **YOU** agree or disagree with each of the following statements. The categories are as follows:

1 strongly disagree	2 moderately disagree	3 slightly disagree	4 slightly agree	5 moderately agree	6 strongly agree

1. I am concerned about my child's future.	1	2	3	4	5	6
2. I have difficulty accepting the situation.	1	2	3	4	5	6
3. I worry about my spouse's health(if applicable).	1	2	3	4	5	6
4. The reactions of society toward schizophrenia concern me.	1	2	3	4	5	6
5. I have difficulty keeping up with chores at home.	1	2	3	4	5	6
6. Not knowing who and where to go to for help is a problem.	1	2	3	4	5	6
7. I worry about the effect on my other child(ren).	1	2	3	4	5	6
8. I am concerned about relations with my friends and neighbours.	1	2	3	4	5	6
9. I am concerned that if something happens to me, it will be difficult for the rest of my family.	1	2	3	4	5	6
10. Reactions of society toward my family concern me.	1	2	3	4	5	6
11. Lack of understanding of professional language used by service providers is a problem.	1	2	3	4	5	6

	1 strongly disagree	2 moderately disagree	3 slightly disagree	4 slightly agree	5 moderately agree	6 strongly agree
12.	Relations with relatives not in the household are a concern.	1	2	3	4	5	6
13.	I lack time or energy for the family.	1	2	3	4	5	6
14.	I have guilt feelings about my child.	1	2	3	4	5	6
15.	Relations with professionals are a problem.	1	2	3	4	5	6
16.	I lack time and energy at work.	1	2	3	4	5	6
17.	I am concerned that my child is not getting the proper treatment.	1	2	3	4	5	6
18.	I worry about my own mental health.	1	2	3	4	5	6
19.	Relations with my spouse (or former spouse) have suffered.	1	2	3	4	5	6
20.	Lack of information about the illness in general is a concern.	1	2	3	4	5	6
21.	Relations with public agencies are a source of concern.	1	2	3	4	5	6
22.	I worry about my own physical health.	1	2	3	4	5	6
23.	This illness has created financial problems for our family.	1	2	3	4	5	6
24.	There is a lack of information about my child's specific condition.	1	2	3	4	5	6
25.	Relations with parents/spouse's parents have worsened.	1	2	3	4	5	6
26.	Reactions of society toward my son/daughter concern me.	1	2	3	4	5	6

SECTION 4: THOUGHTS ABOUT YOUR SITUATION

In order to help us more completely understand how you see your situation, as you have described it above, would you please indicate your level of agreement with the following statements. The categories are as follows:

1	2	3	4	5	6
strongly disagree	**moderately disagree**	**slightly disagree**	**slightly agree**	**moderately agree**	**strongly agree**

1.	My situation is one in which there are things that I can change or do something about.	1	2	3	4	5	6
2.	My situation is one that I have to accept.	1	2	3	4	5	6
3.	My situation is one in which I needed to know more before I could act.	1	2	3	4	5	6
4.	My situation is one in which I had to hold myself back from doing what I wanted to do.	1	2	3	4	5	6

SECTION 5: YOUR WAYS OF COPING

We come now to the part of the questionnaire in which we ask you to indicate the various ways in which you presently cope with your situation. The word coping used here refers to any attempt to manage your situation, <u>as you have described it above</u>, whether or not you feel this effort is successful. Please carefully read each item and indicate, by circling the appropriate category number, the extent to which you have used it <u>within the past three months</u>.

The categories are:

1	2	3	4
not used	**used somewhat**	**used quite a bit**	**used a great deal**

1.	Just concentrated on what I had to do next - the next step.	1	2	3	4
2.	I did something which I didn't think would work, but at least I was doing something.	1	2	3	4

	1 not used	2 used somewhat	3 used quite a bit	4 used a great deal
3.	Tried to get the person responsible to change.	1	2	3	4
4.	Talked to someone to find out more about the situation.	1	2	3	4
5.	Criticized or lectured myself.	1	2	3	4
6.	Tried not to burn my bridges, but leave things open somewhat.	1	2	3	4
7.	Hoped a miracle would happen.	1	2	3	4
8.	Went along with fate; it's just bad luck.	1	2	3	4
9.	Went on as if nothing was wrong.	1	2	3	4
10.	Tried to keep my feelings to myself.	1	2	3	4
11.	I looked for the silver lining, so to speak; tried to look on the bright side of things.	1	2	3	4
12.	Slept more than usual.	1	2	3	4
13.	I expressed anger to the person who caused the problem.	1	2	3	4
14.	Accepted sympathy and understanding from someone.	1	2	3	4
15.	I was inspired to do something creative.	1	2	3	4
16.	Tried to forget the whole thing.	1	2	3	4
17.	I got professional help.	1	2	3	4
18.	I changed or grew as a person in a good way.	1	2	3	4
19.	I apologized or did something to improve a relationship.	1	2	3	4
20.	I made a plan of action and followed it.	1	2	3	4
21.	I let my feelings out somehow.	1	2	3	4
22.	Realized I brought the problem on myself.	1	2	3	4

	1 not used	2 used somewhat	3 used quite a bit	4 used a great deal
23.	I have benefitted from the experience.		1	2	3	4
24.	I talked to someone who could do something concrete about the problem.		1	2	3	4
25.	Tried to make myself feel better by eating, drinking, smoking, using drugs or medication, etc.		1	2	3	4
26.	Took a big chance or did something very risky.		1	2	3	4
27.	I tried not to act too hastily or follow my first hunch.		1	2	3	4
28.	Found new faith.		1	2	3	4
29.	Rediscovered what is important in life.		1	2	3	4
30.	Changed something so things would improve.		1	2	3	4
31.	I avoided being with people in general.		1	2	3	4
32.	Didn't let it get to me; refused to think too much about it.		1	2	3	4
33.	I asked a relative or friend I respected for advice.		1	2	3	4
34.	Kept others from knowing how bad things were.		1	2	3	4
35.	Made light of the situation; refused to get too serious about it.		1	2	3	4
36.	Talked to someone about how I was feeling.		1	2	3	4
37.	Stood my ground and fought for what I wanted.		1	2	3	4
38.	Took it out on other people.		1	2	3	4
39.	Drew on my past experiences; I was in a similar situation before.		1	2	3	4

	1 not used	2 used somewhat	3 used quite a bit	4 used a great deal
40.	I knew what had to be done, so I doubled my efforts to make things work.	1	2	3	4
41.	Refused to believe that it was happening.	1	2	3	4
42.	I made a promise to myself that things would be different next time.	1	2	3	4
43.	Came up with a couple of different ways to deal with the problem.	1	2	3	4
44.	I tried to keep my feelings from interfering with other things too much.	1	2	3	4
45.	I changed something about myself.	1	2	3	4
46.	Wished that the situation would go away or somehow be over with.	1	2	3	4
47.	Had fantasies about how things might turn out.	1	2	3	4
48.	I prayed.	1	2	3	4
49.	I went over in my mind what I would say or do.	1	2	3	4
50.	I thought about how a person I admire would handle this situation and used that as a model.	1	2	3	4
51.	We changed or grew as a family in a good way.	1	2	3	4
52.	Made some arrangements for my child's future.	1	2	3	4
53.	Read books and articles to learn more about the situation.	1	2	3	4
54.	Adjusted my expectations for the future.	1	2	3	4
55.	Concentrated on child's contributions to the family.	1	2	3	4
56.	I talked to someone in a similar situation.	1	2	3	4

SECTION 6: FAMILY INFLUENCE

Sometimes parents indicate that their thoughts or feelings about a stressful situation and the ways they choose to respond to it are influenced by what a family member has done or said. Have any family members influenced **your** views of your situation or your coping responses?

_____**Yes** _____**No**

If yes, in a few brief sentences would you please tell us 1) *which family member(s)* have influenced your views of your situation and/or your coping responses, and 2) *how your views of your situation and/or your coping responses have changed* because of what they have done or said.

1) Which family members have influenced your views of your situation and/or your coping responses?

2) How have your views of your situation and/or your coping responses changed because of what they have done or said?

SECTION 7: INFORMATION ABOUT YOURSELF

At this point it would be helpful for us to understand something about you and your unique personal situation. Please remember your confidentiality is assured.

1. Your year of birth _____

2. You are: male _____ female _____

3. Number of years of your formal education _____

4. To what ethnic or cultural group(s) do you belong?

_____

5. Your marital status is:

married or common law ___ separated____ divorced _____

remarried _____ widowed _____ never married _____

6. Your total annual family income is:

_____ less than $15,000 _____ $45,001 - $60,000

_____ $15,000 - $30,000 _____ $60,001 - $75,000

_____ $30,001 - $45,000 _____ over $75,000

7. Do you have any other children (other than your child with schizophrenia)?

____ Yes (please list the age for each below) _____ No

Son(s) age(s): ____ ____ ____ ____ ____

Daughter(s) age(s): ____ ____ ____ ____ ____

If any of the above children/dependents are living with you at the present time, please circle their ages.

8. Do you have another child with any physical or mental disability or illness? _____Yes _____No

9. Do you have any other dependents?

_____ Yes _____ No

Please explain your relationship to these other dependents:

_____

_____

SECTION 8: GENERAL BELIEFS

Now we would like you to help us understand your general beliefs about yourself and life. Please indicate the extent to which you agree or disagree with the following statements. The categories are:

1 strongly disagree	2 moderately disagree	3 slightly disagree	4 slightly agree	5 moderately agree	6 strongly agree

1.	I have little control over the things that happen to me.	1	2	3	4	5	6
2.	I feel that I have a number of good qualities.	1	2	3	4	5	6
3.	There is little I can do to change many of the important things in my life.	1	2	3	4	5	6
4.	I am able to do things as well as most other people.	1	2	3	4	5	6
5.	Sometimes I feel that I'm being pushed around in life.	1	2	3	4	5	6
6.	What happens to me in the future mostly depends on me.	1	2	3	4	5	6
7.	On the whole, I am satisfied with myself.	1	2	3	4	5	6
8.	There is really no way I can solve some of the problems I have.	1	2	3	4	5	6
9.	I feel that I'm a person of worth, at least on an equal plane with others.	1	2	3	4	5	6
10.	I often feel helpless in dealing with the problems of life.	1	2	3	4	5	6
11.	I take a positive attitude toward myself.	1	2	3	4	5	6
12.	I can do just about anything I really set my mind to do.	1	2	3	4	5	6
13.	All in all, I'm inclined to feel that I'm a failure.	1	2	3	4	5	6

SECTION 9: HELP AND SUPPORT

Let's turn now to the help and support you get from friends and relatives. Thinking about your friends and family, other than your child with schizophrenia, please indicate the extent to which you agree or disagree with the following statements. The categories are:

1	2	3	4
strongly disagree	**disagree**	**agree**	**strongly agree**

1. There is really no one who understands what I am going through.	SD	D	A	SA
2. The people close to me let me know that they care about me.	SD	D	A	SA
3. I have a friend or relative in whose opinions I have confidence.	SD	D	A	SA
4. I have someone who I feel I can trust.	SD	D	A	SA
5. I have people around me who help me to keep me spirits up.	SD	D	A	SA
6. There are people in my life who make me feel good about myself.	SD	D	A	SA
7. I have at least one friend or relative I can really confide in.	SD	D	A	SA
8. I have at least one friend or relative I want to be with when I am feeling down or discouraged.	SD	D	A	SA

COMMUNITY SUPPORT

1. There are support programs and/or support groups for relatives of persons with schizophrenia available.

____ Yes ____ No ____ Don't know

2. There are information and/or education programs available for relatives of persons with schizophrenia.

____ Yes ____ No ____ Don't know

3. There is a day program available for my son/daughter.

____ Yes ____ No ____ Don't know

4. My son/daughter has a confidant/friend or support person.

____ Yes ____ No ____ Don't know know

SECTION 10: UNDERSTANDING HOW YOUR FAMILY WORKS

You've come to the final section. Thank you for your perseverance. Over time, families naturally vary in levels of togetherness and adaptability. We'd like you to share with us some of your views about how your family presently operates. Please circle the appropriate number which indicates the extent to which the following items apply to your family.

(Note. This assessment was conducted utilizing FACES II of Olson, Portner, and Bell, 1982, which is not able to be reproduced here).

Thank you for your patience and cooperation in completing the questionnaire. Your help is very much appreciated. Please check back to make sure you have not left any questions unanswered. If you have additional comments you would like to make on the ways in which you cope with your situation, please use the space provided below and the reverse of this page. Some examples are:

What has helped you most to cope?

How have your coping efforts changed over time?

Appendix C

Questionnaire Items Categorized According to Sub-Scale

Illness characteristics - Life Skills Profile (Rosen et al., 1989)

Self-care:
Wears clean clothes.
Capable of budgeting.
Chooses good diet.
Neglects physical problems.
Has unsociable habits.
Bathes regularly.
Capable of employment.
Capable of food preparation.
Well groomed.

Nonturbulence:
Displays reckless behaviour.
Shows violence to others.
Has problems with other household members.
Displays offensive behaviour.
Has been in trouble with the police.
Abuses alcohol and/or drugs.
Is intrusive toward others.
Shows responsible behaviour.
Is angry toward others.
Takes offense readily.
Is violent to her/himself.
Destroys property.

Sociable:
Shows warmth to others.
Has some social organization involvement.
Is generally active.
Has friendships.
Has some definite interests.
Withdraws from social contact.

Communication:
Intrudes on other's conversations.
Displays odd ideas in talk.
Shows reduced eye contact.
Speech is disordered.
Uses bizarre or inappropriate gestures.
Generally has difficulty with conversation.

Responsibility:
Shows poor compliance with medication.
Takes others possessions.
Loses personal property.
Is uncooperative with health workers.
Is reliable with own medication.

Primary appraisal - How the illness has influenced your life

(Gidron, 1991)

Lack of information and problems in communication:
Not knowing who and where to go to for help.
Lack of understanding of professional language used by service providers.
Relations with professionals are a problem.
Concern that my child is not getting proper treatment.
Lack of information about the illness in general.
Relations with public agencies are a problem.
Lack of information about my child's condition.

Relationship with the community:
Reaction of society toward schizophrenia concern me.
Relations with my friends and neighbours are a concern.
Reaction of society toward my family concern me.
Relations with relative not in the household are a concern.
Reactions of society toward my child concern me.

Problems in daily functioning:
Difficulty keeping up with chores at home.
Have guilt feelings about my child.
Lack time and energy at work.
Worry about my own mental health.
Worry about my own physical health.
Illness has created financial problems for family.

Relations within the family:
I have difficulty accepting the situation.
Worry about the effect on my other child(ren).
Lack time and energy for the family.
Relations with my spouse (or former spouse) have worsened.

Worry about the future:
I am concerned about my child's future.
I am concerned that if something happens to me it will be difficult for the rest of my family.

Ways of Coping (Folkman, Lazarus, Dunkel-Schetter, et al., 1986)

Confront:
Did something which I didn't think would work, but at least I was doing something.
Tried to get the person responsible to change.
Expressed anger to the person who caused the problem.
Let my feelings out somehow.
Took a big chance or did something very risky.
Stood my ground and fought for what I wanted.

Distance:
Went along with fate; it's just bad luck.
Went along as if nothing was wrong.

Looked for the silver lining, so to speak; tried to look on the bright side of things.
Tried to forget the whole thing.
Didn't let it get to me; refused to think too much about it.
Made light of the situation; refused to get too serious about it.

Self-control;
Tried not to burn my bridges, but leave things open somewhat.
Tried to keep my feelings to myself.
Tried not to act too hastily or follow my first hunch.
Kept others from knowing how bad things were.
Tried to keep my feelings from interfering with other things too much.
Went over in my mind what I would say or do.
Thought about how a person I admire would handle this situation and used that as a model.

Seek social support:
Talked to someone to find out more about the situation.
Accepted sympathy and understanding from someone.
Got professional help.
Talked to someone who could do something concrete about the problem.
Asked a relative or friend I respected for advice.
Talked to someone about how I was feeling.
* Talked to someone in a similar situation.

Accept responsibility:
Criticized or lectured myself.
Apologized or did something to improve a relationship.
Realized I brought the problem on myself.
Make a promise to myself that things would be different next time.

Escape-avoidance:
Hoped a miracle would happen.
Slept more than usual.
Tried to make myself feel better by eating, drinking, smoking, using drugs or medication, etc.
Avoided being with people in general.
Took it out on other people.
Refused to believe that it was happening.
Wished that the situation would go away or somehow be over with.
Had fantasies about how things might turn out.

Planful problem-solving:
Just concentrated on what I had to do next- the next step.
Made a plan of action and followed it.
Changed something so things would improve.
Drew on my past experiences; I was in a similar situation before.
Knew what had to be done, so I doubled my efforts to make things work.
Came up with a couple of different ways to deal with the problem.
* Made some arrangements for my child's future.
* Read books and articles to learn more about the situation.

Positive reappraisal:
Was inspired to do something creative.
Changed or grew as a person in a good way.
I have benefitted from the experience.
Found new faith.
Rediscovered what is important in life.
Changed something about myself.
Prayed.
We changed or grew as a family in a good way.
* Adjusted my expectations for the future.
* Concentrated on the child's contributions to the family.

Esteem (Pearlin & Schooler, 1978)
I feel that I have a number of good qualities.
I am able to do things as well as most other people.
On the whole, I am satisfied with myself.
I feel that I'm a person of worth, at least on an equal plane with others.
I take a positive attitude toward myself.
All in all, I am inclined to feel that I'm a failure.

Mastery (Pearlin & Schooler, 1978)
I have little control over the things that happen to me.
There is little I can do to change many of the important things in my life.
Sometimes I feel that I'm being pushed around in life.
What happens to me in the future mostly depends on me.
There is really no way I can solve some of the problems I have.
I often feel helpless in dealing with the problems of life.
I can do just about anything I really set my mind to do.

Note. * indicates idiosyncratic items

Appendix D

The Shapes of Value Distributions

Demographics

Except for family income, distributions of values for the demographic variables approached normality. Observed values of "total family income" were slightly and significantly skewed to the right. Except for a value of 35 years for "formal education" (recoded to one above the next highest value as suggested by Tabachnick and Fidell, 1989), there were no outliers (defined as 3 SDs above the mean).

Level of functioning measures

Observed values of "selfcare" and "sociable" sub-scales were approximately normally distributed. Distributions were significantly skewed to the left in the sub-scales "nonturbulent behaviour" (Skewness = -.854, SE Skewness = .212), "communication skills" (Skewness = -.642, SE Skewness = .207), and "responsibility (Skewness = -.875, SE Skewness = .206), indicating a "tail" towards lower values. Kurtosis values lacked significance. In this sample then, the greater number of sons and daughters were considered to be responsible, communicative, and calm, whereas the others were ranked in varying degrees of lower function. The distribution of observed values for the total scale, the "Life Skills Profile," had a small but significant skew to the left (Skewness = -.524, SE Skewness = .220) along with a slightly platykurtic shape which lacked significance.

Primary appraisal measures

The observed distributions of four of the primary appraisal sub-scales, namely, "lack of information," "relationship with the community," "problems functioning," and "relationships within the family," displayed nonsignificant positive skewness and nonsignificant negative kurtosis. This pattern was also evident in the distribution of the cumulative scale "all the concerns." The distribution of the sub-scale "worry about the future," however, demonstrated a clear departure from normality. It had strong negative skewness (-1.387, SE Skewness = .204) and significant positive kurtosis (1.754, SE Kurtosis = .406). The majority of cases were clustered toward the higher values, an indication that indeed this was an area of great concern for most of the parents in the sample.

Secondary appraisal

Distributions of values for two of the single-item secondary appraisals, "I could change or do something about the situation" and "I had to hold back from doing what I wanted to do," were negatively skewed (nonsignificant) with significant platykurtic shapes. Kurtosis values for the former were -1.325 with a SE Kurtosis of .406; values for the latter were Kurtosis = -1.361 with a SE Kurtosis of .408. The negative skew of "I had to accept the situation" was significant (Skewness = -1.293, SE Skew = .205) but its positive kurtosis was not. Distribution of the secondary appraisal, "I needed to know more I could act," was

significantly skewed to the left (-.636, SE Skewness = .206) with a significant negative kurtosis (Kurtosis = -.944, SE Kurtosis = .408).

Resource measures

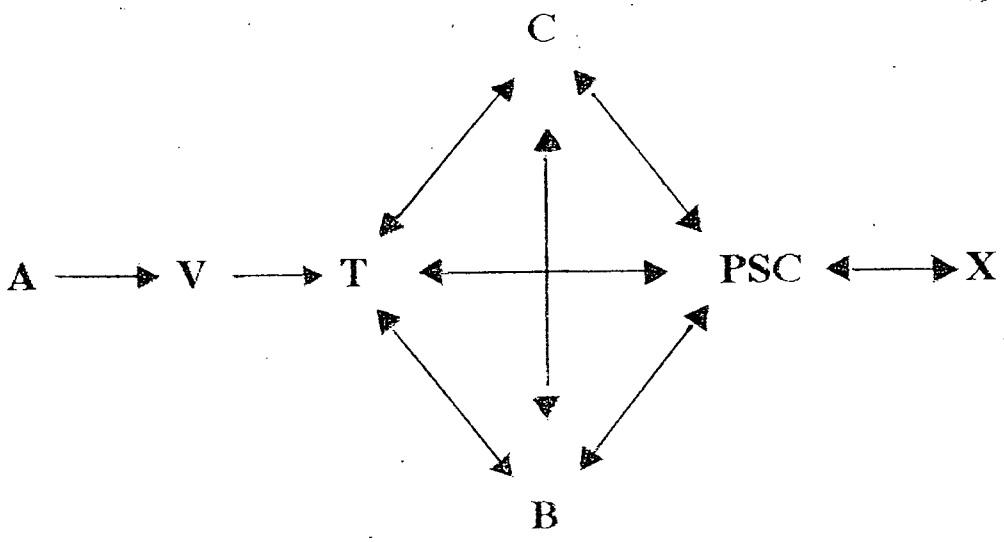
The distribution of values of the "esteem" scale was significantly skewed to the left (Skewness = -1.526, SE Skewness = .207) with a significant positive kurtosis (Kurtosis = 3.419, SE Kurtosis = .411), indicating a leptokurtic distribution of the observations with a cluster of cases in the upper values and a "tail" toward the lower end of the scale. More respondents in this sample expressed high levels of "esteem" than would normally be expected. The individual resource, "mastery," however was approximately normally distributed with slight, negative skew and platykurtic shape, both of which lacked significance.

Distributions of observed values of "expressive support" and "community support" were skewed to the left with similar levels of significance (3.89 and 3.85). Observations of "cohesion" were distributed in a comparable pattern but with a lower significance level for skewness (2.60).

Ways of coping scales

"Seeking social support" and "positive reappraisal" were similarly distributed with platykurtic shapes that did not reach levels of significance. Distributions of "distancing," "accepting responsibility," and "escape-avoidance" were similar with significant levels of positive skewness (Skewness = .736, .602, .786, respectively). The sub-scales, "confront," "plan," and "self-control," along with the two cumulative scales, "problem-focussed" and "emotion-focussed," were those that most closely approached a normally shaped distribution with low, insignificant levels of skewness and kurtosis.

Appendix E



Legend

(A) pile-up of demands

(B) available resources

(V) family vulnerability

(C) situational appraisal

(T) family type

(PSC) problem-solving coping

(X) family adjustment and adaptation

Figure E1.

A Model of Family Stress, Coping, and Adaptation (Following McCubbin and McCubbin, 1991)

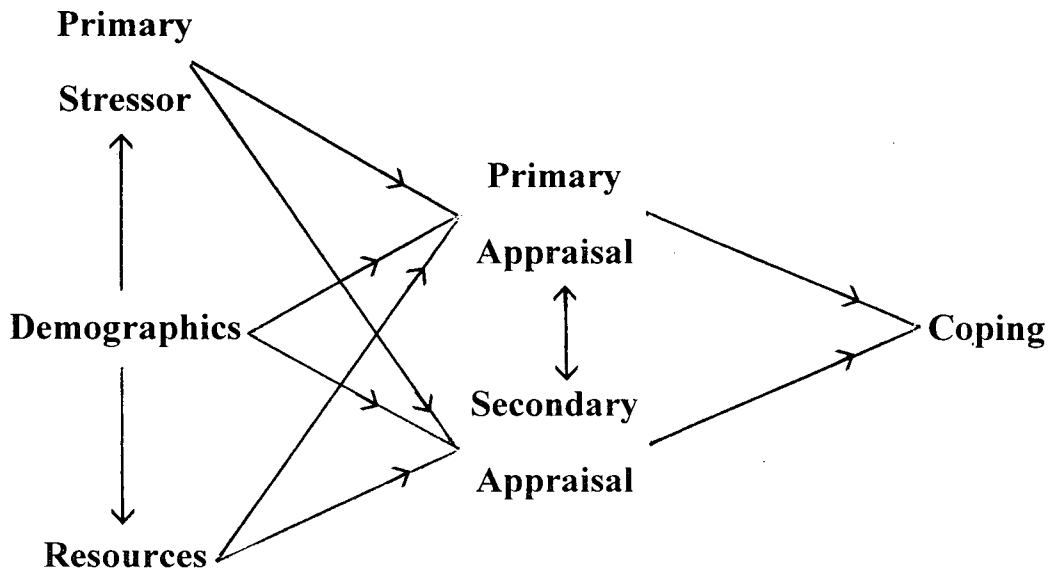


Figure E2

A Representation of the Coping Process (following Lazarus and Folkman, 1984)

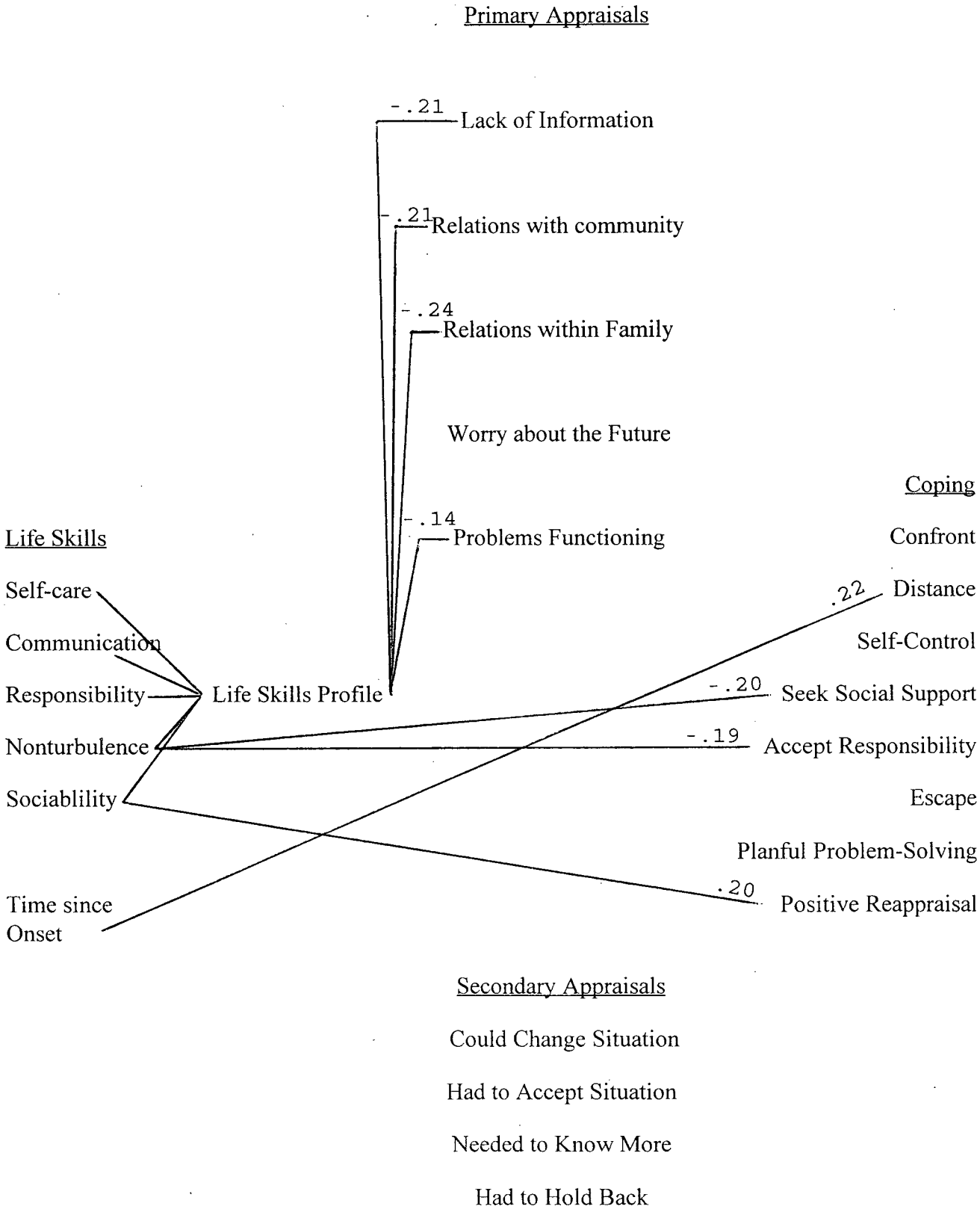


Figure E3.

Illness Characteristics (Life Skills) that Predict Appraisals and Coping.

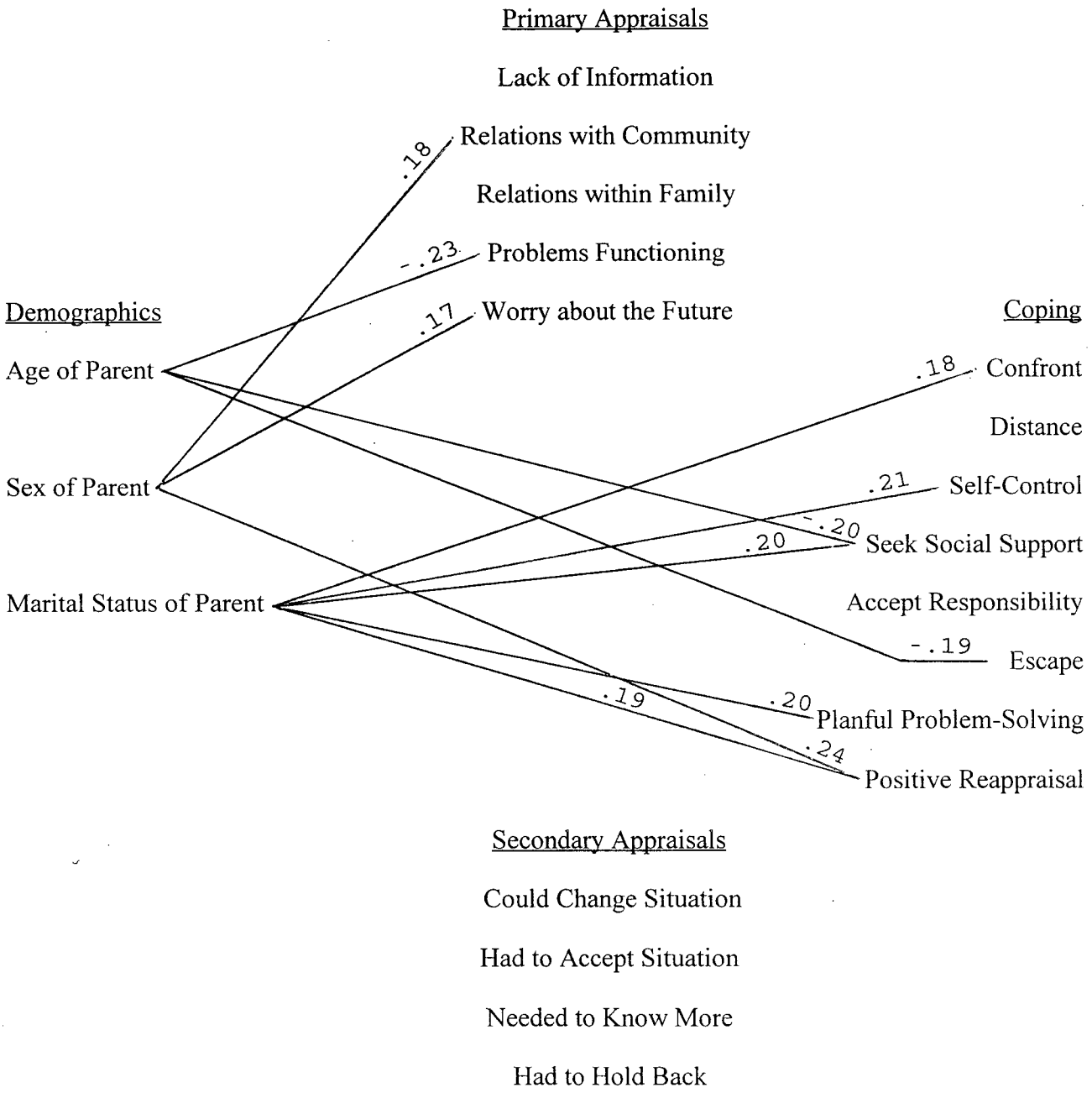


Figure E4.

Demographic Characteristics That Predict Appraisals and Coping

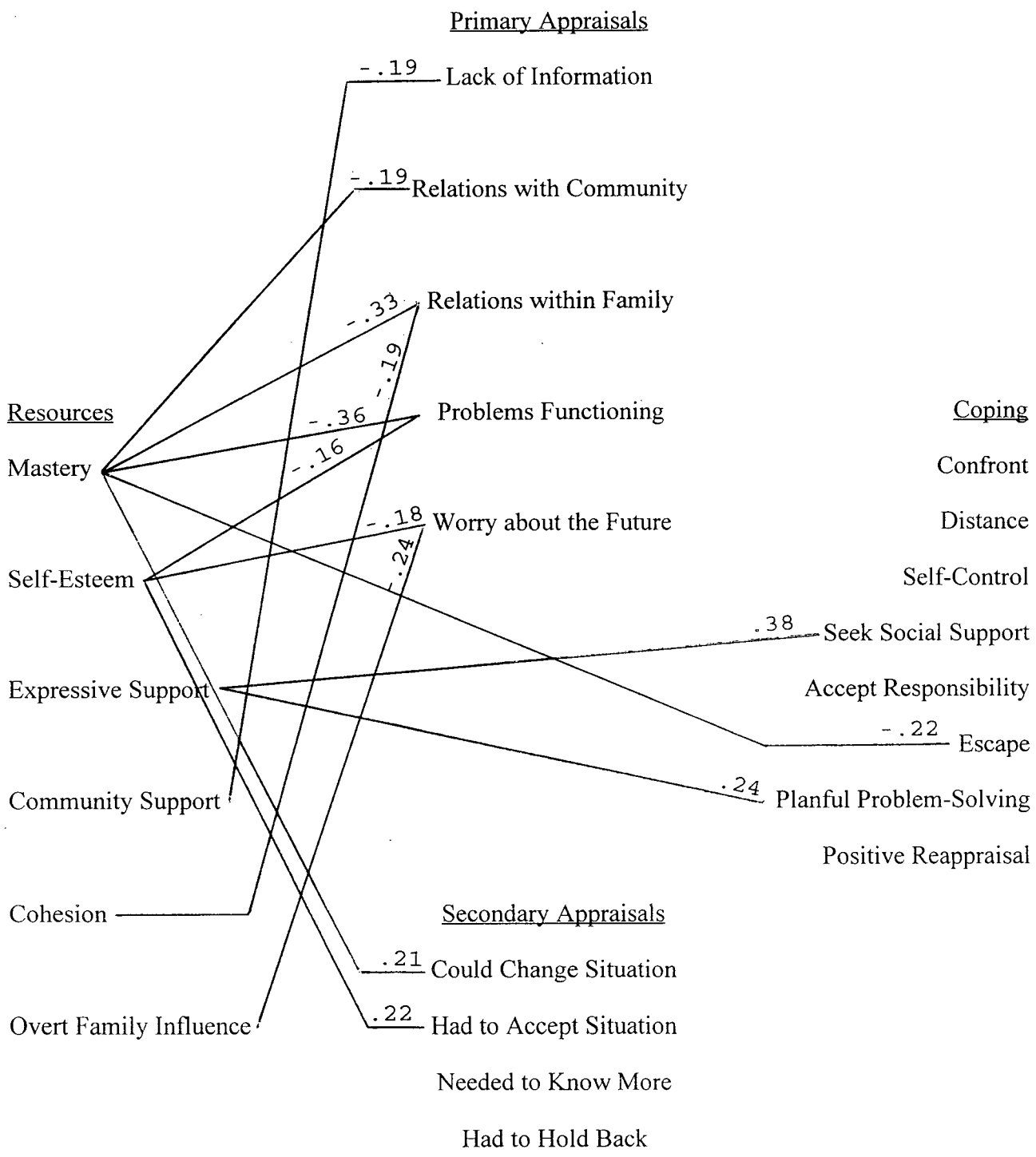


Figure E5.

Individual and Family Resources That Predict Appraisals and Coping

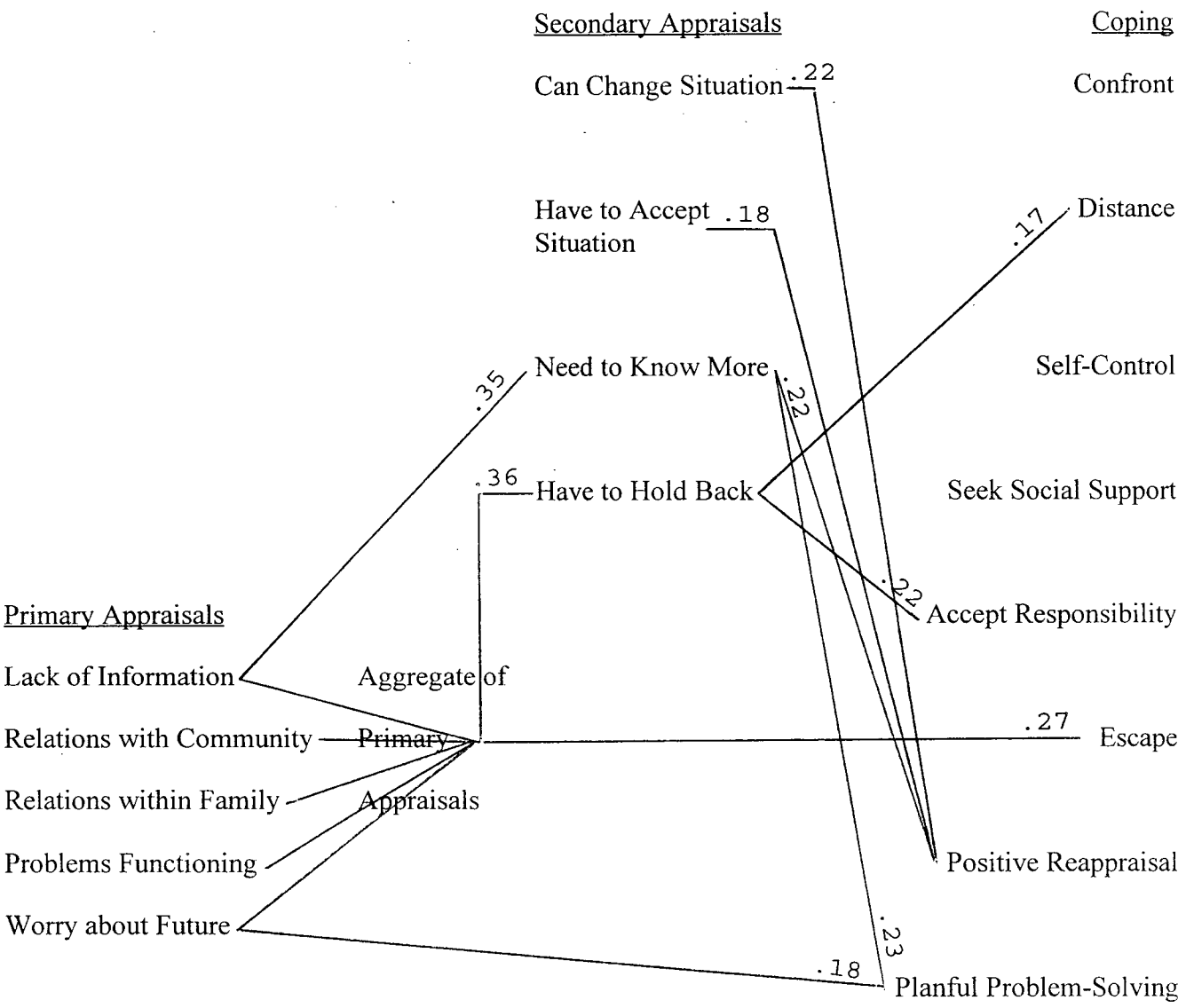


Figure E6.

Predictive Relationships Among Primary Appraisal, Secondary Appraisals and Coping

Appendix F

Table F1
Demographic Characteristics of Parents

Sample Size	
Mothers	109
Fathers	32
Marital Status	
Married/Remarried	108
Widowed	13
Divorced/Separated	19
Formal Education (4-22 years)	
M	13.16
SD	3.06
Number of Other Children (0-8)	
M	2.97
SD	1.6
Have Other Child with Disability	
Yes	35
No	106
Have Other Dependents	
Yes	17
No	122
Missing	2

Characteristics with Significant Differences by Sex of Parent	Mothers	Fathers	t test p <
Age (39-88 years)	M 59.00. SD 9.29	M 66.65 SD 9.77	.00
Family Income (a)	M 2.93 SD 1.34	M 3.66 SD 1.47	.01

Note.(a)1=<$15,000, 2=$15,001-30,000, 3=$30,001-45,000, 4=$45,001-60,000, 5=$60,001-75,000, 6=>$75,000.

Table F2

Characteristics of Daughters and Sons with Schizophrenia

	Daughters	Sons	Significance Chisquare
Sample Size (141)	30	111	
Residence			
With Parents	11	35	
Elsewhere	19	76	.60
Marital Status			
Never Married	22	104	
Other	8	7	.00
			Significance t test
Age (17-51)	M 33.07 SD 7.19	M 32.72 SD 7.75	p<.83
Time Since Illness Onset (1-35 years)	M 12.90 SD 7.41	M 12.27 SD 7.96	p<.70
Number Hospitalizations (0-20)	M 4.71 SD 2.92	M 4.52 SD 4.22	p<.82

Table F3

Reliabilities of Measures

Scale	Number of Items	Cronbachs Alpha
	Illness Characteristics	
Selfcare	9	.72
Nonturbulence	12	.81
Sociability	6	.70
Communication	6	.72
Responsibility	5	.77
Life Skills Profile (cumulative)	38	.90
	Resources	
Self-Esteem	6	.75
Mastery	7	.69
Cohesion	14	.91
Adaptability	16	.87
Expressive Support	8	.87
	Primary Appraisal	
Lack of Information	7	.79
Relations within Family	4	.66
Relations with Community	5	.72
Problems Functioning	6	.75
Worry about the Future	2	Correlation r =.41
Cumulative Primary Appraisals	24	.90
	Ways of Coping	
Confront	6	.49
Distance	6	.57
Self-Control	7	.52
Social Support	7	.79
Accept Responsibility	4	.32
Escape/Avoidance`	8	.61
Planful Problem Solving	8	.70
Positive Reappraisal	10	.79

Table F4

Functioning Level of Daughters and Sons: Means, Standard Deviations, and Significant Differences

Sub-Scale	Range (1-4)		Group		Daughters (30)		Sons (111)		Significance
	Min	Max	M	SD	M	SD	M	SD	t test p<
Self-care	1.33	3.78	2.62	.59	2.69	.53	2.59	.62	.43
Nonturbulence	1.25	4.00	3.21	.57	3.01	.64	3.23	.57	.05
Social Contact	1.17	4.00	2.46	.68	2.47	.07	2.44	.67	.73
Communication	1.33	400	3.02	.66	2.88	.68	3.06	.66	.20
Responsibility	1.13	3.20	2.54	.67	2.82	.78	3.17	.81	.04

Table F5
Means, Standard Deviations, and Significant Differences of Resources and Appraisals for Mothers and Fathers

Variable	Range		Group		Mothers		Fathers		Significance
	Resources								
	Min	Max	M	SD	M	SD	M	SD	t test p<
Self-Esteem (1-6)	2.33	6.00	5.29	.70	5.34	.72	5.26	.54	.63
Mastery (1-6)	1.29	6.00	4.09	.90	4.07	.88	4.24	.97	.34
Cohesion (1-5)	22.0	79.0	58.38	11.98	58.21	12.12	58.17	10.72	.98
Espressive Support (1-4)	1.63	4.00	3.38	.54	3.41	.56	3.24	.70	.15
Community Support(4-8)	4.00	8.00	7.08	.92	7.10	.90	6.97	.10	.50
	Primary Appraisal (1-6)								
Lack of Information	1.00	6.00	3.18	1.25	3.29	1.25	2.71	1.16	.02
Relationship with Community	1.00	6.00	3.57	1.13	3.68	1.00	3.16	1.18	.02
Relationship with Family	1.00	6.00	3.34	1.36	3.49	1.28	3.12	1.56	.17
Problems Functioning	1.00	5.83	2.98	1.35	3.13	1.30	2.39	1.34	.01
Worry about the Future	1.00	6.00	5.13	1.04	5.25	.96	4.73	1.09	.01
	Secondary Appraisals (1-6)								
Can Change Situation	1.00	6.00	3.75	1.85	3.70	1.85	3.94	1.85	.52
Have to Accept Situation	1.00	6.00	4.79	1.54	4.89	1.46	4.47	1.76	.18
Need to Know More	1.00	6.00	4.22	1.78	4.25	1.78	4.09	1.75	.66
Have to Hold Back	1.00	6.00	3.74	1.87	3.77	1.83	3.28	1.91	.11

Note. Higher scores indicate higher levels of resources, primary appraisal concerns and situational beliefs.

Table F6

Means,Standard Deviations, and Significant Differences of Ways of Coping for Mothers and Fathers

Way of Coping	Range		Group		Mothers		Fathers		Significance
	Min	Max	M	SD	M	SD	M	SD	t test p<
Problem Focussed									
Confront	1.00	3.17	1.97	.48	2.04	.44	1.77	.54	.00
Planful Problem-Solving	1.00	4.00	2.54	.64	2.72	.52	2.37	.72	.00
Emotion Focussed									
Distancing	1.00	4.00	1.96	.53	1.97	.52	1.95	.61	.85
Self-Control	1.00	3.71	2.32	.52	2.39	.47	2.14	.61	.02
Seek Social Support	1.00	4.00	2.56	.77	2.73	.71	2.31	.81	.01
Accept Responsibility	1.00	3.25	1.79	.59	1.85	.53	1.59	.72	.03
Escape/Avoidance	1.00	3.38	1.72	.52	1.77	.53	1.55	.46	.08
Positive Reappraisal	1.00	3.90	2.48	.65	2.59	.51	2.12	.76	.00

Note. Higher scores indicate greater use of coping strategy.

Table F7

Means, Standard Deviations, and Significant Differences in Parents' Appraisals and Coping by Categorical Variables "Sex of Child" and "Overt Family Influence"

Parents' Appraisals and Coping		Sex of Child		
		Daughters	Sons	t-tests p <
Primary Appraisal "Lack of Information"	M	3.57	3.05	.04
	SD	1.32	1.22	
Primary Appraisal "Relations Within the Family	M	3.86	3.28	.04
	SD	1.38	1.32	
Secondary Appraisal "Have to Hold Back"	M	4.43	3.55	.02
	SD	1.65	1.88	
"Distance" Coping	M	2.15	1.92	.04
	SD	.58	.52	
"Accept Responsibility" Coping	M	2.15	1.92	.02
	SD	.56	.58	

Parents' Appraisals and Coping		Overt Family Influence		
		Yes	No	t-tests p<
Primary Appraisal "Worry about the Future"	M	5.45	4.87	.00
	SD	.78	1.29	
"Self-Control" Coping	M	2.41	2.21	.03
	SD	.53	.49	
"Planful Problem-Solving" Coping	M	2.74	2.51	.02
	SD	.53	.63	

Note. Significance levels are 2-tailed.

Table F8

Means, Standard Deviations, and Significant Differences in Parents' Appraisals and Coping by Categorical Variables "Have otherChild with Disability" and "Marital Status of Parent"

Parents' Appraisals and Coping		Have Other Child with Disability		
		Yes	No	t-tests p <
Primary Appraisal "Relationships in Family"	M	3.86	3.25	.02
	SD	1.15	1.39	

Parents' Ways of Coping		Marital Status of Parent		
		Married	Not Married	t-test p<
"Confrontive" Coping	M	1.92	2.17	.01
	SD	.46	.48	
"Self-Control" Coping	M	2.27	2.55	.01
	SD	.52	.42	
"Planful Problem-Solving " Coping	M	2.57	2.87	.01
	SD	,57	.52	
"Positive Reappraisal" Coping	M	2.42	2.69	.04
	SD	.65	.61	
"Seek Social Support" Coping	M	2.55	2.91	.02
	SD	.75	.70	

Note. Significance levels are 2-tailed.

Table F9

Significant Correlations among Demographic Variables

Variables	1	2	3	4	5	6	7	8.
1. Age of Parent	1.00	.81**	.20	.60**	.26	-.04	-.23*	-.18
2. Age of Child	-----	1.00	.25*	.77**	.33**	-.09	-.26*	-.25*
3. Number of Hospitalizations		-----	1.00	.32**	.35**	.09	-.02	-.14
4. Time Since Onset of Illness			-----	1.00	.32**	-.01	-.22*	-.21
5. Residence of Child				-----	1.00	.11	-.18	-.31**
6. Parents Education Level					-----	1.00	.33**	.06
7. Total Family Income						-----	1.00	.26*
8. Number of Other Children at Home							-----	1.00

Note. Residence of child: With parent = 1, Elsewhere = 2.

*< .01, **<.001.

Table F10
Variables Significantly Correlated with Measures of Primary Appraisal

Variables	Primary Appraisals				
	Lack of Information	Relation with Community	Relations with Family	Problems Functioning	Worry about the Future
Demographics					
Sex of Child (a)	-.52, p< .04	--	-.59, p<.04	--	--
Age of Parent	-.24*	--	--	-.33**	--
Sex of Parent (a)	.58 p<.03	.56 p<.02	--	.74 p<.00	.52 p<.01
Have Other Child with Disability (a)	--	--	.60, p<.02	--	--
Child's Life Skills					
Selfcare	-.28**	-.25*	-.31**	-.24*	--
Sociability	--	-.26*	--	--	--
Communication Skills	-.28**	-.23*	-.27**	-.22*	--
Responsibility	-.36**	-.30**	-.38**	-.34**	--
Nonturbulent Behaviour	-.33**	-.31**	-.38**	-.33**	--
Life Skills Profile (cumulative)	-.37**	-.35**	-.40**	-.34**	--
Resources					
Esteem	-.31**	-.31**	-.32**	-.43**	-.25*
Mastery	-.31**	-.36**	-.49**	-.53**	-.26*
Community Support	-.32**	-.23*	-.23*	--	--
Cohesion	-.28**	-.26*	-.38**	-.32**	--
Overt Family Influence	--	--	--	--	.58, p<.00

Note. Dashes indicate non-significant association.
(a) values displayed are the differences in means between the groups with a 2-tailed significance level.
2-tailed significance *<.01, **<.001.

Table F11

Variables significantly Correlated with Secondary Appraisals

Variables	Secondary Appraisals			
	Could Change Situation	Have to Accept Situation	Need to Know More	Have to Hold Back
Age of Parent	--	--	--	-.24*
Sex of Child (a)	--	--	--	-.88,p<.02
Resources				
Esteem	--	.21*	--	-.25*
Mastery	.33**	--	--	-.35**
Expressive Support	.22*	--	--	--
Community Support	--	--	--	-.26*
Cohesion	--	--	--	-.24*
Child's Life Skills				
Nonturbulence	--	--	--	-.32**
Responsibility	--	--	--	-.31**
Primary Appraisals				
Lack of Information	--	--	.35**	.44**
Relations with Community	--	--	--	.33**
Relations with Family	-.29**	--	--	.41**
Problems Functioning	--	--	--	.54**
Worry about Future	--	--	--	.24*

Note. Dashes indicate non-significant association.
(a) values displayed are the differences in means between the groups with a 2-tailed significance level.
2-tailed significance *<.01, **<.001.

Table F12

Significant Correlations of Demographic, Resource, and Illness Variables with Measures of Coping

	Measures of Coping							
Variables	Confront	Distance	Self-Control	Social Support	Accept Responsibility	Escape	Plan	Positive Reappraisal
Demographics								
Age of Parent	--	--	--	-.24*	--	-.28**	--	--
Sex of Parent (a)	.27 p<.01	--	.25 p<.02	.42 p<.01	.26 p<.03		.35 p<.01	.47 p<.00
Time Since Onset	--	.26**	--	--	--	--	--	--
Marital Status of Parent (a)	-.25 p<.01	--	-.28 p<.01	-.36 p<.02	---	---	-.30 p<.01	-.27, p<.04
Sex of Child (a)	---	.23p<.04	--	---	-.28 p<.02	.23p<.03	---	---
Resources								
Esteem	---	---	---	---	-.22*	-.36**	---	---
Mastery	---	---	-.26*	---	---	-.48**	---	---
Expressive Support	---	---	---	.34**	---	---	.23*	---
Community Support	---	-.24*	---	--	--	-.25*	--	--
Overt Family Influence (a)	--	--	.20 p< .03	---	---	---	.23 p<.02	--
Child's Life Skills								
Nonturbulent Behaviour	--	--	--	-.22*	-.34**	-.22*	--	--
Responsibility	--	--	--	--	-.26*	--	--	--
Sociability	--	--	--	--	---	--	--	.22*

Note. Dashes indicate non-significant association.
(a) values displayed are the differences in means between the groups with 2-tailed significance level
2-tailed significance level * < .01, ** < .001;

Table F13
Significant Correlations of Primary and Secondary Appraisals with Measures of Coping

	Measures of Coping							
Variables	Confront	Distance	Self-Control	Social Support	Accept Responsibility	Escape	Plan	Positive Reappraisal
Primary Appraisals								
Lack of Information	.23*	--	--	--	.30**	.39**	--	--
Relations with Community	--	--	--	--	--	.34**	--	--
Relations with Family	--	--	.26*	--	.29**	.50**	--	--
Worry About the Future	--	--	.24*	--	--	.30**	.23*	--
Problems Functioning	.23*	--	.35**	--	.39**	.60**	--	--
Secondary Appraisals								
Can Change Situation	--	--	--	--	--	-.24*	--	.25*
Have to Accept Situation	--	--	--	--	---	--	--	.23*
Need to Know More	--	--	--	--	--	---	--	.29**
Have to Hold Back	.24*	.21*	.28**	--	.40**	.42**	--	--

Note. Dashes indicate non-significant association.
2-tailed significance level *<.01, **<.001.

Table F14

Standard Multiple Regression of Demographic, Resource, and Life Skills Variables on Primary Appraisal, "Lack of Information and Problems in Communication

Correlation

Variables	1	2	3	4	5	6	7	8	9
1. Lack of Information	1.00	.17	-.23	.19	-.40	-.29	-.33	-.33	-.27
2. Sex of Child	-----	1.00	-.01	-.09	-.09	-.18	-.11	-.09	-.12
3. Age of Parent		------	1.00	-.31	.12	.15	.04	.04	.08
4. Sex of Parent			-----	1.00	-.10	.04	-.02	.06	.00
5. Life Skills Profile				-----	1.00	.21	.30	.38	.22
6. Esteem					-----	1.00	.45	.20	.29
7. Mastery						-----	1.00	.25	.24
8. Community Support							-----	1.00	.20
9. Cohesion								-----	1.00

Equation Number 1 .
Dependent Variable"Lack of Information"

Variables Entered	B	Beta	F	Significance F
Cohesion	-.01	-.11	1.99	.16
Sex of Parent	.43	.14	3.39	.07
Sex of Child	.31	.10	1.83	.18
Community Support	-.25	-.19	5.36	.02
Age of Parent	-.02	-.14	3.24	.07
Mastery	-.17	-.12	2.14	.15
Life Skills Profile	-.51	-.21	6.43	.01
Esteem	-.17	-.09	1.18	.28

F = 7.65 Significance F = .00
DF Regression 8
Residual 132

R = .32
Adjusted R = .28
R = .56

Table F15

Standard Multiple Regression Of Demographic, Resource, And Life Skills Variables On Primary Appraisal "Relations With The Community"

Correlation

Variables	1	2	3	4	5	6	7
1. Relations with Community(PA)	1.00	.21	-.37	-.30	-.37	-.25	-.26
2. Sex of Parent	-----	1.00	-.10	.04	-.08	.06	.00
3. Life Skills Profile		-----	1.00	.21	.30	.38	.22
4. Esteem			-----	1.00	.45	.20	.29
5. Mastery				-----	1.00	.25	.24
6. Community Support					-----	1.00	.20
7. Cohesion						-----	1.00

Equation Number 2

Dependent Variable"Relations With The Community"

Variables Entered	B	Beta	F	Significance F
Cohesion	-.01	-.11	2.06	.15
Sex of Parent	.48	.18	5.69	.02
Community Support	-.10	-.08	.906	.34
Esteem	-.21	-.12	2.17	.14
Life Skills Profile	-.48	-.21	6.62	.01
Mastery	-.24	-.19	5.04	.03

F = 8.36 Significance F = .00

DF Regression 6

Residual 134

R = .27

Adjusted R = .24

R = .52

Table F16

Standard Multilple Regression Of Demographic, Resource, And Life Skills Variables On Primary Appraisal "Relations Within The Family"

Correlation

Variables	1	2	3	4	5	6	7	8	9
1. Relations Within the Family	1.00	.18	-.19	-.41	-.33	-.49	-.27	-.24	-.37
2. Sex of Child	-----	1.00	.02	-.09	-.18	-.11	-.18	-.09	-.12
3. Other Child With Disability		-----	1.00	.13	.03	.12	.10	-.03	.29
4. Life Skills Profile			-----	1.00	.21	.30	.16	.38	.22
5. Esteem				-----	1.00	.45	.30	.20	.29
6. Mastery					-----	1.00	.29	.25	.24
7.Expressive Support						-----	1.00	.24	.42
8. Community Support							----	1.00	.20
9. Cohesion								-----	1.00

Equation Number 3

Dependent Variable "Relations Within the Family"

Variables Entered	B	Beta	F	Significance F
Cohesion	-.02	-.19	5.27	.02
Sex of Child	.28	.08	1.43	.23
Community Support	-.01	-.01	.01	.92
Other Child with Disability	-.21	-.07	.84	.36
Mastery	-.50	-.33	17.04	.00
Life Skills Profile	-.63	-.24	9.39	.00
Expressive Support	-.04	-.02	.04	.85
Esteem	-.10	-.05	.41	.52

F = 10.09 Significance F = .00

DF Regression 8

Residual 132

R = .38

Adjusted R = .34

R = .62

Table F17

Standard Multiple Regression Of Demographic, Resource, And Life Skills Variables On Primary Appraisal "Problems in Daily Functioning"

	Correlation							
Variables	1	2	3	4	5	6	7	8
1. Problems Functioning	1.00	-.34	.23	-.35	-.43	-.53	-.26	-.31
2. Age of Parent	-----	1.00	-.31	.12	.15	.04	.06	.08
3. Sex of Parent		-----	1.00	-.10	.04	-.08	.12	.00
4. Life Skills Profile			-----	1.00	.21	.30	.16	.22
5. Esteem				-----	1.00	.45	.31	.29
6. Mastery					-----	1.00	.29	.24
7. Expressive Support						-----	1.00	.42
8. Cohesion							-----	1.00

Equation Number 4

Dependent Variable "Problems Functioning"

Variables Entered	B	Beta	F	Significance F
Cohesion	-.01	-.11	2.45	.12
Sex of Parent	.42	.13	3.58	.06
Life Skills Profile	-.37	-.14	4.21	.04
Esteem	-.32	-.16	4.71	.03
Age of Parent	-.03	-.23	11.39	.00
Expressive Support	-.10	-.04	.374	.54
Mastery	-.53	-.36	22.72	.00

F = 16.38 Significance F = .00 R = .46

DF Regression 7 Adjusted R = .43

Residual 133 R = .68

Table F18

Standard Multiple Regression of Demographic and Resource Variables on PrimaryAppraisal "Worry About the Future"

	Correlation				
Variables	1	2	3	4	5
1. Worry About the Future (PA)	1.00	.21	-.24	-.27	-.27
2. Sex of Parent	-----	1.00	.04	-.07	-.16
3. Esteem		-----	1.00	.45	-.04
4. Mastery			-----	1.00	.07
5. Family Influence				-----	1.00

Equation Number 5

Dependent Variable "Worry About the Future

Variables Entered	B	Beta	F	Significance F
Family Influence	-.51	-.24	8.75	.00
Esteem	-.29	-.18	4.24	.04
Sex of Parent	.44	.17	4.46	.04
Mastery	-.19	-.15	3.01	.09

F = 7.38 Significance F = .00

DF		
	Regression	4
	Residual	132

R = .18
Adjusted R = .16
R = .43

Table F19

Standard Multiple Regression of Resource and Primary Appraisal Variables on Secondary Appraisal "Situation is One I Could Change Or Do Something About"

	Correlation			
Variables	1	2	3	4
1. Could Change Situation (SA)	1.00	.33	.24	-.31
2. Mastery	-----	1.00	.29	-.49
3. Expressive Support		-----	1.00	-.26
4. Relations Within Family (PA)			-----	1.00

Equation Number 6

Dependent Variable "Situation is One I Could Change Or Do Something About"

Variables Entered	B	Beta	F	Significance F
Relations Within Family	-.24	-.18	3.69	.06
Expressive Support	.40	.13	2.37	.13
Mastery	.43	.21	5.20	.02

F = 8.36 Significance F = .00

DF Regression 3
Residual 137

R = .15
Adjusted R = .14
R = .39

Note. PA indicates Primary Appraisal; SA indicates Secondary Appraisal

Table F20

Standard Multiple Regression Of The Resource "Self-Esteem" On Secondary Appraisal "Situation Is One I Have To Accept"

	Correlation	
Variables	1	2
1. Have to Accept Situation (SA)	1.00	.22
2. Esteem	-----	1.00

Equation Number 7

Dependent Variable "Situation Is One I Have To Accept"

Variables Entered	B	Beta	F	Significance F
Esteem	.49	.22	6.90	.00

F = 6.90 Significance F = .01

DF Regression 1
Residual 139

R = .05
Adjusted R = .04
R = .22

Note. SA indicates Secondary Appraisal

Table F21

Standard Multiple Regression Of Primary Appraisal "Lack Of Information And Problems In Communication" On Secondary Appraisal "Needed To Know More Before I Could Act"

	Correlation	
Variables	1	2
1. Needed To Know More (SA)	1.00	.35
2. Lack Of Information (PA)	-----	1.00

Equation Number 8

Dependent Variable "Needed To Know More Before I Could Act"

Variable Entered	B	Beta	F	Significance F
Lack Of Information	.49	.35	18.86	.00

F = 18.86 Significance F = .00 R = .12

DF Regression 1 Adjusted R = .11

Residual 139 R = .35

Note. PA indicates Primary Appraisal; SA Indicates Secondary Appraisal

Table F22

Standard Multiple Regression Of Demographic, Resource, Life Skills And Primary Appraisal Variables On Secondary Appraisal, "Had To Hold Back From Doing What I Wanted To Do"

Correlation

Variables	1	2	3	4	5	6	7	8	9
1. Had To Hold Back (SA)	1.00	-.24	.19	-.24	-.36	-.27	-.24	-.33	.53
2. Age of Parent	-----	1.00	-.02	.15	.04	-.03	.08	.22	-.27
3. Sex of Child		-----	1.00	-.18	-.11	-.09	-.12	-.16	.16
3. Esteem			-----	1.00	.45	.20	.29	.19	-.40
4. Mastery				-----	1.00	.25	.24	.34	-.50
5. Community Support					-----	1.00	.20	.35	-.21
6. Cohesion						-----	1.00	.27	-.34
7. Nonturbulence							-----	1.00	-.42
8. Cumulative PA								-----	1.00

Equation Number 9

Dependent Variable "Had To Hold Back From Doing What I Wanted To Do"

Variables Entered	B	Beta	F	Significance F
Cumulative P A	.65	.36	15.03	.00
Sex of Child	.47	.10	1.98	.16
Age of Parent	-.03	-.13	2.93	.09
Community Support	-.23	-.11	2.06	.15
Cohesion	-.01	-.04	.25	.62
Esteem	.10	.04	.20	.65
Nunturbulent Behaviour	-.15	-.05	.33	.57
Mastery	-.25	-.12	1.85	.18

F = 8.14 Significance F = .00

DF			R = .33
	Regression	8	Adjusted R = .29
	Residual	132	R = .58

Note. PA indicates Primary Appraisal; SA indicates Secondary Appraisal

Table F23

Standard Multiple Regression Of Demographic and Appraisal Variables On "Confrontive" Coping

Correlation

Variables	1	2	3	4	5	6
1. Confrontive Coping	1.00	.24	.22	.22	.21	.23
2. Sex of Parent	-----	1.00	.22	.19	.23	.13
3. Marital Status of Parent		-----	1.00	.07	.03	-.02
4. Lack of Information (PA)			-----	1.00	.61	.44
5. Problems Functioning (PA)				-----	1.00	.54
6. Had to Hold Back (SA)					-----	1.00

Equation Number 10

Dependent Variable "Confrontive" Coping

Variables Entered	B	Beta	F	Significance F
Had to Hold Back (SA)	.04	.16	2.67	.11
Marital Status of Parent	.21	.18	5.02	.03
Sex of Parent	.17	.15	3.29	.07
Lack of Information (PA)	.03	.09	.76	.39
Problems Functioning (PA)	.01	.04	.11	.74

F = 4.46 Significance F = .00

DF			R = .14
	Regression	5	Adjusted R = .11
	Residual	135	R = .38

Note. PA indicates Primary Appraisal; SA indicates Secondary Appraisal

Table F24

Standard Multiple Regression Of Demographic, Resource, And Appraisal Variables On "Distance" Coping

	Correlation				
Variables	1	2	3	4	5
1. Distance Coping	1.00	.20	.18	-.22	.21
2. Time Since Onset	-----	1.00	.03	-.03	-.16
3. Sex of Child		-----	1.00	-.09	.19
4. Community Support			-----	1.00	-.27
5. Had to Hold Back (SA)				-----	1.00

Equation Number 11

Dependent Variable "Distance" Coping

Variables Entered	B	Beta	F	Significance F
Had To Hold Back (SA)	.05	.17	4.11	.05
Time Since Illness Onset	.02	.22	7.05	.01
Sex of Child	.16	.12	2.15	.15
Community Support	-.09	-.16	3.64	.06

F = 5.26 Significance F = .00

DF		
	Regression	4
	Residual	136

R = .13
Adjusted R = .11
R = .37

Note. SA indicates Secondary Appraisal

Table F25

Standard Multiple Regression of Demographic, Resource, And Appraisal Variables On "Self-Control" Coping

Correlation

Variables	1	2	3	4	5	6	7	8
1. Self-Control Coping	1.00	.22	.24	-.28	.25	.35	-.19	.30
2. Sex of Parent	-----	1.00	.22	-.07	.21	.22	-.16	.12
3. Marital Status of Parent		-----	1.00	.06	.05	.05	-.07	-.00
4. Mastery			-----	1.00	-.27	-.53	.07	-.35
5. Worry about the Future(PA)				-----	1.00	.46	-.27	.23
6. Problems Functioning (PA)					-----	1.00	-.07	.52
7. Overt Family Influence						-----	1.00	-.08
8. Had to Hold Back (SA)							-----	1.00

Equation Number 12

Dependent Variable "Self-Control" Coping

Variables Entered	B	Beta	F	Significance F
Had to Hold Back (SA)	.04	.15	2.69	.10
Marital Status of Parent	.26	.21	7.26	.01
Overt Family Influence	-.12	-.12	2.07	.15
Sex of Parent	.10	.08	1.03	.31
Mastery	-.08	-.14	2.33	.13
Worry about the Future (PA)	.03	.06	.39	.53
Problems Functioning (PA)	.05	.14	1.57	.21

F = 5.72 Significance F = .00

DF Regression 7

Residual 129

R = .24

Adjusted R = .20

R = .49

Note. PA indicates Primary Appraisal; SA indicates Secondary Appraisal

Table F26

Standard Multiple Regression Of Demographic, Resource, And Life Skills Variables On "Seek Social Support" Coping

Correlation

Variables	1	2	3	4	5	6
1. Seek Social Support	1.00	-.22	.24	.20	.34	-.22
2. Age of Parent	-----	1.00	-.31	.08	.06	.22
3. Sex of Parent		-----	1.00	.22	.12	-.16
4. Marital Status of Parent			-----	1.00	-.03	-.10
5. Expressive Support				-----	1.00	.15
6. Nonturbulent Behaviour					----	1.00

Equation Number 13

Dependent Variable "Seek Social Support

"Variables Entered	B	Beta	F	Significance F
Nonturbulent Behaviour	-.26	-.20	6.95	.01
Marital Status of Parent	.35	.20	6.61	.01
Expressive Support	.48	.38	25.32	.00
Age of Parent	-.02	-.20	6.02	.02
Sex of Parent	.09	.05	.42	.52

F = 9.92 Significance F = .00

DF			R = .27
	Regression	5	Adjusted R = .24
	Residual 135		R = .51

Table F27

Standard Multiple Regression Of Demographic, Resource, Life Skills, And Appraisal Variables On "Accepting Responsibility" Coping

Correlation

Variables	1	2	3	4	5	6	7
1. Accept Responsibility Coping	1.00	.19	.20	-.21	-.35	.38	.41
2. Sex of Parent	-----	1.00	-.09	.04	-.16	.23	.13
3. Sex of Child		-----	1.00	-.18	-.16	.14	.19
4. Esteem			-----	1.00	.19	-.43	-.24
5. Nonturbulent Behaviour				-----	1.00	-.33	-.33
6. Problems Functioning (PA)					-----	1.00	.54
7. Had to Hold Back (SA)						-----	1.00

Equation Number 14

Dependent Variable "Accept Responsibility" Coping

Variables Entered	B	Beta	F	Significance F
Had to Hold Back (SA)	.07	.22	6.10	.02
Sex of Parent	.15	.11	1.90	.17
Sex of Child	.15	.11	1.94	.17
Esteem	-.04	-.04	.27	.60
Nonturbulent Behaviour	-.19	-.19	5.53	.02
Problems Functioning (PA)	.06	.13	1.85	.18

F = 7.81 Significance F = .00

DF Regression 6

Residual 134

R = .26

Adjusted R = .23

R = .51

Note. PA indicates Primary Appraisal; SA indicates Secondary Appraisal

Table F28

Standard Multiple Regression Of Demographic, Resource, Life Skills, And Appraisal Variables On "Escape-Avoidance" Coping

Correlation

Variables	1	2	3	4	5	6	7	8	9
1. Escape/Avoidance	1.00	-.28	-.37	-.48	-.25	-.22	.55	-.22	.42
2. Age of Parent	-----	1.00	.15	.04	-.04	.22	-.27	-.12	-.24
3. Esteem		----	1.00	.45	.20	.19	-.40	.12	-.24
4. Mastery			-----	1.00	.25	.34	-.50	.33	-.36
5. Community Support				-----	1.00	.35	-.29	.16	-.27
6. Nonturbulent Behaviour					-----	1.00	-.42	-.08	-.33
7. Cumulative PA's						-----	1.00	-.19	.53
8. Could Change Situation (SA)							-----	1.00	.07
9. Had to Hold Back (SA)								-----	1.00

Equation Number 15

Dependent Variable "Escape-Avoidance" Coping

Variables Entered	B	Beta	F	Significance F
Had to Hold Back (SA)	.04	.15	3.12	.08
Could Change Situation (SA)	-.03	-.09	1.56	.22
Age of Parent	-.01	-.19	6,93	.01
Esteem	-.07	-.09	1.24	.27
Community Support	-.05	-.09	1.53	.22
Nonturbulent Behaviour	.09	.10	1.61	.21
Mastery	-.13	-.22	6.35	.01
Cumulative PA's	.14	.27	8.57	.00

F = 11.97 Significance F = .00 R = .42

DF Regression 8 Adjusted R = .39

Residual 132 R = .65

Note. PA indicates Primary Appraisal; SA indicates Secondary Appraisal

Table F29

Standard Multiple Regression Of Demographic, Resource, And Appraisal Variables On "Planful Problem-Solving" Coping"

Correlation

Variables	1	2	3	4	5	6	7
1. Planful Problem-Solving	1.00	.26	.21	.24	.24	-.20	.23
2. Sex of Parent	-----	1.00	.22	.13	.21	-.16	.02
3. Marital Status of Parent		-----	1.00	-.04	.05	-.07	-.07
4. Expressive Support			-----	1.00	-.07	-.06	.00
5. Worry About the Future (PA)				-----	1.00	-.27	.07
6. Overt Family Influence					-----	1.00	.02
7. Need to Know More (SA)						-----	1.00

Equation Number 16

Dependent Variable "Planful Problem-Solving"

Variables Entered	B	Beta	F	Significance F
Need to Know More (SA)	.08	.23	8.98	.00
Expressive Support	.24	.24	9.6	.00
Overt Family Influence	-.13	-.11	1.82	.18
Marital Status of Parent	.27	.20	6.27	.01
Sex of Parent	.18	.13	2.43	.12
Worry About the Future (PA)	.10	.18	4.84	.03

F = 7.16 Significance F = .00

DF Regression 6

Residual 130

R = .25

Adjusted R = .21

R = .50

Note. PA indicates Primary Appraisal; SA indicates Secondary Appraisal

Table F30

Standard Multiple regression Of Demographic, Illness, And Appraisal Variables On "Positive Reappraisal" Coping

Correlation

Variables	1	2	3	4	5	6	7
1. Positive Reappraisal	1.00	.31	.18	.22	.25	.22	.30
2. Sex of Parent	-----	1.00	.22	.02	-.05	.11	.04
3. Marital Status of Parent		-----	1.00	-.10	-.05	-.11	-.06
4. Sociability of Child			-----	1.00	.14	-.03	.01
5. Could Change Situation (SA)				-----	1.00	-.03	.16
6. Have to Accept Situation (SA)					-----	1.00	.20
7. Need to Know More (SA)						-----	1.00

Equation Number 17

Dependent Variable "Positive Reappraisal" Coping

Variables Entered

	B	Beta	F	Significance F
Need to Know More (SA)	.08	.22	9.12	.00
Sociability of Child	.19	.20	7.54	.01
Sex of Parent	.37	.24	10.46	.00
Could Change Situation (SA)	.08	.22	8.57	.00
Have to Accept Situation(SA)	.08	.18	6.00	.02
Marital Status of Parent	.29	.19	6.22	.01

F = 10.04 Significance F = .00 R = .31

DF Regression 6 Adjusted R = .28

Residual 133 R = .56

Note. SA indicates Secondary Appraisal.