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Elders Caring for Elders: Risk of Abuse and Neglect?

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ELDERS CARING FOR ELDERS: RISK OF ABUSE AND NEGLECT?

by

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ABSTRACT

This study was designed to examine the phenomena of mood disturbance and associated potential to abuse in an elderly caregiver population. The data from which the results were obtained came from structured interviews, using quantitative measures, with 110 men and women caregivers aged 55 and over, living at home and caring for another physically or mentally ill elder (usually a spouse or other relative) who was living with them. A causal model was developed to examine the effects of locus of control, social support, physical health, stress perception, and coping efficacy on total mood disturbance and potential to abuse. Standardized instruments were used to measure all variables except potential to abuse, for the operationalization of which an instrument was devised based on the newly-emerging theory of risk factors for elder abuse and neglect.

Results indicated that the predictors for mood disturbance, accounting for 45% of the variance in that variable, were a low level of social support, poor physical health, stress perception, and coping by self blame. However, there were seven predictors of potential to abuse, including total mood disturbance. The other six were an external locus of control orientation, a low level of social support, coping by using fantasy, income

inadequacy, poor physical health, and coping by self blame. In the case of potential to abuse, however, the two latter predictors were inversely related to that criterion variable. These seven variables accounted for 46% of the variance in potential to abuse. Contrary to conventional wisdom, stress perception did not figure in the potential to abuse picture with this subject group, and coping efficacy was not prominent.

The utility of the revised model lies in its ability to predict the occurrence of abuse or neglect of the elderly when the risk factors are present, and thereby to institute nursing interventions with one or more variables in the model to change that outcome. The potential to abuse tool now has psychometric properties which will render it useful in assessment of the caregiving situation before abuse occurs. Study results can also be used to support proposed changes in health care policy.

DEDICATION

My dissertation, the culmination of a dream that was fifteen years in the making, is the product of the love, caring and support of many wonderful people.

First and foremost, I dedicate this dissertation to my dear husband, George, without whose constant encouragement and sacrifice this dream could not have come to fruition.

Then, to those others dear to my heart, my six children: George, John, Virginia, William, Marjorie, and Joseph, with their loving spouses and my fifteen grandchildren: Nicole, Jean, Willie, Tricia, Joey, Lauren, Melissa, Jake, Cole, Alicia, Kirsten, Megan, Billy, J.T., and Erin, who did not always understand this eccentric matriarch, but loved her just the same and gave her courage to go on-- I dedicate this work.

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INTRODUCTION

The American health care scene is in a turmoil of change. Gains in technology have enabled people to live, and to live longer, despite disease or disability (Davis, 1989). Diagnostically related groups (DRGs) have imposed mandatory (and possibly premature) hospital discharge dates upon physicians and patients (Bauknecht, 1985). The cost of professional health care has risen astronomically (Grady, 1986). Insurance is not universally available, and, when available, has many gaps in coverage which deny access to professional health care (AARP National Legislative Council Report, 1989).

All of these factors have led to a new assumption--that individuals will assume more responsibility for their own and their family's care. However, general changes in societal norms are influencing this process. In particular, the large increase in the percentage of women between the ages of 20 and 55 employed outside the home has created a deficit of highly able individuals for caregiving roles. Consequently, the burden of caregiving has fallen largely to older individuals, who tend to be less functionally able than younger persons, but who are less likely to be employed outside of the home (Robinson, 1986;

Zarit, Todd, & Zarit, 1986). How have these caregivers and their charges fared, given this unexpected and wearisome burden in their declining years?

Purpose and Background of the Study

The purpose of this study was to examine the effects of locus of control, social support, physical health and stress perceptions on coping efficacy, mood disturbance, and potential to abuse in elderly men and women caregivers. Elders caring for other elders in the family were the specific focus of the study, in consideratiion of the potential for elder abuse and neglect to occur under such circumstances (Steinmetz, 1988). A second purpose of the study was to examine the data for possible gender differences in caregivers regarding the potential to abuse.

The specter of elder abuse has surfaced in recent years. It is a problem of considerable magnitude, with 500,000 to 2,500,000 as an estimated number of cases yearly (Fulmer & Cahill, 1984). Most of the reported cases (71%) were cases of neglect. Severe intentional neglect and physical abuse comprised 28% of the cases. It was assumed that the oldest and the frailest were the most vulnerable, but there were no data on whether or not the abuse and neglect rates were the same for all persons over the age of 60. However, all forms of abuse and neglect, taken together, affected 5% of persons over the age of 60;

whereas child abuse cases affected 1 to 2% of children! (Poertner, 1986).

The phenomenon of abuse was attributed to the stresses of modern living, which were blamed for an increase in violent behavior in our society (Fulmer & Cahill, 1984). In family situations, as pointed out by Steinmetz (1988), the interacting of personalities over a long period of intimate family relationships may have blurred the distinctions between the abused and the abuser. Thus, the caregiver, too, may have seen him or herself as under duress and victized by circumstances. Or, the caregiver may have been handling the situation with little or no apparent interpersonal difficulties (Colerick & George, 1986). What personal or situational factors may have been responsible for such discrepant outcomes?

Assuming that a caregiving situation has not been the expected norm for an individual over the age of 55, both personal and situational factors were involved in adjusting. Situationally, it was the perception of stress by the individual that had the power to influence personal variables, such as coping effectiveness and mental well-being (Cantor, 1983; Zarit, et al., 1986). However, there was also evidence to support the notion that personal factors, such as locus of control, individual social support, and physical health influenced the person's perception of a situation as being stressful in the first

place (Averill, 1973; Colerick, 1985; Kobasa & Puccetti, 1983). Some of these relationships have been examined in a younger-aged cohort (Folkman & Lazarus, 1980; Husaini, Newbrough, Neff, & Moore, 1982). Several studies have also looked at the relationships with younger individuals in a caregiving role (Bowers, 1987; George & Gwyther, 1986; Robinson & Thurnher, 1979).

In the past few years, research on caregiving has assumed prominence in the literature (Cantor, 1983, Robinson & Thurnher, 1979; Scott, Roberto, & Hutton, 1986). The consensus seen in these studies was that caregiving had a detrimental effect on the mental well-being of the caregiver, although a recent study by Colerick & George (1986) indicated that this effect can be ameliorated by assistance to the caregiver. In addition, perceived stress resulted in lowering coping efficacy (Robinson & Thurner, 1979). Although caregivers may perceive stress and suffer strain, only one study was found to link caregiving status with the use of effective coping strategies (Quayhagen & Quayhagen, 1988). No studies were found which dealt specifically with the effects of personal and situational factors indigenous to an elderly caregiver population in their attempts to cope with perceived stress and maintain mental well-being. In light of the potential for elder abuse and neglect inherent in all caregiving situations perceived as stressful (Steinmetz, 1988), research testing

these relationships with an elderly caregiver population was imperative. Only by obtaining accurate data with this population will nurses be able to design interventions to assist these caregivers in avoiding abuse.

Coping and the Elderly Caregiver

As mentioned earlier, rarely has the buffering effect of coping been studied with caregivers. To explore this relationship with elderly caregivers was a major focus of the present study. There are various reasons why coping in this age cohort may differ in effectiveness from coping in other populations. As proposed by McCrae (1982), and later concluded from the study results of Manfredi and Pickett (1987), indications were that the elderly may have experienced many life situations which would have promoted the development of greater coping ability over time. Also, they may be less burdened by other considerations--obligations to children, business, or community life.

Conversely, older individuals may be less efficacious copers than younger persons, because of being at greater physical and social disadvantage or because of the unrelenting nature of their problems (George & Gwyther, 1986; Zarit, et al., 1986). Before such comparisons can be made, however, it is necessary to have a data base on coping effectiveness in an elderly population. To obtain this data base was an additional purpose of the study. The

significance of such a data base for nursing became apparent when considering that: 1) the elderly are the fastest growing segment of the population (Robinson, 1986), 2) three times as many impaired persons are living at home than in all institutions combined (Bowers, 1987), 3) about 50% of the caregivers are the impaired elder's spouse (Poulshock & Diemling, 1984), 4) the spouses and other elderly caregivers are the highest risk group among caregivers because of enduring stress, failing health, and financial problems (Cantor, 1983), and 5) an increasing number of elderly people are discharged earlier, and sicker, to home from the hospital (Waters, 1987). As emphasized by Cantor (1983), caregivers carry heavy responsibilities, and have been doing so for a long time. It is now time for policy makers to consider how this burden can be lightened, in the interests of caregiver and family well-being.

Significance of the Problem for Nursing

The significance of the problem for nursing lies in the fact that as our population grows older, more and more old people will be at risk for elder abuse and neglect. This is particularly true of situations where the elders are being cared for in the home, by other elders, because of the lack of viable alternatives in our society today. The nursing functions of assessment, case finding, health

teaching and health counseling must be strengthened if we are to avoid the tragedies of elder abuse and neglect. Neglect is common, and not always intentional, for example: due to lack of preparation and assistance in caring for an elderly individual, he or she is left unattended, suffers falls, develops decubitus ulcers, or becomes infested with vermin (Steuer & Austin, 1980). But deliberate abuse and neglect can also occur, for the reasons cited earlier in this chapter. Abuse, and both active and passive neglect, are serious problems demanding social action and autonomous nursing interventions, based on a core of scientific knowledge (Robinson, 1986). This study was designed to provide that core of knowledge.

Theoretical Framework for the Study

The theoretical framework for the study evolved following a thorough review of the literature. The causal model (Figure 1) posited relationships between the variables of locus of control, social support, physical health status, stress perception, coping efficacy, mood disturbance and potential to abuse. Of the extant theories linking these variables, the best developed is that of Lazarus and his associates, who have studied the relationship between stress and coping extensively (Folkman & Lazarus, 1980; Lazarus, Averill, & Opton, 1974). An extension of the theory was described by Folkman (1984),

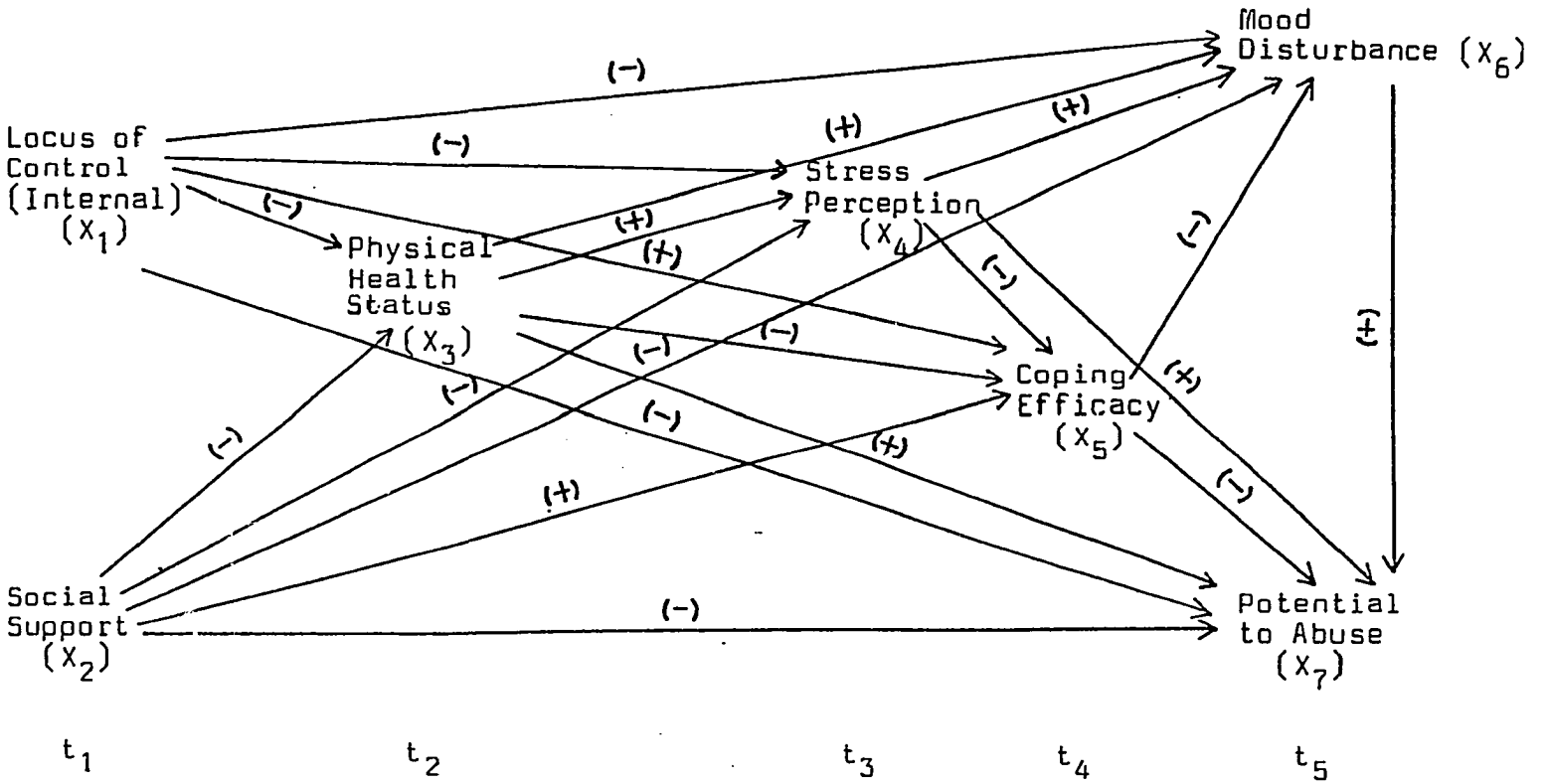

Figure 1. Model to test for abuse potential in caregiving: Hypothesized relationships.

who proposed a link between a personal control variable, and stress and coping.

In the stress-coping paradigm of Lazarus and his associates, coping was regarded as problem solving efforts that were made by an individual after appraising the demands of a situation as being taxing to personal adaptive resources (Lazarus, et al., 1974) Therefore, coping logically followed stress perception in the model. The relationship between stress, coping and personal control, however, was more complex. As explained by Averill (1973), the relationship which existed between personal control and stress was complex. Whether personal control served to induce or to reduce stress depended upon the meaning of control to the individual, and the context of the situation. Thus, believing one had control may, in some instances, actually have increased the feeling of threat in a stressful situation where expectations for control were not met. On the other hand, if the situation was perceived as challenging (with a potential for control) rather than as threatening, control exercised tended to promote well-being.

According to Folkman (1984), in response to an uncontrollable event, helplessness or depression can occur. However, these negative outcomes occurred only if the meaning of the situation and its emotional impact were not changed through cognitive coping and reappraisal. In view

of the complex nature of personal control as presented, belief in control took the form of the variable locus of control, which was comprised of three types of control belief, internal locus of control, control by powerful others, and control by chance. Together, the latter two comprised a belief in external locus of control (Levenson, 1974). In the model, locus of control variables were positioned preceding both stress and coping, since coping can ameliorate the distress of an uncontrollable event, according to the theory.

With regard to the other entry variable in the model, social support, the theory of its relationship to other factors in the model is at an earlier stage of development, but much progress has been made of late. Problems in the definition and measurement of the concept, inclusion or exclusion of various dimensions, sex differences in the use and perceived effectiveness of support available, and questions of quality and satisfaction regarding support were all issues which have been researched recently (Kessler, Price, & Wortman, 1985). For the purposes of this study, social support was construed as perceived availability of support and confidence in the prospective support provider (McNett, 1987; Weinert, 1987). Hence, its placement in the model reflected its consideration for future use, in time of need, rather than the actual use of social support, which was included as a part of coping.

The placement of physical health status in the model was a reflection of recent studies which seemed to indicate that persons exhibiting a belief in internal locus of control and satisfaction with their support group also report themselves to be in better health than their peers (Guarnera & Williams, 1987; Lohr, Essex, & Klein, 1988). Additionally, that a negative perception of physical health had a direct relationship to stress perception, and a negative relationship to coping efficacy and mental well-being was also documented in the literature (Markides & Martin, 1979a; Palmore & Luikart, 1972). The relationships of all of the variables to mood disturbance have been researched and were explored in the literature review.

The study itself was designed as an empirical test of the model with elderly caregivers to assess the potential to abuse in caregiving situations of this nature. Following the guidelines developed in child abuse theory (Pelton, 1982), and the newly emerging theory of elder abuse (Fulmer & O'Malley, 1987; Montgomery & Borgatta, 1986; Quinn & Tomita, 1986), the variables in the model were chosen. Elder abuse theory involved:

1) social learning theory (family violence is a learned behavior),

2) vulnerability and victimization theory (the most dependent and most vulnerable tend to be abused),

3) theories of stress and coping (persons who abuse are believed to be poor copers who are under stress),

4) theories of psychopathology (undesirable personality traits or character disorders in the abuser are responsible for abuse), and

5) exchange theory (abuse will occur as long as the abuser gains from it, when the victim is socially isolated and there are no sanctions to prevent abuse).

(Fulmer & O'Malley, 1987).

Essentially, persons who were prone to become abusers were described as those who felt trapped in a situation over which they had no control, were socially isolated, tended to have physical health problems, were experiencing high levels of general stress, used negative coping mechanisms such as alcohol, and in many cases had psychiatric symptomatology (Pelton, 1982). There were, of course, contextual and personal differences between the person who abused or neglected a child and one who abused or neglected an elder. These differences have been briefly mentioned in the literature (Fulmer & O'Malley, 1987; Pillemer, 1985; Steinmetz, 1988). An intent of this study was to describe these differences via the risk profiles (demographic data), and the data from the model testing. Definitions of the variables in the study, as they were measured, appear in the following section.

Definition of Terms

In sequence, definitions of the variables are given as they appeared in the model.

Locus of Control. The personality variable, locus of control, has been associated with the perceived ability to take charge of one's own life (Cox, 1980; Rotter, 1975). Locus of control was conceptualized by Rotter (1966) as tending to be either external or internal. A belief in externality of control meant that one perceived the events of one's life as being caused by chance or by powerful others. On the other hand, a belief in an internal locus of control meant that the individual perceived the self as being in control over events in life. Internal locus of control represented the first variable in the model.

Social support. Social support consisted of several dimensions: 1) provision for attachment/intimacy, 2) social integration, 3) opportunity for nurturant behavior, 4) reassurance of worth, and 5) availability of informational, emotional, and material help. The latter dimension was conceptualized as situations in which a person might need help, to whom he or she might turn in such an event, and how satisfied the person would be with the help received. In addition, the relational dimensions of social support

were explored. These dimensions indicated the perceived level of social support (Weinert, 1987).

Physical health status. Physical health status, in this study, was a subjective phenomenon, determined by the administration of a health assessment scale. This scale measured three dimensions of physical health status: 1) a perceived general health rating, 2) illness problem ratings in terms of type of illness(es) experienced (e.g., heart trouble), whether the illness was better or worse since last month, and the number of days the person had been confined because of the illness during the past month, and 3) health habits. A condition of poor physical health status, therefore, was defined by self-perception combined with many illness problems and an analysis of health habits as dysfunctional and/or harmful, according to the standards of today (Demi, 1978; Markides & Martin, 1979b; Rosencranz & Pihlblad, 1970).

Stress perception. First, stress perception as understood in this study meant general stress perception, or a universe of stressors (noxious stimuli) for the older adults, the relative recency of the stressful events, and the potency of the stressors in terms of the tendency of the person to dwell upon them in their thoughts. The universe of stressors consisted of four areas: 1) personal events, 2) events concerning work, 3) events concerning

physical environment, and 4) interpersonal events (Quayhagen, 1978; Quayhagen & Bendik, 1989).

Coping efficacy. As opposed to studies which defined coping as a management strategy (Holahan & Moos, 1985), or as a response to stressful environment (Mitchell, Cronkite, & Moos, 1983), or as a set of defense mechanisms (Panzarine, 1985), coping in this study was conceptualized in two ways: First, as a series of strategies which fell into three categories: 1) strategies that directly altered the situation, such as problem solving and help seeking, 2) strategies that controlled the meaning of the situation, such as existential growth seeking and minimization of threat, and 3) strategies that managed stress, such as using religion or using fantasy, or expressed affectivity (ventilating through self blame) (Quayhagen & Quayhagen, 1982).

The second way in which coping was defined required the use of a supplementary measure of the concept. Coping was seen as a hierarchy of behaviors which can be mastered in step-wise fashion, in a manner described by Caplan (1981). Thus, the emphasis was on coping as a learned behavior, described by Bandura (1982), who documented how people gained increased self-efficacy when they gained new skills to confront future threatening events. Bandura was concerned with how the behavior of individuals was

influenced by their judgment of their capabilities and the self-perception of their efficacious functioning. According to Bandura, it was possible for an otherwise competent individual to have attained only a low level of self-efficacy, and thus to remain unreasonably threatened by stressful events. In this manner, therefore, coping efficacy was defined as the level in the hierarchy of behaviors (described by Caplan, 1981) that the person had attained, by learning, to the present time. There were five dimensions in the hierarchy of coping: 1) protection, 2) management, 3) development and challenge, 4) care, and 5) mastery. There were both positive and negative coping strategies within each of these dimensions (Bendik, 1987).

Mood disturbance. Mood disturbance was based on a subject rating of the dimensions of seven identifiable affective states: tension/anxiety; depression/dejection; anger/hostility; vigor/activity; fatigue/inertia; confusion/bewilderment; and friendliness. These dimensions were assessed separately, and a single, global estimate of affective state (total mood disturbance) was obtained by assessing them additively. (McNair, D. M., Lorr, M., & Droppleman, L. F., 1981). Total mood disturbance was one outcome variable of the model.

Potential to abuse. According to Fulmer and O'Malley (1987), abuse was the deliberate action of a caregiver, or the intentional omission of a necessary intervention by a caregiver, which resulted in physical, psychological, or financial injury to the patient. Ferguson and Beck (1983) have identified four factors that have the potential for contributing to elder abuse: health status, caregiver and aged adult's attitude toward aging, living arrangements, and finances. Potential to abuse was the second outcome variable of the model, in the same time-ordering as total mood disturbance.

Specific Hypotheses

All paths of the model were tested. The hypotheses for the study were as follows:

1) Internal locus of control (X_1) is directly but inversely related to perception of poor physical health status (X_3), positively related to coping efficacy (X_5), and negatively related to total mood disturbance (X_6).

$$(X_1 \xrightarrow{-} X_3 \; ; \; X_1 \xrightarrow{+} X_5 \; ; \; X_1 \xrightarrow{-} X_6)$$

2) Social support (X_2) is directly and inversely related to perception of poor physical health status (X_3), positively related to Coping efficacy (X_5), and negatively related to total mood disturbance (X_6).

$$(X_2 \xrightarrow{-} X_3 \; ; \; X_2 \xrightarrow{+} X_5 \; ; \; X_2 \xrightarrow{-} X_6)$$

3) Perceived poor physical health (X_3) is directly and inversely related to coping efficacy (X_5) and positively related to total mood disturbance (X_6).

$$(X_3 \xrightarrow{-} X_5 \; ; \; X_3 \xrightarrow{+} X_6)$$

4) Stress perception (X_4) is directly and positively related to potential to abuse (X_7).

$$(X_4 \xrightarrow{+} X_7)$$

5) Coping efficacy (X_5) is directly and inversely related to total mood disturbance (X_6).

$$(X_5 \xrightarrow{-} X_6)$$

6) Internal locus of control (X_1) is inversely related to stress perception (X4) and potential to abuse (X_7).

$$(X_1 \xrightarrow{-} X_4 \; ; \; X_1 \xrightarrow{-} X_7)$$

7) Social support (X_2) is inversely related to stress perception (X_4) and potential to abuse (X_7).

$$(X_2 \xrightarrow{-} X_4 \; ; \; X_2 \xrightarrow{-} X_7)$$

8) Perceived poor physical health (X_3) is positively related to stress perception (X_4) and potential to abuse (X_7).

$$(X_3 \xrightarrow{+} X_4 \; ; \; X_3 \xrightarrow{+} X_7)$$

9) Stress perception (X_4) is inversely related to coping efficacy (X_5) and positively related to total mood disturbance (X_6).

$$(X_4 \xrightarrow{-} X_5 \; ; \; X_4 \xrightarrow{+} X_6)$$

10) Coping efficacy (X_5) is inversely related to potential to abuse (X_7).

$$(X_5 \xrightarrow{-} X_7)$$

11) Total mood disturbance (X_6) is directly and positively related to potential to abuse (X_6).

$$(X_6 \xrightarrow{+} X_7)$$

12) Internal locus of control (X_1) indirectly influences stress perception (X_4) through perceived poor physical health (X_3).

$$(X_1 \xrightarrow{-} X_3 \xrightarrow{+} X_4)$$

13) Internal locus of control (X_1) indirectly influences coping efficacy (X_5) through perceived physical health (X3) and stress perception (X_4).

$$(X_1 \xrightarrow{-} X_3 \xrightarrow{+} X_4 \xrightarrow{-} X_5)$$

14) Internal locus of control (X_1) indirectly influences total mood disturbance (X_6) through perceived poor physical health (X_3), stress perception (X_4), and coping efficacy (X_5).

$$(X_1 \xrightarrow{-} X_3 \xrightarrow{+} X_4 \xrightarrow{-} X_5 \xrightarrow{-} X_6)$$

15) Internal locus of control (X_1) indirectly influences potential to abuse (X_7) through perceived poor physical health (X_3), stress perception (X_4), coping efficacy (X_5), and total mood disturbance (X_6).

$$(X_1 \overset{-}{\longrightarrow} X_3 \overset{+}{\longrightarrow} X_4 \overset{-}{\longrightarrow} X_5 \overset{-}{\longrightarrow} X_6 \overset{+}{\longrightarrow} X_7)$$

16) Social support (X_2) indirectly influences stress perception (X_4) through perceived poor physical health (X_3).

$$(X_2 \overset{-}{\longrightarrow} X_3 \overset{+}{\longrightarrow} X_4)$$

17) Social support (X_2) indirectly influences coping efficacy (X_5) through perceived poor physical health (X_3) and stress perception (X_4).

$$(X_2 \overset{-}{\longrightarrow} X_3 \overset{+}{\longrightarrow} X_4 \overset{-}{\longrightarrow} X_5)$$

18) Social support (X_2) indirectly influences total mood disturbance (X_6) through perceived poor physical health (X_3), stress perception (X_4), and coping efficacy (X_5).

$$(X_2 \overset{-}{\longrightarrow} X_3 \overset{+}{\longrightarrow} X_4 \overset{-}{\longrightarrow} X_5 \overset{-}{\longrightarrow} X_6)$$

19) Social support (X_2) indirectly influences potential to abuse (X_7) through perceived poor physical health (X_3), stress perception (X_4), coping efficacy (X_5), and total mood disturbance (X_6).

$$(X_2 \overset{-}{\longrightarrow} X_3 \overset{+}{\longrightarrow} X_4 \overset{-}{\longrightarrow} X_5 \overset{-}{\longrightarrow} X_6 \overset{+}{\longrightarrow} X_7)$$

20) Perceived poor physical health (X_3) indirectly influences coping efficacy (X_5) through stress perception (X_4).

$$(X_3 \overset{+}{\longrightarrow} X_4 \overset{-}{\longrightarrow} X_5)$$

21) Perceived poor physical health (X_3) indirectly influences total mood disturbance (X_6) through stress perception (X_4) and coping efficacy (X_5).

$$(X_3 \overset{+}{\longrightarrow} X_4 \overset{-}{\longrightarrow} X_5 \overset{-}{\longrightarrow} X_6)$$

22) Perceived poor physical health (X_3) indirectly influences potential to abuse (X_7) through stress perception (X_4), coping efficacy (X_5), and total mood disturbance (X_6).

$$(X_3 \overset{+}{\longrightarrow} X_4 \overset{-}{\longrightarrow} X_5 \overset{-}{\longrightarrow} X_6 \overset{+}{\longrightarrow} X_7)$$

23) Stress perception (X_4) indirectly influences total mood disturbance (X_6) through coping efficacy (X_5).

$$(X_4 \overset{-}{\longrightarrow} X_5 \overset{-}{\longrightarrow} X_6)$$

24) Stress perception (X_4) indirectly influences potential to abuse (X_7) through coping efficacy (X_5) and total mood disturbance (X_6).

$$(X_4 \overset{-}{\longrightarrow} X_5 \overset{-}{\longrightarrow} X_6 \overset{+}{\longrightarrow} X_7)$$

25) Coping efficacy (X_5) indirectly influences potential to abuse (X_7) through total mood disturbance (X_6).

$$(X_5 \overset{-}{\longrightarrow} X_6 \overset{+}{\longrightarrow} X_7)$$

Assumptions of the Causal Model

The causal model (Figure 1) was recursive and temporally ordered, with unidirectionality of flow. Relationships were linear, additive, and causal, and all variables were measured on an interval scale. Rationale for the choice of variables and the relationships proposed was derived from the ensuing literature review, Chapter II.

The assumptions of the causal model were: first, that the variables of locus of control and social support were not causally related to each other. Support for this position was derived from the literature, and ensued from the recent studies of Krause (1987), and Lefcourt, Martin, and Saleh (1984). The findings of Lefcourt, et al., indicated that although persons with certain personality characteristics may benefit more than others from some types of social support, personality measures in general were not strongly related to social support. Krause, on the other hand, found that emotional social support tended to engender feelings of control, but only to a degree. Beyond a certain point, the relationship became

curvilinear, and feelings of control were diminished by additional support. The complexity of the presumed relationship was also explored earlier by Kobasa and Puccetti (1983), who found that persons low in internal control orientation did not benefit from their perceived family support. However, the studies did not examine the relationship between locus of control and social support in a manner which would indicate that persons high in internal locus of control would also be high (or low) in perceived social support, or vice versa. No studies which examined this specific relationship were discovered, therefore, the model assumption is that the variables are not causally related.

The second assumption related to the first outcome variable, total mood disturbance. It has often been tacitly inferred that total mood disturbance is the opposite of mental well-being. For the purposes of this study, therefore, a person who experienced mental well-being was one who functioned comfortably within his or her society and was satisfied with the self and his or her achievements (Freedman, Kaplan, & Sadock, 1972). The definition was reality based. Conversely, a person with mood disturbance was one who experienced negative feelings in one or more of several emotional areas: anxiety, dejection, anger, activity, inertia, confusion, and friendliness, thus engendering dysfunctionality. It was

assumed that total mood disturbance was infuenced both directly and indirectly by all the preceding variables, and particularly by coping efficacy.

Third, it was assumed, in this study, that caregiving was a special stress that had a negative outcome in terms of potential to abuse. In older caregivers, the negative relationship between caregiving status and physical health had been explored in studies by Cantor (1983), George and Gwyther (1986) and Robinson (1983). Results of the first two studies tended to indicate no relationship between caregiver status and perceived physical health status, but the results of the latter study by Robinson yielded conflicting data on the relationship. First of all, the only longitudinal study found (Zarit, et al., 1986) did not break out physical health status from the composite variable of burden, although there were significant differences in the burden status between time one and time two of the study. No studies have been found which specifically linked poor physical health to caregiver status in an elderly population.

Tangentially, however, studies by Antoni (1985), Holahan and Moos (1985), and Monroe (1983), found that a stressful life situation (such as caregiving) increased susceptibility to physical illness in general. In addition, caregivers have been looked at as comprising an aggregate of older and younger individuals in the studies,

hence the effect of age vulnerability on the physical health of caregivers could not be acertained. If, indeed, caregiving did have a negative impact on physical health, then, following the newly-evolving theory of elder abuse, older caregivers and those in poorer health would be most inclined to abuse or neglect their elderly charges. Thus, this particular study explored the relationship of physical health status to potential to abuse in caregivers.

Fourth, a set of assumptions concerned the nature of caregiving and its relationship to abuse and neglect. In this study, it was assumed that caregivers knew how to care for their care recipients and that they derived their values of caring from the larger culture (Fulmer & Cahill, 1984). This assumption was necessary if one was to be consistent with the definitions of abuse and neglect, particularly in the area of intentionality. Intentionality served to shift the focus of the act from the recipient of care to the caregiver.

As the writer looked at caregivers, the research of Poertner (1986) advanced the notion that violence was more related to the characteristics of the abuser than of the abused. In this view, provocative behavior of the abused or neglected did not enter the picture, for the purposes of analysis (Giordano & Giordano, 1984). This choice was supported by the study findings of Colerick & George (1986), who discovered that patient variables did not

emerge as predictors when persons were institutionalized, and that the act of institutionalization improved the quality of life for the caregiver, but did not necessarily relieve caregiver worry and concern. The profile of the potential abuser thus began to emerge as a person who had particular characteristics, shaped by the caregiving experience. Accordingly, abuse and neglect did not appear to be a result of the situation alone.

The situation, of course, did exert considerable influence on the caregiver, according to the stress pile-up model of McCubbin and Patterson (1982). Pile-up was envisioned as consisting of hardships (low self-perception of problem solving skills, or belief in externality of control, inadequate social supports, and perceived stresses-- general and specific-- that continued to affect the individual). Similarly, the additive burden hypothesis of Dohrenwend and Dohrenwend (1981) was appropriate for the caregiving situation. In this hypothesis, the personal characteristics, social factors, and stress perception, separately or in combination, influenced the onset of various types of psychological symptomatology. These writers also called attention to the personal disposition of belief in the ability to control one's own life, and indicated that such behavior was learned. The implication was that the behavior can then be changed, with proper interventions, thus modifying the

relationships in the model for a more desirable outcome. Before proper interventions can be planned, however, these relationships must be explored through research such as the present study.

The final assumption of the model was that there was a direct relationship between mood disturbance and the potential to abuse. In the present state of theory development, the empirical evidence for this particular assumption was sparse. Stating the assumption in another way, there was a significant negative relationship between preceived well-being and psychopathology (Reker & Wong, 1984), and, as pointed out in the review by Kessler, et al. (1985), interactions between persons with psychopathology and their significant others were fraught with conflicts and hostility. This factor was a tenet of child abuse theory (Pelton, 1982), and has been validated by studies in that area (Finklehor, Gelles, Hotaling, & Straus, 1983). Specifically in the area of elder abuse, there was some evidence to link abuse and neglect with mood disturbance, recently gathered by grounded theory and case study methods (Phillips & Rempusheski, 1985; Steinmetz, 1988).

Theoretically, it was hypothesized that persons high in mood disturbance would be high in the potential to abuse (Fulmer & O'Malley, 1987; Phillips, 1983; Pierce & Trotta, 1986; Quinn & Tomita, 1986). Tangentially, there was also support for this premise in the literature on

burnout, which was described by Benner and Wrubel (1989) as the loss of human caring, and by others (McCranie, Lambert, & Lambert, 1987; Rich & Rich, 1987) as a syndrome of emotional exhaustion which resulted in a loss of empathic concern for patients. This poor personal commitment to caring led to deliberate patient neglect, or to patient blaming (psychological abuse), for being needy and sick (Benner & Wrubel, 1989). In summary, the relationship between mood disturbance and potential to abuse has begun to be substantiated. The data from this study further that effort. In the following chapter, the literature has been reviewed with respect to other positied relationships of the model.

Chapter II

REVIEW OF THE LITERATURE

This chapter presents a comprehensive literature review of all variables and relationships in the model.

Locus of Control and Other Variables in the Model

Locus of Control and Physical Health Status

This relationship has been explored by a number of authors in recent years. Beginning with the early work on hardiness (a tendency to feel influencial in managing one's life, similar to internal locus of control) by Kobasa and her associates (Kobasa, 1979; Kobasa, Maddi, & Kahn, 1982; Kobasa & Puccetti, 1983), the relationship in its various aspects was studied over time. The first study explored hardiness and its effect in controlling for the impact of stressful events on the physical health of a large group of middle-aged male executives. Results of this research indicated that the subjects with a high level of hardiness suffered fewer bouts of illness than subjects who were rated lower in hardiness but were under comparable levels of stress.

Following up on these early results, Kobasa, et al. (1982), refined the design, using a section of the original

subject group and measuring illness change over time, with hardiness prior in time. Again, the results showed a significant relationship between hardiness and physical health, but this time the role of stressful events was not significant, suggesting that stressful life events may not have a causal effect for illness in the presence of hardiness, or an internal locus of control orientation. (Conversely, there is evidence that subjectively rated health status may have an effect on stress perception, a relationship that will be discussed later in this section.)

In the third study to be discussed (Kobasa & Puccetti, 1983), the relationships between hardiness, social support, stressful events and illness were explored. Once more, the same subject group was used, and the relationships between hardiness, stressful events, and illness were similar to those of the first study. However, the relationship of social support to the other variables in the study was complex, suggesting that social support may function differently with different persons or situations. For instance, it was found that the source of the support was important in its effects on health; boss support had a positive effect, while family support had a negative effect with persons low in hardiness. The studies of Kobasa and her associates, while important as early explorations, cannot be generalized because of the very specific and homogeneous nature of the sample and the unique way in

which social support was measured. Although the studies are important because of the way in which control orientation was tied to other variables of interest for the present study, the locus of control variable seems to have wider application than hardiness at the present time.

In a study of men and women with chronic illness (Felton, Revenson, & Hinrichsen, 1984), the puzzling patterns of relationships between coping and adjustment in this very different subject group indicated the presence of a third variable which affected them. As stated by the authors, positive affective personality variables functioned in a way which changed cognitions, so that the illness became, instead of a stressor, a challenge for personal growth. Support for this conclusion was obtained in a study on an older-aged cohort (Colerick, 1985). In that study, a personality variable the author titled "stamina" and defined as cognitive orientation (degree of perceived control) of the individuals was strongly related to physical health. The author maintained that when circumstances were adverse, but the person's physical health was good, coping in old age was effective, through utilizing the orientation of an optimistic outlook.

The research of Guarnera and Williams (1987), on an elderly population, served to tie the notion of optimism to perceived control over one's life; optimism was significantly correlated with internal health locus of

control ($p < .001$). A clear relationship of internal control orientation to health perception was found in the recent study by Krause (1988), in which it was demonstrated that elders with internal control beliefs made far fewer visits to physician's offices in times of stress than elders with external control beliefs.

Other findings discriminated between sub-components of the variables, with some conflicting results. For example, while a study by Adlwin & Revenson (1985) indicated that older adults were more external and felt little responsibility for events, in a later study by Blanchard-Fields and Robinson (1987) internal locus of control was associated with elders under stress engaging in self blame. In these elders, an internal control orientation may have functioned to adversely affect health and stress perception, while an external control orientation may have been protective. Finally, research by Reker, Peacock, and Wong (1987) found that, in the elderly, women viewed life as being more under their control than did men, and that life control perception was significantly and positively related to both physiological and psychological well-being. In this study, the meaning of life significantly correlated with life control. These factors had not been studied in a caregiver group, until the present study.

Locus of Control and Stress Perception

One of the first authors to question the long-held assumption that having personal control would advantageously affect stress perception was Averill (1973). He concluded, from his review of studies, that control was composed of several elements, each relating to stress perception differentially, sometimes increasing, sometimes reducing, and sometimes having no effect at all upon stress perception. In other studies on control orientation, it has been inversely associated with stress perception; the more one felt in control, the lower the stress perception (Manfredi & Pickett, 1987; Medinger & Varghese, 1981).

However, a conclusion of curvilinearity of control effects was validated by Krause's (1986b) research. Using elderly persons in his study, Krause looked at the way in which control orientation mediated stress and promoted well-being. He found that persons with either extreme internal or extreme external orientations were vulnerable to stress, but that extreme internal orientation was not always counter productive, because it could sometimes lead to the avoidance of stressors. The relationship was complex, and sometimes reciprocal; for example, severe stress in which the outcome was uncertain altered a feeling of control over one's life.

Research to sort out these relationships abounded in the 1980s. Husaini, et al. (1982) reported on effects from

an analysis of personal competence (perception of self as being in control of destiny) and social support on stress. In their study, the researchers found that although there were no gender difference in stress perception, married persons (particularly males) with low levels of competence experienced more psychological strain under high stress conditions. As a whole, personal competence seemed to have more of an effect on stress than did social support, in that study, but the results were somewhat disappointing because of the relatively low power of the variables to predict psychological distress.

Prediction of happiness, rather than distress, was the aim of a longitudinal study by Chiriboga (1984). As in the research reported in the preceding paragraph, Chiriboga found sex differences in the experience of stress. With regard to stress perception, for both males and females in the study, the older participants had fewer day-to-day hassles, but perceived more stresses in their lives. Only one personal characteristic, the tendency to self-criticize, was instrumental in affecting happiness, but the effect was strangely different for men and women. Men who were more self-critical were less happy, whereas women who were more self-critical were happier. Although longitudinal studies in general have more potential to add greater dimension to predictive variables, this study was unfortunately weak in that it did not include either social

support or coping, which were known to have interactional effects with the variables studied, in the prediction of psychological outcomes. In addition, while it was refreshing to find that the outcome variable was happiness rather than distress, happiness was measured using a single-item scale, which calls the validity of its measurement into serious question.

Inclusion of both coping and support mobilization as a facet of coping affecting mental health outcomes was the subject of a study by Aldwin and Revenson (1985). The researchers discovered that how persons dealt with the emotions involved when a stressful situation was perceived may have been a function of personality characteristics. Although they used a psychological symptom screening measure for their outcome, the authors did note that future research might benefit from looking at a positive mental health outcome, which would foster examination of how individuals manage stress via personality characteristics.

More light was shed on this latter notion in the recent study on burnout (Rich & Rich, 1987), where it was shown that burnout and hardiness were inversely related. The control orientation hardiness evidently functioned to change the perception of stress under burnout-provoking circumstances, and to conceptualize stress as challenge, rather than as threat. While it was true that Rich and Rich's study was on professional caregivers, it seemed

logical that the findings would translate to non-professional caregivers as well.

However, considering the concept of control orientation as a stress perception reducer may not be accurate. In a study on caregiving strain (Cantor, 1983), noted in her results that the more commitment was involved in supplying a caregiving relationship, the more the caregiver was likely to experience a feeling of strain. While all of the above findings were helpful in understanding the nuances of the stress process, they were not specific enough to be useful in practice.

Consequently, the present study undertook to examine the concept of locus of control and its effects on stress perception in an elderly caregiving population, to the purpose of finding out which components of the concept are effective in reducing stress perception in this population and which components, therefore, may be the target of change through nursing interventions. In general, in the present model it was proposed that internal locus of control had an inverse relationship to stress perception, based on evidence from this literature review.

Locus of Control and Coping Efficacy

Colerick's (1985) study of stamina in an elderly population predictively related antecedents, one of which was physical health, to later adaptive potential to deal

with perceived stress. Also in Colerick's study, predictive links between the control orientation of the subjects and their adaptive potential to cope by congnitve appraisal of a situation were substantiated. As explained by the author, those elders who, when faced with adverse circumstances, were able to maintain an optimistic outlook increased their coping resourcefulness. Among the elderly, and especially those in caregiving roles, control orientation has been shown to be an important predictor of effective coping (Colerick & George, 1986; Miller, 1987).

The studies in the area were rather consistent, from the earliest reviewed (Kobasa, et al., 1982) to later studies specifically involving caregivers (McCann, 1988), in their findings that internal control orientation helped persons to cope. However, in a study comparing young and older persons in coping and controllability, results showed that older persons, if they perceived a stressful event as one for which they were somewhat to blame, then coped less well than younger persons because of their tendency to use self-blaming policies in their attempts to cope (Blanchard-Fields & Robinson, 1987).

Some research findings further verified that the relationship between control orientation and coping was a complex one; for example, Lefcourt, et al. (1984) discovered that the variable of control interacted with social support, such that persons with an internal control

orientation benefitted more from social support than those with an external orientation. Nevertheless, the relationship of internal control orientation to coping efficacy was generally direct and positive, as substantiated by the literature. In this study, therefore, the relationship was examined by looking at the effects of the various components of locus of control and their effects on efficacy of coping, to ferret out the complexities of the interaction.

Locus of Control, Mood Disturbance, and Potential to Abuse

Externality of control has also been shown to be associated with mood disturbance (Burckhardt, 1985; Krause, 1986b; Palmore & Luikart, 1972). Also, a recent study (Reker, et al., 1987) linked internality of control orientation positively to mental well-being. However, the literature in this area tended to be rich and varied. One of the earlier research teams in the area of personality variables and their relationship to mood disturbance outcomes was Dohrenwend and Dohrenwend (1981). These researchers concentrated on class differences in vulnerability to stress, and presented evidence to the effect that control orientation differed according to the social class of the subject. Persons in a higher social class tended to be self-directing (internal control) whereas persons from a lower class tended to conform to

external proscriptions (belief in externality of control). This factor, then, predisposed persons from the lower class to being vulnerable to mental illness, because of their lack of flexibility when life stressors demanded adaptation.

According to Holahan and Moos' (1985) study, persons who were flexible, with easy-going dispositions and self-confidence (associated with internal orientations) were more resistant to stress and less likely to suffer psychological consequences. Their research indicated that this finding might hold for men more than for women, although it operated in both sexes. In addition to gender differences, an age difference in control orientation and psychological well-being was cited by Colerick and George (1986). In their study, the older caregivers felt challenged by the caregiver responsibility, and did not suffer as much psychological distress in the activity as did younger caregivers.

McCrae and Costa (1986), although they used subjects with an age range of 24 to 91, did not look for a distinction by age in the relationship between control orientation and mental well-being. They did, however, find a relationship between the personality variables and mental well-being (adaptational outcomes), but it was confounded by the relationship between coping and adaptational outcomes. Therefore, they concluded that personality

variables (one of which was extraversion, comprised of assertiveness and challenge), in conjunction with coping efforts, were responsible for mental well-being in the face of adverse circumstances.

A later study by Costa and his associates (1987) once again looked at psychological well-being and personality dispositions. However, this study took issue with the assumption that mental well-being fluctuated from one time to another, and therefore could be used as a sensitive indicator of the effects of such variables as coping and changes in personality dispositions. Their results gave emphasis to the importance of personality dispositions in subjective well-being, which they considered a stable trait. However, it seemed this conclusion was not warranted, in view of the fact that there was no indication in their study of the different types and amounts of stress subjects had undergone between time one and time two, nor the types of coping mechanisms they had employed. Since only maturational change possibilities were considered, it was conceivable that the subjects who responded nine years later at time two (about two-thirds of the participants at time one) were those who had had few or no stressful episodes in the intervening years. We do not have data to indicate the percentage of the population who undergo stressful events in any given span of time, and most

persons may lead relatively untroubled lives, thus accounting for stability of well-being.

Other studies which related personality variables to well-being were McCranie, et al, 1987, Rich and Rich, 1987, and McCann, 1988. The first two groups of researchers looked specifically at the relationship between hardiness (control orientation) and burnout in professional caregiving situations. Burnout is a concept which shares much in common with potential to abuse, by virtue of its definition of loss of capacity to care and lack of empathic feeling for patients. The latter study reported findings on the relationship between challenge and lay caregiver's perception of well-being. McCranie, et al., found that control orientation did not prevent burnout in highly stressful caregiving situations, although it did function to reduce it somewhat in less stressful situations. On the other hand, Rich and Rich's study results showed an inverse relationship between control orientation and burnout that was significant according to the age of the nurse. Older nurses were less prone to burnout. Nevertheless, the small qualitative research study of McCann indicated that about a third of the elderly lay caregivers experienced resentment, disgust, and fear in their situations, leading to mood disturbances. This finding contradicts Colerick and George's conclusion, cited earlier. As suggested by Rich and Rich, the relationship between age and burnout may have

been more a function of the older professional nurses' experience than of their control orientation. The present study looked at experience (in terms of duration of the caregiving situation) and its effect on mood disturbance of the caregiver.

Social Support and Other Variables in the Model

Social Support and Physical Health Status

One of the earliest studies to examine the relationship between social support and physical health was the study of the prognosis of pregnancy by Nuckolls, Cassel, and Kaplan (1972). The researchers found a definite relationship between social support and the physical well-being of pregnant women. In pregnant women who experienced stressful events but were low in social support, the pregnancy complication rate was much higher than for those who were also under stress but were high in social support.

Social support was a factor in influencing health behaviors (going for a health check-up, e.g.) which indirectly influenced physical health, in the study by Lin, Simeone, Ensel, and Kuo, 1979). On the other hand, social support did not relate to physical health, either directly or as a buffer between stress and physical illness, in the longitudinal study by Schaefer, Coyne, and Lazarus (1981). However, social network was one measure of social support

in their study. The social network can be demanding of time and energy. Thus, when taken together with perceived quality of social support, size of the social network may serve to cancel out any positive effects of perceived quality of support on physical health. Also, since subjects in this study were all under 65 years of age, the findings may not generalize to an older population.

The effects of social support on physical health were also studied in Kobasa and Puccetti's (1983) work on hardiness. The relationship between social support and physical health was conditioned by the type of social support (boss support or family support) in this study. Boss support was positively related to low physical symptomatology, whereas family support had a negative effect on physical health, but only for those subjects who were low in hardiness. Social support was conceptualized as subjectively perceived and also in terms of social assets (money, goods, and social influence). Again, the study was done on a subject group very different, demographically, from elderly caregivers. Kobasa and Puccetti used male middle and upper level executives in their study.

Finally, the study of Lefcourt, et al. (1984) used a sample of first year college students to test the effects of control orientation and social support on stress. One finding of the study was that social support was positively

related to physical health, but only for those individuals high in internal control orientation. Any or all of the findings from the studies mentioned in this section may differ from findings when the relationship between social support and physical health was examined in a population of elderly caregivers.

Social Support and Stress Perception

Social support was seen as being of vital importance in lowering stress perception. This relationship was substantiated in several studies (Billings & Moos, 1981; Husaini, et al. 1982; McNett, 1987; Scott, et al., 1986; and Zarit, Reever, & Bach-Peterson, 1980). In the study by Husaini, et al., social support was found to be positively related to stress perception, for males. Conversely, Lin, et al.'s (1979) study found no support for a relationship between social support and stress perception, but the results may have been seriously affected by the way in which social support was defined in the measure-- as community rather than as family affiliations.

The hallmark study on the nature of coping by Pearlin and Schooler (1978) maintained that social support was important in lowering the level of perceived stress. In the study of elderly retired persons by Krause (1986a), however, this relationship was not validated, except in specific instances such as crises and bereavement. It was

possible that caregiving was akin to these extreme stressors. Support for this idea was shown in the study by McCann (1988), the results of which indicated that without social support, caregiving was more stressful because of the social isolation caregiving engenders. The study by Pratt, Schmall, and Wright (1986) found that help provided by the extended family was associated with lower levels of caregiver stress. The interviews with caregivers indicated that they had difficulty thinking about what help they needed from others. Discovering what kind of help was needed and who could provide it was an urgent requirement in the field of social gerontology, in view of older persons' shrinking social networks (Lawton, 1980). This perception was particularly important for the elderly who were in caregiving roles (Colerick & George, 1986; Scott, et al., 1986).

Social Support and Coping

The role of social support in coping has been explored, but the results were mixed. For example, the study by Billings and Moos (1981) and the study by Menaghan (1982) indicated that social support was effective in helping people to cope, but Kobasa and Puccetti's later work (1983) showed that the effects of social support on coping were dependent upon the type of social support available. More recent studies have tended to substantiate

the role of social support as an effective adjunct to coping (Colerick, 1985; McNett, 1987; Scott, et al., 1986). McCann (1988) found that social support helped caregivers to cope. To conclude the search of social support and coping, two studies, in addition to the ones just mentioned, showed that the relationship between social support and coping was a positive one (Burckhardt, 1985; Krause, 1986a).

Social Support, Mood Disturbance, and Potential to Abuse

The literature abounded with studies on the relationship between social support and mental well-being, but the results were often conflictual. For example, one might suppose the relationship to be generally linear and positive (Lin, et al., 1979), but several researchers' results have not borne out this assumption (Arling, 1987; Thoits, 1982). Thoits, after testing several measures of social support, found that the variable did not have a buffering effect on psychological distress in the presence of stress. Arling, in his examination of emotional distress in old age, found that there were differential effects of social support. Contrary to the findings of Thoits, Arling did find a modest buffering effect of social support between stress perception and distress. Social support as frequency of contacts with others was, indeed, positively related to mental well-being. Unexpectedly,

instrumental social support was inversely related to mental well-being in this study.

The latter result was in direct contrast to that obtained by Ward, Sherman, and LaGory (1984). These researchers were particularly interested in the quality of social support, by which they meant social involvement. Findings in their study indicated that instrumental social support and contact with children were very strong predictors of well-being in persons over the age of 60. In 1983, Cantor, too, found that instrumental social support had a postive effect on mental well-being of caregivers to the elderly. Apparently this effect was particularly important for persons with certain personality dispositions (Lefcourt, et al., 1984). In the latter study of young college students, subjects who were more autonomous were more affected by stressful experiences if they did not have social support. With it, they were resilient to stress.

Another differential effect for social support (in the form of family support) was reported in the study by Holahan and Moos (1985). In that study, social support in the experience of stress was shown to be more important for women than for men, in protecting against the occurrence of psychological distress. This result echoed one obtained in the study by Husaini, et al. (1982). In contrast, the recent study by Baillie, Norbeck, and Barnes (1988) found no buffering effects of social support upon psychological

distress. They did, however, find a substantial main effect; those who were satisfied with their social support had considerably less distress than those who were not satisfied with their social support. This result was similar to one obtained by George and Gwyther (1986), in which they found that caregivers who indicated a need for social support showed greater mood disturbance than those who did not express such a need.

However one defined social support, it was apparent that certain aspects of the variable were extremely important in supporting mental well-being, either directly or by buffering the effects of stress. Lately, social support has been emerging as a salient factor in abuse prevention as well. In the archival study by Hall (1986), indications were that persons having a low level of contact with others, and individuals who tended to be loners, correlated with an increased tendency to abuse their older family members. McCann's (1988) qualitative study found that 75% of elderly caregivers experienced social isolation, and 50% complained of lack of family support. Poertner (1986) concluded, from his survey research, that abusive behavior was often a consequence of factors such as social isolation and lack of social support.

Finally, the ex post facto, correlational study by Phillips (1983) looked at perceived social support and service-giving (instrumental) support. Both were found to

be directly related to positive affect in the caregiver, and, by implication, inversely related to potential to abuse. Phillips cited examples from the child abuse literature to support this link in her study.

Taken together, studies in the literature which dealt with the relationship between social support and mental well-being indicated many variations in the relationship, depending upon how social support was defined, and also upon characteristics of the subject group. But the type of stress was important also, and caregiving was a specific kind of stress, experienced by a specific population having unique demographic characteristics. From recent explorations, it was beginning to be realized that the effects of social support on other populations may not be relative to the situations nor to the persons of elderly caregivers.

Physical Health Status and Other Variables in the Model

Physical Health Status, Stress Perception, and Coping

In conjunction with the literature on social support, reviewed above, the studies on the relationship between physical health and stress perception tended to have findings in which the direction, polarity, and strength of the relationship depended upon the situations and the persons involved. An earlier study which examined the relationship found no association between physical health

and stressful experiences, in either direction (Schaefer, et al., 1981). On the other hand, the study by Deimling and Bass (1986) indicated a nonrecursive relationship.

In Shaefer, et al.'s study, the score on stressful experiences involved the number of incidents, rather than the intensity or duration of any or all stressful experiences. A later study by Schroeder and Costa (1984) separated out stressful experiences into health related events and other types. In that study, stressful experiences, of the health related types only, had a negative effect on physical health perception, a conclusion that is tautological in nature. (A purpose of the study was to point to this tautology in existing measures.) Schaefer, et al. tested a population of healthy men and women aged 45 to 65, whereas Schroeder and Costa used functional men and women in a broader age range-- 20 to 90, in their study. In neither study were individuals in poor health prominent in the sample.

In the present study, however, the intent was to look at perceived health status and the effect that that variable had on stress perception, rather than the other way around. Since previous studies have shown that when the direction of the relationship was to test the effect of stress perception on physical health status, the results were spurious or contaminated, one might logically investigate another directionality. There seemed to be

good rationale for this procedure, despite the finding of Robinson (1983), that health status did not affect stress perception (in that instance, perception of caregiver strain). Robinson's study used a global measure of self-rated health status: 1 = poor to 4 = excellent. Such a measure was not sensitive enough to capture nuances and changes in stress perception related to a thoroughly evaluative rating of health status in a population of elderly caregivers. Also, Robinson's study gave a rating of the care recipients' health (two-thirds rated good or excellent, with low caregiving demand), but not of the caregivers' health, although that factor was measured.

In view of the high care demand placed upon elderly caregivers to the physically and mentally impaired (the latter were not considered in Robinson's study), physical health status would seem to be important in assessing one's perception of stress. Indeed, it was pointed out in the pilot study by McCann (1988), that caregivers in poor health complained of increases in their stress levels, due to fear of being unable to continue in their caregiving role to a beloved family member. Empirical evidence substantiating the inverse relationship between physical health and stress perception can now be found in the study by Pruchno and Resch (1989), where poorer health in women, but not in men, was associated with greater stress perception, especially in the caregiving role. As the

researchers indicated, the variables in the model had greater predictive power for men than for women, due to unequal representation of the sexes in the sample. This literature review also explores gender differences among the variables in the study, and these studies are to be presented later.

A similar question related to physical health status concerns the notion of how it was related to coping efficacy. Although this relationship would seem to be worth considering, few studies were found which examined it. Perhaps old idea of the sick role and the assumption that persons who were in poor health were not expected to cope well with other stressors was pervasive. However, in the study by Felton, et al. (1984), persons who were physically ill used a variety of coping strategies, some effective, others less so, in coping with their illnesses. There seemed to be little relationship between type or length of illness and use of particular strategies, but, as validated by other studies to be discussed later, the use of certain strategies did have a significant effect upon mental well-being.

The relationship between physical health and coping effectiveness in women aged 50 and over was recently explored by Lohr, et al. (1988). In that study, it was shown that women perceiving more physical health problems used more direct-action (problem solving) coping

strategies, but these had little enhancing effect on mental well-being. The authors concluded that coping was not particularly effective when health problems could not be changed. In the same study, however, it was shown that women who used positive-cognitive (emotion-focused) coping strategies, such as reminding themselves that their health was better than that of many women their age, experienced a higher degree of life satisfaction. Although not specific regarding types of coping used, the study by McCann (1988), indicated that good health in the caregiver aided effective coping. However, a third of the caregivers in her study had problems coping with the physical aspects of caregiving, due to health limitations. Once again, the effects of health on coping efficacy, like the effects of health on stress perception, seemed to be particularly important and unique in a caregiving population.

Physical Health, Mood Disturbance, and Potential to Abuse

The relationship between physical health status, stress perception, and mental distress was well substantiated in the literature. The positive effect of good physical health upon mental well-being was supported by the studies of Arling (1987), Felton, et al. (1984), Markides and Martin (1979a), and Palmore and Luikart (1972). Recent studies continued to indicate a positive

relationship between physical health, coping, and life satisfaction (Lohr, et al., 1988; Pruchno & Resch, 1989).

In the caregiving situation, the health of the caregiver was crucial. Poor health of the caregiver often meant inability to cope with the situation, a decline in psychological well-being, and eventual placement of the patient in a nursing home (Colerick & George, 1986; Phillips & Rempusheski, 1985; Soldo & Myllyluoma, 1983). In the case where nursing home placement was not an option due to financial constraints, the physical exhaustion of caregiving sometimes led to eventual neglect of the patient (Smallegan, 1985).

The results of McCann's (1988) caregiver interviews yielded information relative to the effects of physical health status on the caregiving function. When interviewed, caregivers stated that they simply could not continue to do the caregiving because of their present health limitations, and two-thirds of them reported a further negative impact of caregiving upon their health. Many of them suffered severe fatigue but were unable to sleep-- a certain trigger for psychological problems. Other physical limitations cited by caregivers were back problems (67%), heart disease (58%), hypertension (50%), diabetes (42%), emotional problems (25%), and stroke (8%). The items on this list were not mutually exclusive, of course, and represented illness conditions suffered by many

persons over the age of 65. What may have occurred in situations where an ill caregiver was compelled by circumstances to care for a still more impaired family member was a crisis of neglect due to the caregiver's illness, hospitalization, or death.

Stress Perception and Other Variables in the Model

Stress Perception and Coping Efficacy

As noted by Kessler, et al. (1985), few studies have examined the impact of stressful events on coping. However, from crisis theory it was acknowledged that in any crisis or series of crises, adaptive mechanisms were often replaced by ineffective ones. Stress perception tended to lower coping efficacy, particularly when the stress continued over time (Menaghan, 1982; Soldo & Myllyluoma, 1983).

In addition, perceived stress seemed to have a positive relationship to emotional coping in some individuals (Wheaton, 1983). However, stressful events could sometimes promote effective coping in certain situations (McCann, 1988). There was simply no basis for predicting conditions under which a particular emotion or response was likely to occur. Folkman and Lazarus (1980), in their study of middle-aged adults, found that stress perception affected coping differentially, and that how stress was perceived had an influence on the type of coping

that occurred, problem-focused coping or emotion-focused coping.

In their study of stress and coping in an elderly population, Manfredi and Pickett (1987) stated they used the theoretical framework of Lazarus and Folkman. They examined the types of stressful events experienced by the elderly individuals, and the coping strategies they were likely to use, but unfortunately they made no effort to assess the effectiveness of the strategies.

However, the study by McCrae (1982) indicated that the use of some of the more effective as well as some of the ineffective coping strategies tended to decline with age. In other respects, the older persons were found to cope in much the same way as younger persons, and the use of different strategies depended upon the types of stress they faced. In a later study, McCrae and Costa (1986) found that the strategies of drawing strength from adversity, self-adaptation, use of faith and prayer, and use of humor were all highly effective coping strategies regardless of the stress encountered. But this was only the tip of the iceberg. As pointed out by the authors, unless one knew all perceived stress that had occured and how the individuals coped with the stressors, the global effectiveness of coping could not be determined. From what was known, however, it seemed that coping was useful in maintaining well-being despite adversity.

Stress Perception, Mood Disturbance, and Abuse Potential

Stress perception has been closely implicated, in a number of studies, with the increase of mental distress (Arling, 1987; Chiriboga, 1984; Holahan & Moos, 1985; McCranie et al., 1987; Mitchell, et al., 1983; Robinson, 1983). This relationship may be situationally dependent, however, as interpreted from the study findings of Baille, et al. (1988). In attempting to show that the perceived stress of caregiving was positively related to psychological distress, they found only partial support for the hypothesis, for actual caregiver demand was shown to be a more potent predictor of distress than the stress that was perceived.

Stress perception has usually been measured in terms of the perception of impact that a given stressor or stressors have had (Husaini, et al., 1982; Kobasa & Puccetti, 1983; Wheaton, 1983). In these studies, stress perception itself has invariably been shown to have a positive relationship to mental distress. Results in the Wheaton study also indicated that chronic stress was significantly related to depression, even after controlling for other influences such as coping. Earlier, Pearlin and Schooler (1978) found that chronic stress, more than stressful life events, was associated with psychological distress.

The assumption of caregiving burden as a chronic stress was seen in the study by Zarit, et al. (1986). This longitudinal study, with a two-year follow-up, showed that the stress perception of caregiving actually changed over time, becoming lower at time two. This change was attributed to a possible change in coping strategies, which mediated the effects of the stress, or to the caregivers becoming more stoic with the passage of time (passive resignation).

Given that such an effect may occur over time, it was also likely that some caregivers were unable to muster the coping strategies necessary to deal with a caregiving situation, regardless of the time frame. There was certainly plenty in the literature of abuse theory to propose that stress perception in caregivers was strongly related to the potential to abuse (Giordano & Giordano, 1984; Hirst & Miller, 1986; Montgomery & Borgatta, 1987; Pierce & Trotta, 1986; Quinn & Tomita, 1986; Steuer & Austin, 1980). In some instances, abuse was culturally sanctioned when individuals were under stress, so the tie between stress perception and abuse seemed strong and enduring (Fulmer & Cahill, 1984).

In addition to the theoretical support for the tie, empirical evidence, in the form of exploratory and descriptive studies, was beginning to mount. In the interviews conducted by various researchers, stress

perception of not only caregiving, but of other added stressors, increased the potential for violence to occur (Fulmer & O'Malley, 1987; Phillips & Rempusheski, 1985). Steinmetz (1988) maintained that when stressors of all kinds exceeded the tolerance level of the caregiver, abuse resulted. The study by Smallegan (1985) provided an interesting twist on stress perception. In this study, one wife neglected her caregiving responsibilities because she was afraid of her spouse-patient; he was violent toward her!

Coping Efficacy and the Outcome Variables

Coping Efficacy and Mood Disturbance

Shortly after the seminal work of Pearlin and Schooler (1978) suggested that the analysis of coping in response to chronic stress would be a promising area in which to study the relationship between coping and psychological distress, McCubbin (1979) integrated coping into his family stress theory. He analyzed several studies and concluded that coping was instrumenal in managing stress and in preserving well-being in the family. Likewise, Billings & Moos (1981), and McCrae and Costa (1986) found that coping effected a lifting of psychological mood and an alleviation of distress.

As these findings were questioned more closely, Felton, et al. (1984) conducted a study in which they

examined both the direct and the buffering effects posited for coping, on mental distress. Their results indicated that there was a rather modest direct effect on mental well-being imposed by the use of coping, and that the buffering hypothesis was not supported. In their study, only cognitive coping strategies were related (positively) to mental well-being, while emotion-focused strategies were not. Their subject group was unique, however, consisting, as it did, of chronically ill adults. This result was similar to the one obtained in the study by Caplan, Naidu, and Tripathi (1984), in which it was concluded that coping may have buffered the effects of stressors on psychological distress only when the stressors were subjectively controllable.

In general, early researchers paid little attention to the overlap between coping and the symptoms of psychological distress (Dohrenwend & Dohrenwend, 1981). The effects that poor coping methods such as the use of alcohol and drugs can have on mental well-being and psychological functioning was a case in point (Colerick & George, 1986). Avoidance coping, another poor coping method, has been shown to negatively affect mental well-being, in the study by Holahan and Moos (1985). A recent study on maladaptive coping and its effects on the appearance of psychiatric symptomatology was a definitive indictment of negative coping responses such as anger

turned inward, anger projected, rumination, and the use of alcohol and drugs in the cause of mental illness (Miller, Surtees, Kreitman, Ingham, & Sashidharan, 1985).

Nevertheless, the inquiry into this relationship by Aldwin and Revenson (1987) generated guarded conclusions. First, their results indicated bidirectionality between coping and psychological distress. Second, they found little or negative effects of coping on mental health. However, the way in which the researchers conceptualized coping did not adequately differentiate between effective and ineffective coping strategies in attempting to assess their effects on mental ill or well-being, and some of their coping strategies were rather nebulous (exercising caution, for example). The authors did concede that some strategies may function to maintain positive mood states, however. Finally, Foster and Gallagher (1986) linked coping in a positive fashion to mental well-being. To explore this relationship was a major emphasis in the present study.

Although the literature was rife with data on caregiving stress and its effect upon well-being, there was little to indicate the direct and indirect effects of coping upon well-being in this population group. A notable exception to this statement concerned the work of Quayhagen and Quayhagen (1988). In their study, the researchers were in accord with the conceptualization of

coping advanced by Pearlin and Schooler (1978), and found that when emotion-focused coping strategies such as self blame were used, coping was associated with a lower level of well-being. Conversely, when strategies such as problem solving were used, a positive association with mental well-being was seen, for spouse caregivers, but not for daughters. This finding was interpreted as understandable, given the need of daughters for lessened responsibility, and the fact that problem solving does not directly address this need. However, in a recently published article by Quayhagen and Quayhagen (1989), cognitive stimulation strategies for Alzheimer's patients were employed as an intervention. This intervention had the effect of enhancing the coping resources of the caregivers, with a consequent salutary effect on their mental well-being. In the present study, coping was conceptualized in a slightly different, but related manner.

Coping Efficacy and Potential to Abuse

Empirical studies on coping and potential to abuse were sparse at this point in the theory development of abusive behavior. Theory held that in some families, violence was a normative coping pattern learned through family role models, as a response to stress. Problems of abuse in such families resulted from attempting to handle stress by using destructive coping methods, including the

use of alcohol and drugs, which fostered violence by lowering inhibition thresholds (Fulmer & O'Malley, 1987; Giordano & Giordano, 1984; Hirsh & Miller, 1986). The influence of stress in caregiving situations involved not only the usual stress of caregiving, but also the possible stress of a personal crisis which occurred at the same time, acting as a trigger for the violent behavior (Pierce & Trotta, 1986).

Inability to successfully cope with the caregiver role was also implicated in neglect, as shown in the study by Smallegan (1985). Families in the study could not cope with round-the-clock care, or care for an extended period. Eventually, needed care was simply omitted from the schedule, with resultant decubiti, vermin infestation, or infections (Steuer & Austin, 1980).

Coping could also involve being able to deal effectively with the patient's resistive or contrary behavior in the caregiving situation (Steinmetz, 1988). Strategies to deal effectively with such behavior were difficult to implement, and in general were not common knowledge outside of the mental health professions. Lacking a repetiore of such strategies, and being angry and impatient in response to patient behavior, led to verbal abuse and rough handling.

The Effect of Gender on Variables in the Model

Studies on the relationship of gender to the variables in the model presented interesting, and sometimes conflicting findings. Earlier researchers in this area found no difference between either sex in life satisfaction (Palmore & Luikart, 1972). Life satisfaction had, as one of its components, mental well-being (George & Bearon, 1980). In an elderly population, however, there were some differences in well-being between the sexes, as discovered by Reker, et al. (1987). Women, more than men, felt that life was under their control and they strove harder to find meaning in human existence, boosting their mental well-being. In concert with Johnson and Catalano's (1983) findings about the adaptive mechanisms of caregivers, the role of caregiving could enhance well-being by giving new meaning to life. Since women were in caregiving roles more often than men, this finding had implications for understanding how women coped with the role (Johnson & Catalano, 1983; Smallegan, 1985).

Later researchers, working with elderly persons of both sexes, found that well-being in this population was closely related to perceived social ties and supports, and that this factor was most influential in maintaining well-being in the elderly (Ward, et al., 1984). These researchers did not investigate sex differences in

well-being. In the general population, however, social support seemed to be more important for women than for men. Social support helped women to cope more effectively with stress, while for men, personality factors, such as confidence and locus of control, were more important in their coping efforts. (Holahan & Moos, 1985; Husaini, et al., 1982). In fact, Husaini, et al., found that men were actually more vulnerable to stress if they were not confident, but had a high level of social support!

The importance of social support for women was also substantiated in the study by Billings & Moos (1981), who discovered that women perceived stressful events differently than men did. For women, stress was generated by events related to illness and children, while for men, economic stressors were more potent. Thus, women relied on social support to help them with their problems, while men focused on problem solving coping strategies. This notion is supported by the earlier research of Folkman and Lazarus (1980), in which they found that while there was no difference between the sexes in emotion-focused coping, men tended to use more problem-focused coping. Thoits (1982), on the other hand, found that stress perception was exacerbated in women who had close friends, an unexpectedly negative effect of social support in women.

Gender differences also played a role in abuse of the elderly. According to Hall's (1986) investigation, women

care recipients were more likely to receive maltreatment than men. No empirical evidence was located concerning the sex of the abuser. However, as reported in the review of abused elderly by Hirst and Miller (1986), women were more likely to be the abusers. This may have been due, in part, to their higher representation in the caregiver role, or may have been a factor in the relationship between abuser and abused. The present study investigated these gender differences in potential to abuse.

Summary

Conclusions from this review of the literature indicate that: 1) studies of the relationships between one personality variable, locus of control, and other variables in the model yielded conflicting results, with a preponderance of evidence supporting the positions depicted in the model (Figure 1), 2) social support, mostly depending on how it was measured, seemed to exert a powerful influence on other variables, according to the studies, 3) physical health status is a variable whose impact upon other variables in the caregiving situation has not been systematically explored in the studies, 4) while there have been some studies which attempted to explore the relationship between stress and coping, the role of coping in the alleviation of stress remained unclear, although the effect of stress on mental well-being and avoidance of

abuse seemed patently negative, 5) the notion of coping in a caregiver group and its effect upon well-being presented many unanswered questions, and the relationship between coping and the potential to abuse has not been studied to date, and 6) possible gender differences in the predictor variables, as well as the relationships brought forth throughout the literature review, offered much potential for establishing a scientific data base on abuse in the elderly. The knowledge gained could be used in nursing interventions to assist caregivers to cope effectively with their role.

Chapter III

METHODOLOGY

The design of the study, presented in this chapter, employed path analysis, a correlational design using causal modeling techniques. Multiple regression procedures were employed to assess the relative strength of prediction of each of the variables, independently and in combination, upon the outcome variables, total mood disturbance and potential to abuse. Exogenous variables in the model were locus of control and perceived social support. They were not considered dependent upon any of the subsequent variables. The endogenous mediating variables, in order of progression, were perception of physical health status, stress perception, and coping efficacy. The endogenous variables in the last time ordering, total mood disturbance and potential to abuse, are outcome variables of major import. All endogenous variables were each presumed to vary as a direct or indirect result of previous variables or their interactions.

Structural equations for the just-identified model were as follows:

1) $X_1 = e_1$.

2) $X_2 = e_2$.

3) $X_3 = P_{31} X_1 + P_{32} X_2 + e_3$.

4) $X_4 = P_{41} X_1 + P_{42} X_2 + P_{43} X_3 + e_4$.

5) $X_5 = P_{51} X_1 + P_{52} X_2 + P_{53} X_3 + P_{54} X_4 + e_5$.

6) $X_6 = P_{61} X_1 + P_{62} X_2 + P_{63} X_3 + P_{64} X_4 + P_{65} X_5 + e_6$

7) $X_7 = P_{71} X_1 + P_{72} X_2 + P_{73} X_3 + P_{74} X_4 + P_{75} X_5 + P_{76} X_6 + e_7$.

Sample

One hundred ten men and women caregivers were recruited to participate in the study. This number addressed the convention of 10 subjects per predictive variable, plus 50 additional subjects (Pedhazur, 1982). A power analysis was done to determine the strength of the anticipated findings, based on 110 subjects. Power is 1-B, and is determined by considering four parameters: 1) Power, 2) Sample size, 3) Significance level, a (alpha), and 4) the Effect size, which can be estimated from the first three parameters. Power of .80 or above is desirable for predictive purposes.

Therefore, to do the power analysis for the study, the a level was set at .05. Study participants number 110. The effect size was calculated, using Cohen's (1988) formula of the metric-free index L, where R^2 is the value for a medium effect, N is the number of subjects, and u is the number of predictor variables.

$$L = \frac{(R^2)}{(1-R^2)} \times (N - u - 1)$$

$$L = .149 \times 105 = 15.65$$

Consulting the table in Cohen (1988, page 420) the L would be approximately .83 for this study. This is acceptable, since it is above .80 for the subject group.

Subjects were caregivers over the age of 55, living in private residences in the community. They were functional adults able to care for themselves. Each subject had the major responsibility of caring for another ill or disabled elder living with them. Subjects were recruited from senior citizen centers, from church groups formed for elder activities, from caregiver support groups, and from various other organized groups. Examples of these groups are the Alzheimer's Disease & Related Disorders Association, the San Diego County Family Mental Health Counseling Services, the Head Injury Support Group, the Chronic Obstructive Pulmonary Disease Support Group, and cancer and stroke support groups. Most of the study participants were living in southern California (Los Angeles to Chula Vista area),

although a few had been recruited from the New York metropolitan area as well.

By using the Hollingshead Two Factor Index of Social Position (see Appendix A), it was determined that the majority of the participants were in the range of social class III (small business owners, technicians, sales clerks, etc.). All study participants were Caucasian. Five social classes were represented, however, from physicians and executives to unskilled laborers (see Table 1 for further descriptive statistics of the sample).

Measures

Measurement of the variables was achieved by the use of a variety of instruments. The demographic data form appears in Appendix A. All background variables deemed essential for the study were addressed on the demographic data form. Particular demographic variables were selected using two criteria: 1) whether or not the variable had been mentioned as influencing study outcomes in previous research, and 2) whether or not data on the variable had been requested as a condition for permission from the authors to use certain instruments. It was decided that, although the demographic variables were not of primary interest in this study, and therefore would not be part of any of the hypotheses, they could be of assistance in post hoc analysis to account for possible variance in the

Table 1

Demographic Data on Family Caregivers and Care Recipients

Characteristics (total sample =110)	Caregiver Status Number	Percent	Mean or Mode	S.D.
Sex: males	22	20.0	...	...
females	88	80.0	...	...
Marital Status:				
married	89	80.9	...	...
single	8	7.3		
widowed	8	7.3		
divorced	4	3.6		
separated	1	.9		
Age: (55-59)	19	17.3	69.2 Mean	8.4
(60-65)	15	13.5		
(66-70)	27	24.6		
(71-75)	21	19.1		
(76-80)	18	16.4		
(81-89)	10	9.1		
Education:				
1. Grad. School	16	14.5	3 Mode	1.6
2. College Grad.	8	7.3		
3. Part College	49	44.6		
4. H. S. Grad.	26	23.6		
5. Part H. S.	10	9.1		
6. Jr. H. S.	1	.9		

(continued)

Table 1, continued

Caregiver Status				
Characteristics (total sample =110)	Number	Percent	Mean or Mode	S.D.
Occupation:				
1. High Exec.	4	3.6	3 Mode	1.1
2. Business Mgr.	28	25.5		
3. Adm. Personnel	49	44.5		
4. Clerical/Sales	19	17.3		
5. Skilled Labor	8	7.3		
6. Unskilled	2	1.8		
Hours/week worked outside home:				
1. None	87	79.0	1.0 Mode	1.0
2. Work <20 hrs	7	6.4		
3. Work 20-34 hrs.	6	5.5		
4. Work 35-40 hrs.	10	9.1		
Hours per week furnished care:				
(6 -24)	10	9.1	97 Mean	44.5
(28 -48)	7	6.3		
(50 -72)	17	15.5		
(76 -96)	10	9.1		
(99 -119)	37	33.6		
(123-144)	10	9.1		
(147-168)	19	17.3		

(continued)

Table 1, continued

Characteristics (total sample =110)	Caregiver Status Number	Percent	Mean or Mode	S.D.
Total months furnished care:				
(1-6)	21	19.1	52.8 Mean	64.1
(7-12)	13	11.8		
(13-18)	10	9.1		
(19-24)	8	7.3		
(25-30)	5	4.5		
(31-36)	9	8.2		
(37-48)	11	10.0		
(49-84)	11	10.0		
(85-120)	12	10.9		
(121-300)	10	9.1		
Relationship of care recipient:				
1. Husband	53	48.2	1.0 Mode	1.7
2. Wife	22	20.0		
3. Father	2	1.8		
4. Mother	26	23.6		
5. Other relative or friend	6	5.5		
6. Son	1	.9		

(continued)

Table 1, continued

Characteristics (total sample =110)	Number	Percent	Mean or Mode	S.D.
Caregiver Status				
Health self-rating:				
1. Excellent	22	20.0	2.1 Mean	.8
2. Good	61	55.4		
3. Fair	20	18.2		
4. Poor	7	6.4		
Status of Care Recipient				
Age: (55-59)	3	2.7	78.8 Mean	8.5
(60-65)	3	2.7		
(66-70)	12	10.9		
(71-75)	21	19.1		
(76-80)	24	21.8		
(81-89)	35	31.9		
(90-98)	12	10.9		
Diagnosis:				
1. Alzheimer's or mental ill	43	39.1	2.0 Mode	.6
2. Physical ill	63	57.3		
3 Both diagnoses	4	3.6		

(continued)

Table 1, continued

Living Situation

Characteristics (total sample =110)	Number	Percent	Mean or Mode	S.D.
Type Dwelling:				
1. Small studio	3	2.7	5.0 Mode	2.1
2. 2-3 B.R. Apt.	7	6.4		
3. Trailer home	5	4.5		
4. Lg. Condominium	3	2.7		
5. 2-3 B.R. house	72	65.5		
6. > 3 B.R. house	20	18.2		
Space Adequacy:				
1. > adequate	29	26.4	2.0 Mode	.6
2. adequate	74	67.2		
3. < adequate	6	5.5		
4. crowded	1	.9		
Homes with age:				
1. Children < 13	5	4.5	...	...
2. Persons 13-19	3	2.7		
3. Persons 20-39	10	9.1		
4. Persons 40-59	19	17.3		
5. Persons ≥60	108	98.2		
Health of others:				
1. Poor	10	9.1	...	...
2. Fair	27	24.5		
3. Good	81	73.5		

(continued)

Table 1, continued

Living Situation				
Characteristics (total sample =110)	Number	Percent	Mean or Mode	S.D.
Household income:				
1. > $50,000	13	11.8	5.0 Mode	1.4
2. $40,000-50,000	13	11.8		
3. $30,000-40,000	11	10.0		
4. $20,000-30,000	33	30.0		
5. $10,000-20,000	35	31.9		
6. < $10,000	5	4.5		
Most income by:				
1. Husband	78	70.9	1.0 Mode	2.0
2. Daughter	15	13.7		
3. Wife	11	10.0		
4. Other	6	5.4		
Second income by:				
1. Wife	64	58.2	1.0 Mode	1.6
2. Mother	12	10.9		
3. Husband	8	7.3		
4. Other	7	6.3		
5. No second	19	17.3		
Income adequacy:				
1. > adequate	8	7.3	2.0 Mode	.5
2. adequate	86	78.2		
3. < adequate	16	14.5		

outcome variables that had not been accounted for by the study variables themselves. Chapter IV contains the results of consequence from the demographic variables; in Chapter V these results were discussed.

In addition to the demographic data form, the Hollingshead Two-Factor Index of Social Position (1957) also appears in Appendix A. This index was used to determine the social position of each subject from the information submitted on the demographic data form. The data from the Hollingshead instrument was used for the descriptive analysis of the sample. Other data gathering instruments used in the study appear in Appendix B. A description of the other data gathering instruments, including their psychometric properties, appears on the following pages.

Locus of Control

Locus of control was based on the seminal work of Rotter (1966), and was associated with the perceived ability to take control over one's own life. Originally, this control was conceptualized as tending to be either external or internal. A belief in internality of control meant that the individual perceived the self as being in control over the events in one's life. On the other hand, a belief in externality of control meant that one perceived

the events of life as being caused by chance or by powerful others.

Later, another researcher (Levenson, 1974) devised a scale which differentiated between external control as caused by powerful others or as caused by chance. Since this latter scale had been used in a study involving older individuals, whereas Rotter's (1966) had been designed for young college students, it was decided to use Levenson's (1974) scale as more appropriate for this study population.

Levenson's (1974) instrument was a 24 item measure with a Likert scale ranging from +3 to -3, with no mid-point, which gave the subjects a choice of how strongly they agreed or disagreed with the item statements. None of the items were reverse scored. There were three eight-item sub-scales, measuring internality (I), control by powerful others (P), and control by chance (C). Each item statement pertained only to the individual subject, and all scales had a high degree of parallelism in content among each triad (Levenson, 1974). Scoring was achieved by adding algebraically the scores separately for each scale, and adding a constant of 25 to each total to keep the scores positive. Scores for each scale could range from 1 to 49. Kuder-Richardson coefficient alpha reliabilities yielded $\underline{r}$ = .64 for the I Scale, .77 for the P Scale, and .78 for the C Scale. Test-retest reliabilities after a period of one week were .64, .74, and .78 respectively. Item to total

correlations were high and consistent. Content validity was established with the Rotter I-E Scales, and although the internal consistency estimates were only moderately high, the correlations compared favorably with those obtained by Rotter (1966) (Levenson, 1974). Construct validity was established through factor analysis. Item analysis indicated that all items significantly distinguished between high and low scorers on each scale (Levenson, 1974).

Perceived Social Support

The Personal Resource Questionnaire (PRQ-85), designed by Brandt and Weinert (1987), was used to measure perceived social support. The instrument was in two parts. The first part presented 10 situational problems for which an individual might seek tangible help. Answers to the questions following the situations gave a view of whether or not the situation arose within the last 6 months, and how satisfied the subject was with any help received. This part of the instrument was presented as a 6-point Likert scale, ranging from +3 to -3. The higher the score, the greater was the person's level of tangible social support.

Part two of the PRQ-85 had 25 items arranged on a 7-point Likert scale which measured the subject's perceived level of personal social support. With provisions for appropriate recoding, higher scores indicated a greater

level of perceived social support. The general nature of the items on the PRQ-85 made it useful for any age group.

Content, criterion, and construct validity were established for the instrument. Content validity was determined through a panel of six nurse researchers (Weinert, 1987). Internal consistency reliability (coefficient alpha) was established. Cronbach's alpha ranged from .85 to .93 for the scales (Brandt & Weinert, 1987; Weinert, 1987). Construct validity was established through convergent validity with five other prominent measures of social support, and discriminant validity was established with the Profile of Mood States (POMS). Coefficients for convergent validity were:

1) with the Interpersonal Support Evaluation List (SEL, Cohen) .74
2) with the Social Support Scales (SSI, Lin) .49
3) with the Norbeck Social Support Questionnaire (NSSQ, Norbeck) .25
4) with the Cost and Reciprocity Index (CRI, Tilden) .52
5) with the Inventory of Socially Supportive Behaviors (ISSB, Barrera) .40

The correlation coefficient for the POMS was -.29. All coefficients were significant at $p < .01$ or $p < .001$ C. Weinert (personal communication, March 3, 1989).

Physical Health Status

Perceived physical health status (PPH) was assessed by a self-report on health status instrument. This tripartite instrument was composed of the items from three different scales: Scale 1 (composed of two items) was from Markides and Martin (1979b), Scale 2 (25 items) was adapted from Rosencranz and Pihlblad (1970), and Scale 3 (26 items) was from Demi (1978). The first scale asked the respondent to rate general health on a four point scale, and inquired as to the number of times the subject had seen or called the doctor in the past month.

In the second scale, a list of chronic problems was given, to which the subject was asked to reply yes or no concerning whether s/he had been troubled by each particular one on the list, and whether the problem had become worse since last month. Scores on this scale could range from 0 to 6 or 7, depending upon the lethality of the condition and the morbidity of its last occurrence.

Last, the third scale asked questions about health habits. Each question was scored from 1 to 3 points, depending upon the subjects' perceived severity of the problem. The scoring key was arranged so that the lower the total score, the healthier the subject perceived him or herself to be. Self-ratings of health have been found to be more precise, for the purposes of surveying the perceived health status of a population, than objective measures that

do not include the participants' own views about their health (Ware, Brook, Davies, & Lohr, 1981).

Until very recently, according to the above authors, the validity of health status measures was not evaluated. Therefore, content validity only was obtained for two of the three scales. However, this was not considered a shortcoming, because content validity often has told much about what the test actually measured and avoided comparison problems which arose over labeling the same variable differently in other measures (Ware, et al., 1981). Content validity was reported for the first scale in the article by Markides and Martin (1979).

Both content and construct (convergent) validity were established for the second scale, the Health Index, by examining the scores and comparing them with six measures of mobility activities (Rosencranz & Pihlblad, 1970). Regarding the second and third scales, internal consistency reliability (coefficient alpha) figures were available and were .77 and .85, respectively (Rosecranz & Pihlblad. 1970; Demi, 1978).

Stress Perception

Stress perception was measured by the Stress Events Questionnaire (SEQ) (Quayhagen, 1978; Quayhagen & Bendik, 1989). Developed and tested on fully-functioning adults, the scale was particularly relevant to events or situations

occurring in the life of the adult or the older adult. The scale had 60 items which measured recency of the occurrence of the stressor, affectivity or feeling about it, and thought intrusion from the stressor.

The stressors were personal events, work events, environmental changes, and losses or changes in the person's interpersonal relationships. For each item the respondent indicated applied to to him or her, the respondent was asked about three categories: 1) the time period (past year scored 3 points, past 1 to 2 years, 2 points, and past 2 to 3 years, 1 point), 2) feelings related to the event (very happy, 1 point, somewhat happy, 2 points, somewhat unhappy, 3 points, and very unhappy, 4 points), and 3) how much he or she thought about the event now (a lot, 3 points, some, 2 points, and not at all, 1 point).

Scoring was multiplicative (each categorical score was multiplied across each item, giving a score which could range from 0-36), and these scores were additive for the sub-scales and total scale. Provision was made for respondents to add up to 4 events which were stressful and had not appeared on the instrument; thus a wide range of stressors could be assessed, and scored in a way that was highly individualized regarding stress perception. The instrument had content validity (Quayhagen, 1978). Internal consistency reliability (Cronbach's coefficient

alpha) was established for the scales with the present sample. Results obtained were .81 for the Personal Events Scale, .70 for the Work Events Scale, .70 for the Environmental Events Scale, and .79 for the Interpersonal Events Scale.

Coping Efficacy

Coping efficacy was measured in two ways. First, the Quayhagen and Quayhagen (1988) Modified Coping Strategies Inventory (CSI) measured the patterns of coping that the subjects use. The CSI was a 52 item inventory which measured coping in terms of help seeking, problem solving, personal growth, use of fantasy, self blame, minimization of threat and religiosity. The instrument used Likert scaling to indicate how likely respondents were to use the various coping patterns by asking, for each item, if the person was "very likely" to use the strategy (a score of 4), to "not at all likely" (a score of 1), with scores summed for each subscale. The six patterns of coping related to the coping framework of Pearlin and Schooler (1978). Internal consistency reliability (Cronbach's alpha) was established for the scales. Coefficients ranged from .57 for the Minimization of Threat Scale to .79 for the Existential Growth Scale (Quayhagen & Quayhagen, 1988). The instrument had content validity; construct validity was explored via factor analysis (Quayhagen & Quayhagen, 1982).

Second, a new measure, the Bendik Coping Appraisal Lifetime Measure (B-CALM: Bendik, 1987), was used to measure the degree of coping efficacy the subject had attained. The B-CALM was a situation-based instrument which measured five dimensions (protection, management, development and challenge, caring, and mastery) in a coping hierarchy, after the work of Caplan (1981), and the social learning tenets of Bandura (1982). A situation was presented, followed by several behavioral options, then respondents were asked to state whether each option would be, on a scale of 4, most to least likely to be the behavior that they would have used in the situation.

Situations chosen for this age cohort reflected situations which might occur for them, or which had occurred in the recent past and thus reflected events with which they were either personally or vicariously familiar. A 40 question portion of the instrument, in which the subject was asked to comment on four situations, tapped both the positive and negative poles of the five dimensions of coping. The format had a precedent in the early work of Sidle, Moos, Adams, and Cady. (1969). With provision for reverse scoring where applicable, a high rating on this instrument indicated that the person coped effectively in one and/or more of the five dimensions by using positive rather than negative coping strategies . A female version of the B-CALM appears in Appendix B. The comparable male

version, with the same situations, exists also and was used for the men in the study.

Content validity was established for the B-CALM instrument by a Content Validity Index (CVI) procedure in which three nurse researchers examined the content. The CVI was established for the entire instrument at ratings Which ranged from .90 to .99 (Bendik, 1987). Construct (convergent) validity was assessed at .54 by correlation with the Defense Mechanisms Inventory (DMI, Ihlevich & Gleser, 1986). This figure indicated that a similar but non-redundant construct was being tapped by the B-CALM. Test-retest reliability was established at .77, with an interval of four weeks between administrations (Bendik, 1989).

Total Mood Disturbance

The first outcome variable, total mood disturbance, was assessed by using the Profile of Mood States (POMS: McNair, et al., 1981). The POMS was a five point adjective rating scale with 65 items which assessed seven dimensions of identifiable affective states: tension/anxiety; depression/dejection; anger/hostility; vigor/activity; fatigue/inertia; confusion/bewilderment; and friendliness. The five rating choices were: 0= not at all, 1= a little, 2= moderately, 3= quite a bit, and 4= extremely.

The instrument was available in a large-type version suitable for those with vision difficulties; this version was used in the present study of older individuals. Summing the responses for the adjectives defining each dimension, and reverse scoring those which are stated negatively with respect to the dimension, yielded a score for each mood state. The total mood disturbance score was obtained by summing the scores, with vigor/activity and friendliness weighted in the opposite direction from the other factors. The POMS was a copyrighted, well-established and widely-used instrument to measure mood disturbance which was severe but not necessarily pathological in intensity. All mood scales had an internal consistency reliability of near .90 (Kuder-Richardson) or above. A test-retest procedure established reliability ranges from .65 to .74 for the scales, with an interval of six weeks between administrations.

Concurrent validity was established with the Hopkins Symptom Distress Scale (HSDS). The scales of Anxiety and Depression were moderately to highly correlated with corresponding scales of the HSDS (.52 to .86), while the correlations for other mood factors ranged from low to moderately high. The Vigor Scale was inversely correlated with the scales of the HSDS, as appropriate (McNair, et al., 1981)

Potential to Abuse

The instrument, The Caregiver and the Recipient of Care (assessed potential to abuse: APTA) was modified by the investigator (Bendik, 1990) from the H.A.L.F. scales of Ferguson and Beck (1983), to assess potential to abuse. The instrument was based conceptually upon the earlier tool to assess elder abuse by Ferguson and Beck (H.A.L.F.: 1983), and its face validity has been substantiated by those authors through an extensive review of the literature on family dynamics. With the authors' permission, this tool had been modified for use in the present study, in terms of changing the items from data collection elements to Likert scale item responses which could be selected by the subjects. Two of the health dynamics categories had been eliminated on the modified scale, with the authors' consent. One category dealt with existing physical and psychological signs and symptoms of an abused individual, which there was no intent to assess within the scope of this research. The other category dealt with the psychological characteristics of a suspected abuser when an abused elder is brought in for treatment, which was also not within the scope of this study to investigate.

The APTA scale consisted of 22 items, 21 of which were based on Ferguson and Beck's assessment protocol. One of the items, number 22, was based on the review of the literature, which indicated that this facet of family

dynamics was important when considering whether or not abuse was likely to occur. This modified H.A.L.F. scale (Health status of the aged, family Attitudes toward aging, Living arrangements, and Finances) to measure potential to abuse appears in Appendix B. For future use, this instrument will be titled the Modified H.A.L.F. Scale (M - H.A.L.F).

The scoring of this tool was designed so that a high score indicated a high potential to abuse (PTA). Twenty of the items on the scale were Likert-like items in which the three choices of responses were scored as follows: "Almost always" (3 points), "Some of the time" (2 points), and "Never" (1 point). Five of these were reverse-scored, to prevent response set. The remaining two items were informational, and were scored within a range of one to three points, depending upon how much tension the answer was likely to arouse in the caregiving situation. For instance, if the patient was entitled to some financial aid, but refused to apply for it, the score would be 3. A total high score of 66 was possible on the tool. The instrument had been examined for face validity and content validity. Content validity was established for the scale by a content validity procedure (Bendik, 1989). Estimates ranged from 3.33 to 4.00 (on a 4.00 scale) for items retained in the scale. Content validity index coefficients ranged from .94 for the Health Status of the Care Recipient

to .98 for the Finances Scale. Construct validity was examined via a factor analysis procedure. (See Chapter IV.) Internal consistency reliability of .75 (Cronbach's alpha) was established for the M - H.A.L.F. in this study.

Procedure

Permission to conduct the study was granted by the Committee on Protection of Human Subjects (CPHS) on July 11, 1989, and was renewed June 7, 1990. For a copy of the material submitted to the committee and their approval, see Appendix D. A summary of the completed project must be submitted to the committee within a year of that date.

Access and permission to recruit subjects was obtained from various agencies or through professional networking. In some instances, a letter of introduction was sent (see appendix C). At times there were assemblages of prospective study participants, where the researcher was introduced as a nurse who was interested in the caregiving role. Appointments were set up with as many members of the group as agreed to be interviewed. At other times a telephone number and permission to call for an appointment were given to the researcher by another professional. Or a caregiver, seeing one of the study announcements (see appendix C) which were distributed or posted about town, called to set up an interview. A few of the subjects (14) were recruited by mail, from names of caregivers personally

known to the researcher. The majority of the subjects were personally and individually interviewed in their own homes or in another setting of their own choosing. The purpose and manner of the study were explained, in every case, as an effort to gather information on the stress of caregiving on the caregiver. Participation was entirely voluntary, with subjects given the option to withdraw at any time.

Persons agreeing to participate were asked to complete a standard informed consent form (see Appendix A). This form described the role of the subject in the study, and assured that no risks or discomforts would arise from participation. Confidentiality of responses was assured; subjects were told that group data would be used in the analysis and that the identity of any respondent would not be disclosed without their written consent. Study participants were shown a copy of "The Experimental Subject's Bill of Rights" (APA, 1981; see Appendix C) to read. Each participant was given the opportunity to ask as many questions as they needed to ask, at any time before, during, or after the interview.

The structured interviews, consisting of the administration of the demographic data sheet and the eight pen and paper data collecting instruments, lasted an hour to an hour and a half each, depending upon how many questions the participant had relative to the study. (Because of the isolated situation of many of the

caregivers, their expressivity needs were great.) Before proceeding with each instrument, its nature and overt purpose were explained to the participant.

At the close of the interview, a debriefing session was held with each participant. This was an opportunity for the participants to express any feelings they had about the study, the instruments, or the caregiving situation. They were thanked for their participatation in the study, and were also asked how the researcher could help them with any problems related to their situation. This presented some opportunities for the researcher to assist in an instrumental or consultative role, as offered on the announcement sheet. Each participant was promised a brief summary of the study results at the conclusion of the study, which was forecast to occur in late 1990 or early 1991. In large part, the interviews went well, with many of the participants referring other caregivers to the researcher for interview. A total of 71 interview days was required. These days were spread over a calendar year, due to the limited availability of the researcher's time. The last interview took place on July 9, 1990.

Data Analysis

The data analysis was begun immediately on completion of the interviews. A code book was written and each data set was coded for computer analysis. Demographic data was descriptively analyzed and summarized. Recoding was done where necessary, when questions had been asked in a reverse manner. (For example, "clear-headed," item #6 on the POMS instrument in the confusion sub-scale, was recoded so that a high answer, 4, would be recoded to a zero as a measure of confusion.) Data was entered into the computer and the program for analysis was designed. All relationships in the causal model (See Figure 1, Chapter 1) were tested, in order to determine the effects of each prior variable on total mood disturbance and upon potential to abuse. Each hypothesis was considered either supported, partially supported, or unsupported through analysis of the data.

Types of analyses first included frequencies, condescriptives, and other descriptive statistics to describe the sample. Reliabilities were computed on three of the newer instruments, the Stress Events Questionnaire (SEQ, as revised in 1989), the Assessed Potential to Abuse (APTA), and the B-CALM. The APTA and the B-CALM were first factored to explore the underlying conceptual structures. Pearson correlations were done on each of the demographic variables and each of the scales, sub-scales, and computed

combinations (e.g., social position) of the data. These correlations were examined for significance (p of <.05 and a correlation of .30 or above).

Assumptions of correlational analysis are: first, that two variables have a positive relationship if the values of one increase as the values of the other increase. Second, and conversely, the variables are said to have an inverse relationship if the values of one variable decrease as the values of the other increase. Correlation thus assumes a linear relationship between the variables. If the relationship is curvilinear, the correlation coefficient can be 0, because the curvature of one variable's direction away from the other variable's direction causes a change in the polarity (positive to negative or vice versa), although the relationship may be strong at one or more points along the curve. Finally, even though variables may be correlated, this does not imply causality, which is the reason for going to more sophisticated statistical procedures, such as regression, to assess causality.

Regression analyses were completed to assess the predictive power of exogenous and antecedent variables on subsequent variables and particularly upon the two outcome variables. Two sets of regression analyses were used for the outcome variables, one for each outcome variable. Multiple linear regression with simple inclusion of variables was used (Norusis, 1988). The adjusted R^2

computation was used to determine the amount of variance in the dependent variable accounted for by the independent variable(s) in the equation. Beta weights from the regression analysis procedure were placed on the paths of the causal model; a path coefficient of .150 or more; -.150 or less was considered salient (Waltz & Bausell, 1981). The results of these analyses and their effects on the conceptualized model are discussed in Chapter IV.

Residual variables ("e" in the structural equations) do not enter into any of the hypothesized relationships stated in Chapter I. "E"s represent errors in the predictive value of independent variables, denoting an inexact fit of the model, total variance not having been explained (Lewis-Beck, 1989; Pedhazur, 1982). Since there is no way of forseeing in advance what the source of these errors may be, they cannot be hypothesized. Errors represent the variance in the subsequent variables that cannot be accounted for by the independent variables which precede them, but are the result of random (usually), unidentified influences (residual variables) upon the relationship. Residual variables can be examined either graphically or statistically or both, to assist in building a stable linear model (Verran & Ferketich, 1987). Residual analysis was used to test the causal model assumptions. Results of the analysis for each assumption are discussed in Chapter IV.

Further, regression analysis and interpretation of predictive power from the regression line assumes that the population equals, or at least is very similar to the sample population. A normal distribution is assumed in the sampling distribution of the slope (Norusis, 1986). The analysis was interpreted accordingly.

CHAPTER IV

RESULTS

This chapter describes the results of the data reduction procedures, the revision of the model, path analysis, hypothesis testing, testing of the statistical assumptions of the model, regression analysis, and the results of three procedures used in post hoc analysis.

Data Reduction

Factor Analysis

Assessed Potential to Abuse. Obtaining the psychometric properties of the new Assessed Potential to Abuse (APTA) scale was the initial step in data analysis. The original scale had 22 items and there were 110 subjects, a ratio of five subjects per item. The mean inter-item correlation of this scale was below .10, with only 18 inter-item correlations in the matrix achieving a level of .30 or above. After examining communalities, a decision was made to do factor analysis to define the latent structure (Nunnally, 1978). Several methods were explored. Principal component analysis, with criteria set to yield 4 factors to agree with the originally conceptualized dimensions, employed oblique rotation to

obtain the strongest final decision and greatest interpretability (Ferketich & Muller, 1990). Although none of the new factors were ordered in a similar manner as the sub-concepts of the original APTA scale, they did contain some items from each of these 4 sub-concepts.

Examining the results of this factoring generated several scales which were tested for reliability. One scale of 12 items, the most parsimonious generated, yielded a mean inter-item correlation of .20. Eleven of the twelve items had a corrected item-total correlation of > or = to .30, and the scale had a standardized alpha coefficient of .75. These figures met the criteria set by Nunnally (1978). The new scale was called Assessed Potential to Abuse (APTA). Table 2 lists those items which were identified by factoring and were retained to make the APTA. (The original sub-scales are shown to indicate the balanced nature of the scale, but are not considered as separate sub-category variables of the APTA.)

B-CALM: Next, the originally conceptualized scales of the B-CALM coping measure came under scrutiny, when it was discovered that none of the five combined sub-scales (protection, management, development and challenge, caring, and mastery) correlated with the criterion variables, either separately or in combined form. However, the small dimension of positive protection correlated significantly,

Table 2. Items Retained to Form the Assessed Potential to Abuse Scale with Factor Loadings.

Item	Factor Loading	Original Sub-Concept
1. I can get out socially or have friends come to my home. (code -)	.556	Living Arrangements
4. I think that aging is an interesting part of living, and gives people different opportunities for growth. (code -)	.449	Attitudes
5. I am constantly being advised, criticized, and directed by the family member for whom I am providing care.	.558	Health of Care Recipient
6. Taking care of a family member gives purpose and meaning to my life. (code -)	.459	Attitudes
11. Caring for this person interferes with my privacy.	.464	Living Arrangements
13. Although he or she is dependent on me for necessary care, in other respects this family member is quite independent and self-sufficient. (code -)	.588	Health of Care Recipient
15. Our conflicts have always tended to be more physical than verbal.	.737	Health of Care Recipient
16. He or she has friends who call or visit. (code -)	.379	Living Arrangements
17. He or she has a positive attitude about growing old. (code -)	.479	Attitudes
18. He or she is forgetful and does things which are unsafe.	.389	Living Arrangements
19. This family member tries to control others by giving them money or gifts.	.453	Finances
22. His or her needs are a drain on the family budget.	.664	Finances

in a negative direction, with the potential to abuse. Further, although all of the positive dimensions of the scale were intercorrelated, none of the negative dimensions were. But when the negative dimensions were combined, the resultant variable of negative coping correlated significantly with both criterion variables, while the positive dimensions combined correlated inversely with potential to abuse! Hence, it was decided to factor the four situations of the B-CALM measure that participants in this study had been asked to complete. (Test-retest reliability had been previously established on the 15 situation instrument, with another subject group.)

In the analysis the 40 item scale, employing principal components, yielded four factors, using 21 of the items with factor loadings over .400. Varimax rotation repositioned the items to give them greater interpretability (Waltz & Bausell, 1981). However, it must be explained that factoring was performed on this intrument only to give some indications of the relationships, not to establish validity, since the number of subjects per variable required (10) was not present to meet the criterion (Nunnally, 1978). After examining various scale combinations of these items, a reliable 11 item scale emerged with a mean inter-item correlation of .23 and a standardized item alpha of .77. Ten of the eleven items had a corrected item-total correlation of > or = to .30.

These figures met the criteria set by Nunnally (1978). The new scale has a theme of active coping, along the lines of decision and planning. (A coping pattern, rather than a coping hierarchy, is therefore indicated.) Consequently, the scale was named the Decision and Planning scale (DEPLAN). Table 3 lists the items in this scale. Two of the items retained were from Situation One, two from Situation Two, two from Situation Three, and most of them (32 through 40) were from Situation Four. All conceptualized dimensions were represented except management. The investigator has planned further work on the psychometric properties of this instrument.

Examination of Bivariate Correlations

Using Pearson Product-Moment procedures, bivariate correlations were conducted on all study variables and subscales prior to path analysis. This procedure served several purposes. First, it identified multicollinearity among the variables and their subscales, thus facilitating data reduction. Second, it enabled possible interrelationships among the entry (exogenous) variables of the study to be detected, which would affect the structure of the model. Third, it identified relationships among the demographic variables and the study variables, for post-hoc analysis.

Table 3. Items Retained to Form the Decision and Planning Scale with Factor Loadings

Item	Factor Loading	Original Sub-Concept
4. Express regret that it happened and explain that what occurred was a direct result of a faulty decision he made.	.613	+ Protection
9. Eddie explores alternatives with friends and family. (For example, given an apology, the boss may reconsider the firing.)	.440	+ Mastery
11. They would avail themselves of a service like Catholic Charities.	.364	+ Caring
20. They reinforce each other's strengths, each believing that they can overcome this problem through their own efforts.	.506	+ Protection
26. Robert has made a list of the things he needs to to do first, then next, and so on, in order to get his life going again.	.603	+Development and Challenge
30. Robert decides that there are things he may be able to do with his time. For example, he could go to school, or do volunteer work.	.456	+ Mastery
32. After talking it over with Eva, Jack realizes there are some hard decisions to be made. What sort of treatment program is best, for example?	.439	+ Mastery
33. Consideration of treatment programs results in their choosing one. It is a very expensive program, but has a high rate of success.	.491	+ Caring
35. Jack recognizes Eva's alcoholism problem as one with which they both must strive and contend. They need to defend the marriage that has been so good for so many years.	.421	+Development and Challenge
36. Jack views the whole situation as hopeless. He has seen alcoholics before. They end on skid row.	.529	- Mastery
40. Jack considers himself a "self-made-man" and believes he can effect change through his own efforts. He vows to do all within his power to help Eva and to save their marriage.	.656	+ Protection

With regard to the first purpose, several significant correlations were discovered. On the Locus of Control scale, Chance Locus of Control (C) and Powerful Others Locus of Control (P) were moderately correlated (.56). Further, when factored by Levenson (1974), loadings on many of the C and P items were similar. Therefore, for the purposes of this study, the subscales were combined into one variable, External Locus of Control (EXTLOC). Bivariate correlations of Chance Locus of Control and Powerful Others Locus of Control with the combined External Locus of Control scale were .89 for Chance Locus of Control and .88 for Powerful Others Locus of Control, respectively. Next, the two subscales of the Personal Resource Questionnaire, Situational Support (SSSS) and Type of Support (SSTS) were found to be correlated moderately high (.58), so they were combined to form a Total Social Support scale (TOSS).

When the Health Assessment Scale was examined for correlations, it was discovered that moderate correlation existed among all of the subscales except scale 1, Perceived Physical Health Rating (PPHR), which consisted of two items, person's perceived health rating and number of times the person saw the doctor in the past month. When the latter item was removed, however, correlation improved, as follows: PPHR to Perceived Physical Health Conditions (PPHC) was .68, PPHR to Perceived Physical Health Habits

(PPHH) was .34, and PPHC to PPHH was .42. Thus, item two of the Perceived Physical Health Rating scale was removed from further analysis, and the scales were combined to form one variable, Overall Health Perception (OVHP). Correlations of the subscales with this variable were: PPHR, .65, PPHC, .83, and PPHH, .85.

In like manner, it was found that the subscales of the Stress Events Questionnaire were moderately correlated: Stress Perception of Personal Events (STPP) to Stress Perception of Work Events (STPW) was .42, to Environmental Changes (STPE) was .44, and to Interpersonal Events (STPI) was .64. STPW correlated with STPE at .27, and with STPI at .25. Finally, STPE correlated with STPI at .43. These subscales were combined to form the variable Total Stress (TOST). Each subscale correlated with TOST at .50 or over.

All of the coping subscales on the Coping Strategies Inventory were to be retained as separate variables for the regression analysis, since none of them were sufficiently correlated to be combined. Nevertheless, the subscales of Coping by Using Religion (COPR) and Coping by Minimizing the Threat (COPM) were removed from the analysis when it was found that neither of them correlated with the scales of the Profile of Mood States nor with Assessed Potential to Abuse. The role of these variables in hypothesis testing are further described later in this chapter.

However, the scales of the Profile of Mood States (POMS) instrument were highly intercorrelated; those indicating positive moods (Friendliness, Vigor) were correlated inversely with the others. The two indicated scales were recoded in the negative direction and the scale was then combined to form the Total Mood Disturbance Scale (TMDS) (McNair, Lorr, & Droppleman, 1981). None of the bivariate correlations between variables in the model exceeded the level of .70. Therefore, multicollinearity was not considered a problem for subsequent analyses (Asher, 1983; Nunnally, 1978). Reliabilities for the established scales have been reported in Chapter III.

The next analysis using the Pearson Product Moment correlations uncovered the fact that not only were the two entry variables in the model, Locus of Control and Social Support uncorrelated, but also that the third study variable, Overall Health Perception (OVHP), was not correlated with either of these two preceding variables! This discovery enables OVHP to be repositioned as an exogenous variable in the model, as shown in Figure 2. A correlation matrix, containing all of the revised study variables, is presented as Table 4.

Each demographic variable also was correlated with each of the study variables and subscales. Demographic

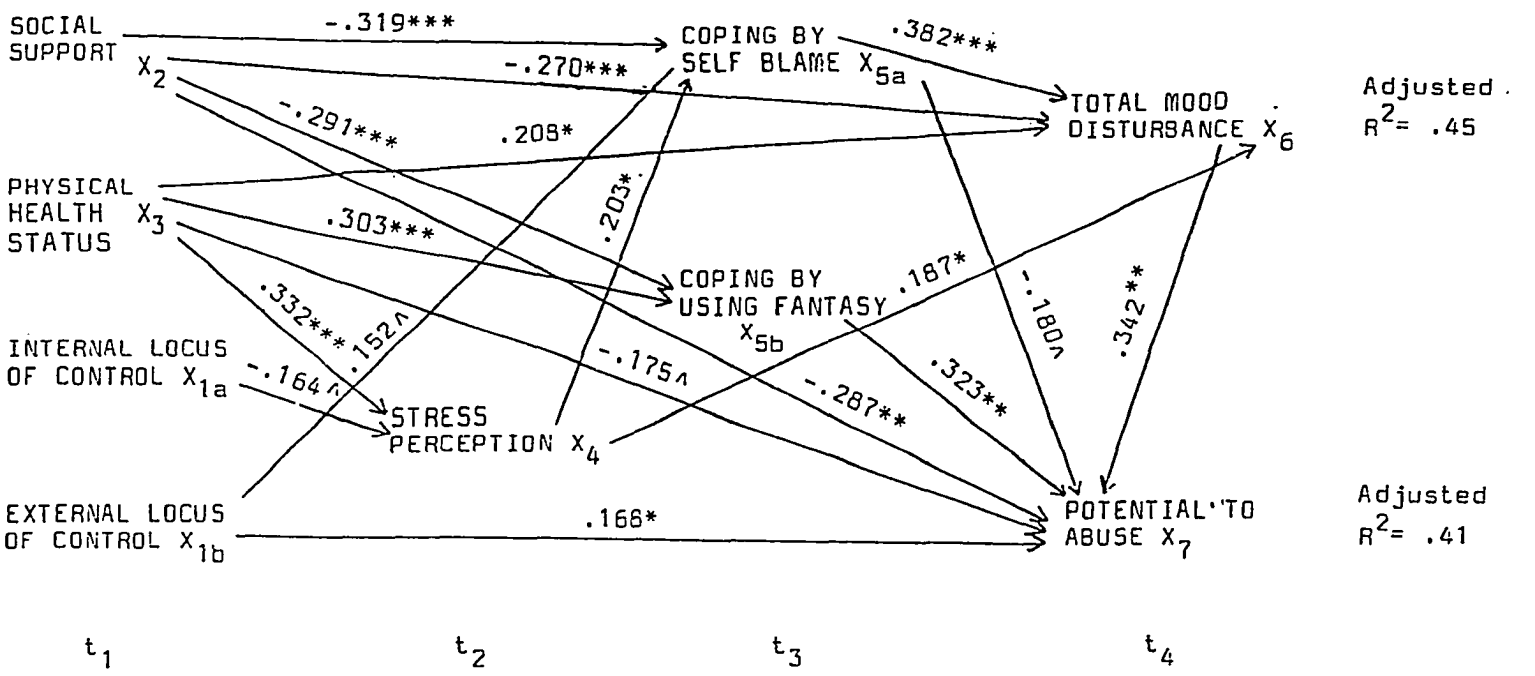

Figure 2. Simplified path model relating potential to abuse to predictor variables.

^Path coefficients $\geq$.150 * $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

Table 4. Correlational Matrix for Revised Study Variables

Variable	Scale	INTLOC	EXTLOC	TOSS	OVHP	TOST	COPB	COPS	COPP	COPH	COPF	DEPLAN	TMD	PTA
LOC	INTLOC	1.00	-.13	.13	-.06	-.20*	-.01	.11	.09	.00	-.14	-.04	-.10	-.15
	EXTLOC			-.22*	-.04	.05	.22	-.16*	-.06	-.18*	.19	-.09	.18*	.32***
TOSS	TOSS				.00	-.11	-.35***	.46***	.28***	.35***	-.34***	.25***	-.44***	-.52***
OVHP	OVHP					.34***	.16	-.01	.08	.04	.34***	.10	.33***	.01
TOST	TOST						.26**	-.15	.07	.21*	.27**	.07	.39***	.14
COP	COPB							-.24**	-.02	-.15	.65***	-.05	.57***	.33***
	COPS								.62***	.31**	-.22*	.13	.37***	-.35***
	COPP									.61***	-.08	.23**	-.14	-.18*
	COPH										-.13	.20*	-.11	-.18*
	COPF											-.02	.47***	.43***
DEPLAN	DEPLAN												-.07	-.19*
TMD	TMDS													.48***
PTA	APTA													1.00

Key:
- LOC = Locus of Control
  - INTLOC = Internal Locus of Control
  - EXTLOC = External Locus of Control
- TOSS = Total Social Support
- OVHP = Overall Negative Health Perception
- TOST = Total Stress Perception
- COP = Coping Strategies
  - COPB = Coping by Self Blame
  - COPS = Coping by Personal Growth
  - COPP = Coping by Problem Solving
  - COPH = Coping by Help Seeking
  - COPF = Coping by Using Fantasy
- DEPLAN = Decision and Planning Pattern of Coping
- TMD = Total Mood Disturbance
  - TMDS = Total Mood Disturbance Scale
- PTA = Potential to Abuse
  - APTA = Assessed Potential to Abuse Scale

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

variables were assessed for their effects on the model. A discussion of the pertinent findings follows in the post-hoc analysis section of this chapter.

Hypothesis Testing

Regression Analysis

To assess the strength and direction of the relationships identified by the correlational analysis, multiple regression analysis was performed. Each of the exogenous variables were entered in a single step, using multiple linear regression techniques with simple inclusion. The dependent variable of total mood disturbance was regressed on the intervening and exogenous variables, then the dependent variable of assessed potential to abuse was regressed on all preceeding variables, including total mood disturbance. Using this technique produced the 17 direct relationships in the model, upon reviewing beta coefficients for significance or a salience level of .150 or greater (Munro, Visintainer, & Page, 1986; Waltz & Bausell, 1981). Results are depicted in Figure 2.

A comparison of Figure 2 and Table 4 reveals that some of the coping variables, which had had significant correlations with other variables in the model, nevertheless did not, upon regression, maintain those significant relationships with either variable at time 4 (T4). As can be seen in Figure 2, the only coping

variables which attained significance or salience with the outcome variables in ordinary multiple regression were coping by using self blame (COPB) and coping by using fantasy (COPF), the two emotion-focused coping strategies. Thus, coping by personal growth (COPG), coping by help seeking (COPH), coping by problem solving (COPP), and coping by decision and planning (DEPLAN) were removed from the model.

Indirect effects were obtained by multiplying the beta coefficients of the pathways from each exogenous variable to the first endogenous variable by each endogenous variable in the pathway to the outcome variable. Table 5 shows these results. Total effects were produced by adding the direct and the indirect effects; noncausal effects were obtained by subtracting the total effects from the total covariance figures for each relationship. An example of discerning the indirect effect of social support (X_2) on potential to abuse (X_7), through the intervening variables of total stress (X_4), the two coping variables (X_{5a} and X_{5b}) and total mood disturbance (X_6) is shown in Figure 3. The equation is as follows:

$P_{42} \times P_{5a4} \times P_{65a} \times P_{76} +$
$-.081 \times .203 \times .382 \times .342 = \quad -.002$

$P_{42} \times P_{5b4} \times P_{65b} \times P_{76} +$
$-.081 \times .123 \times .004 \times .342 = \quad -.000$

$P_{42} \times P_{64} \times P_{76} +$
$-.081 \times .187 \times .342 = \quad -.005$

Table 5. Variables Influencing Total Mood Disturbances and Potential to Abuse: Decomposition Table of Zero Order Correlations and Path Coefficients.

Bivariate relationship		Total covariance (A)	Direct effects (B)	Indirect effects (C)	Total effects (B+C=D)	Noncausal effects (A-D=E)
Potential to Abuse (X_7)						
X_7	X_6	.484***	.342**	....	.342	.142
X_7	X_{5b}	.434***	.323**	.110	.433	.001
X_7	X_{5a}	.331***	-.180^	-.062	-.242	.573
X_7	X_4	.139	-.022	.030	.008	.131
X_7	X_3	.007	-.175*	.175	.000	.007
X_7	X_2	-.519***	-.287**	-.176	-.463	-.056
X_7	X_{1b}	.324***	.168*	.026	.194	.130
X_7	X_{1a}	-.152	-.030	-.043	-.073	-.079
Total Mood Disturbance (X_6)						
X_6	X_{5b}	.470***	.004	....	.004	.466
X_6	X_{5a}	.570***	.382***	....	.382	.188
X_6	X_4	.390***	.186*	.078	.265	.125
X_6	X_3	.331***	.208*	.088	.296	.035
X_6	X_2	-.436***	-.270***	-.021	-.291	-.145
X_6	X_{1b}	.179*	.034	.007	.041	.138
X_6	X_{1a}	-.098	-.003	-.044	-.047	-.051
Coping by Using Fantasy (X_{5b})						
X_{5b}	X_4	.272**	.123	....	.123	.149
X_{5b}	X_3	.342***	.303***	.041	.344	-.002
X_{5b}	X_2	-.336***	-.291***	-.010	-.301	-.035
X_{5b}	X_{1b}	-.187*	.122	.003	.125	-.312
X_{5b}	X_{1a}	-.138	-.040	-.020	-.060	-.078
Coping by Self blame (X_{5a})						
X_{5a}	X_4	.260**	.203*	....	.203	.057
X_{5a}	X_3	.156	.100	.067	.167	-.011
X_{5a}	X_2	-.361***	-.319***	-.016	-.335	-.026
X_{5a}	X_{1b}	.216*	.152^	.005	.157	.059
X_{5a}	X_{1a}	-.011	.098	-.033	.065	-.076
Total Stress (X_4)						
X_4	X_3	.341	.332***	....	.332	.009
X_4	X_2	-.108	-.081	....	-.081	-.027
X_4	X_{1b}	.054	.027	....	.027	.027
X_4	X_{1a}	-.198	-.164^	....	-.164	-.034

^ = a salient relationship

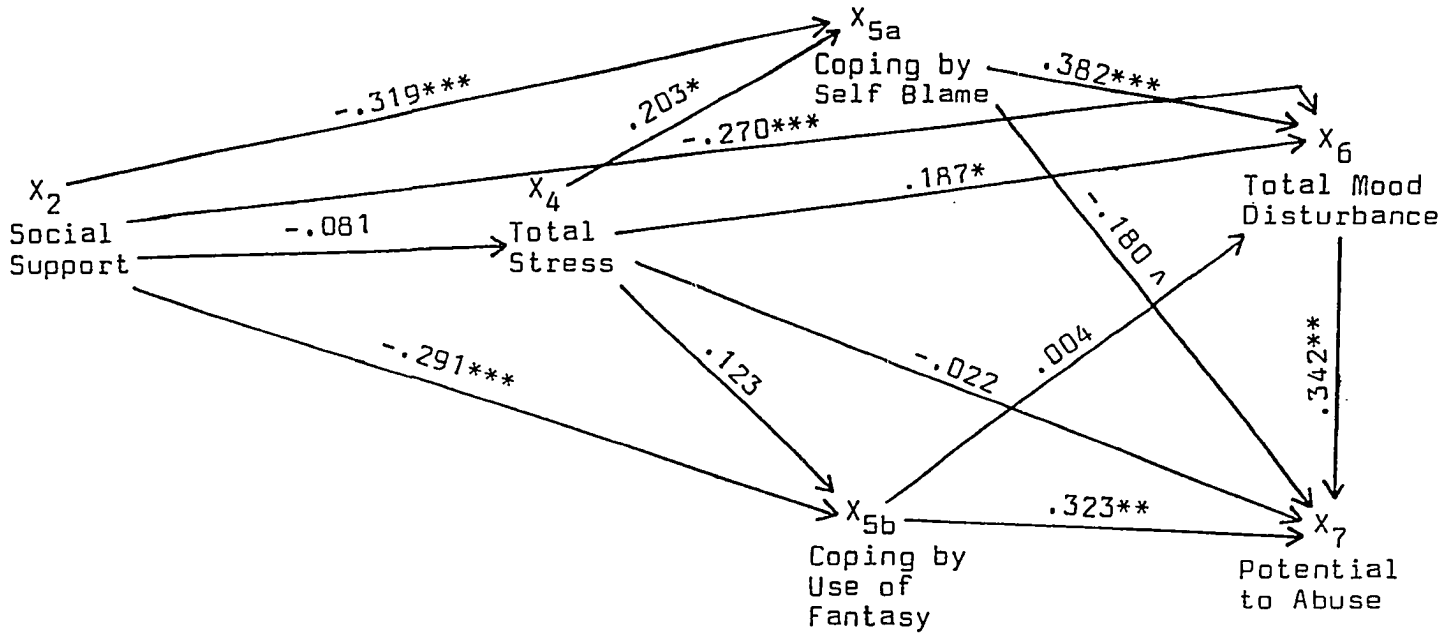

Figure 3. Indirect effect of social support on potential to abuse, through the intervening variables of stress, emotional coping, and total mood disturbance.

Legend: * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

∧ path coefficients $\geq .150$

P_{42} x P_{5b4} x P_{75b} +	
-.081 x .123 x .323 =	-.003
P_{42} x P_{5a4} x P_{75a} +	
-.081 x .203 x -.180 =	.003
P_{42} x P_{74} +	
-.081 x -.022 =	.002
P_{5a2} x P_{65a} xP_{76} +	
-.319 x .382 x .342 =	-.042
P_{5b2} x P_{65b} x P_{76} +	
-.291 x .004 x .342 =	-.000
P_{5a2} x P_{75a} +	
-.319 x -.180 =	.057
P_{5b2} x P_{75b} +	
-.291 x .323 =	-.094
P_{62} x P_{76} +	
-.270 x .342 =	-.092
Total indirect effect	-.176

Statistical Assumptions

The techniques of residual analysis described by Verran and Ferketich (1987) were used to test the statistical assumptions of the model, which were: 1) that the effects of variables external to the model (residuals or error terms) were normally distributed about a zero mean, and 2) that these residuals were linear, with equality of variance, independence, and a fixed distribution. Testing of the statistical assumptions was done on the model with both of the variables at time 4, total mood disturbance and potential to abuse. With either of these variables, the zresidual mean value was .000.

Scatterplots of all standardized residuals (predicted and obtained), and standardized partial regression plots of each individual variable with the variables of total mood disturbance and potential to abuse yielded random and equal scatter points about the zero line. Normal distribution about the zero mean was thereby confirmed, as well as equality of variance and fixed distribution. No patterns were observed, indicating independence (Pedhazer, 1982).

To further support the claim of independence, the Durbin-Watson test for correlation of adjacent error terms was performed. The statistics for this test were 1.92 and 1.94 for total mood disturbance and potential to abuse, respectively. These figures indicate a sufficiently large value of D to support the nul hypothesis-- there was no evidence for believing that the residuals were correlated (Norusis, 1988).

Normal probability plots confirmed linearity, while examination of the histograms indicated essentially normal distributions of residuals, with zero means. No corrections for excessive skewness were necessary. Finally, outliers were examined, using Cook's D and Lever tests. A decision was made to set the cutoff point at values above 2.50. When the statistics were checked for total mood disturbance, three subjects' responses were to be eliminated as not fitting well with the model. However, when the same statistics were checked for potential to

abuse, none of the subjects' responses were beyond the cutoff point, thus all were used.

Overall Results of the Regression Analysis

Inspection of the first regression output indicated that the variables of internal locus of control, external locus of control, social support, physical health, stress perception, coping by using self blame and coping by using fantasy accounted for 45% of the variance in the variable total mood disturbance. The adjusted R squared was used to obtain this figure, thus accounting for the sample size (Waltz & Bausell, 1981). The F figure was 13.74, with a significance of .000. Four of the variables were significant in directly predicting the variance in total mood disturbance: stress perception (X_4), social support (X_2), physical health (X_3), and coping by self blame (X_{5a}).

However, when the regression output with potential to abuse as the dependent variable was examined, the seven previously mentioned variables plus total mood disturbance (X_6) accounted for 41% of the variance in the dependent variable. Again, the adjusted R squared was used. The F figure was 10.34, with a significance of .000. But in this regression, five of the antecedent variables achieved significance, while one was salient ($B \geq .150$). Nor were these all the same variables that had achieved significance in the first equation. This was an unexpected result,

since the literature review had seemed to surmise that some of the independent variables, and particularly stress perception, would be predictors of both mood disturbance and potential to abuse. In the second equation, external locus of control (X_{1b}), physical health (X_3), social support (X_2), coping by using fantasy (X_{5b}), and total mood disturbance (X_6) were significant predictors of potential to abuse, while coping by self blame (X_{5a}) was salient. Stress perception (X_4) was neither significant nor salient in predicting potential to abuse.

It was noted that internal locus of control (X_{1a}) also had no significant nor salient predictive value for either of the variables at time 4. Based on Pedhazur's (1982) criteria, however, the variable was retained in the model because of its theoretical meaningfulness and its salient relationship to stress perception.

In summary, key variables in the regression equations were social support (significant in four of the succedent relationships, including the one with potential to abuse) and physical health (significant in three, and salient in one of the succedent relationships, including the one with potential to abuse). External locus of control had both a direct and an indirect bearing upon potential to abuse, and internal locus of control had only an indirect relationship to total mood disturbance through stress perception and coping by self blame. Stress perception, on the other

hand, was significant in direct relationships only with coping by self blame and total mood disturbance. It did indirectly affect potential to abuse through coping by self blame. Methods of coping, other than by using self blame or using fantasy, did not figure significantly in the outcomes of the conceptualized model, as stated earlier.

Results for each Hypothesis via Path Analysis

Each of the hypothesis statements was reviewed, with the results of the path analysis. Table 6 outlines the results of analysis for each of the direct hypotheses. The results of examining all the hypotheses are described below.

Hypothesis 1. Internal locus of control (X_{1a}) is directly but inversely related to perception of poor physical health status (X_3), positively related to coping efficacy (X_5), and negatively related to total mood disturbance (X_6). This hypothesis was not supported, in whole or in part. However, external locus of control (X_{1b}) was found to be salient in the relationship with coping by self blame (X_{1b} to X_{5a}: $\underline{B} = .152$, $\underline{p} \leq .09$, indicating a trend).

Table 6. Analysis of Hypothesized Direct Relationships

H	Independent V.	Dependent V.	Direction H.	Direction Obt.	Beta
H1	$X_{1\,a}$	$-X_3$	-	-	-.058
		X_5	+	$X_{5\,a}$	-.011
				$X_{5\,b}$	-.138
		X_6	-	+	.047
H2	X_2	$-X_3$	-		.003
		X_5	+	$X_{5\,a}$	-.319***
				$X_{5\,b}$	-.291***
			+	$X_{5\,c}$	.450***
			+	$X_{5\,d}$	.283**
			+	$X_{5\,e}$	.287**
			+	$X_{5\,f}$	.356***
			+	$X_{5\,h}$	.359***
		X_6	-	X_6	-.270***
H3	$-X_3$	X_5	-	$X_{5\,b}$	.303***
		X_6	+	X_6	.208
H4	X_4	X_7	+	+	.139
H5	X_5	X_6	$X_{5\,a}$ -	X_6	.382***
H6	$X_{1\,a}$	X_4	-	-	-.164^
		X_7	-	-	-.098
H7	X_2	X_4	-	-	-.108
		X_7	-	-	-.287**
H8	$-X_3$	X_4	+	-	.332***
		X_7	+	-	.175*
H9	X_4	X_5	+	$X_{5\,a}$	.203*
			-	$X_{5\,f}$	.273*
			+	$X_{5\,g}$	-.250*
		X_6	+	X_6	.178*
H10	X_5	X_7	-	$X_{5\,a}$	-.180^
				$X_{5\,b}$	.323**
H11	X_6	X_7	+	X_6	.342**

^ = a salient relationship

Hypothesis 2. Social support (X_2) is directly and inversely related to perception of poor physical health status (X_3), positively related to coping efficacy (X_5) and negatively related to total mood disturbance (X_6). In the analysis, social support was found to have an insignificant relationship with perception of physical health status, and a significant inverse relationship with both emotion focused coping strategies (coping by self blame and coping by use of fantasy). These relationships prevailed through the final regression. (X_2 to X_{5a}: $\underline{B} = -.319$, $\underline{p} \leq .001$; X_2 to X_{5b}: $\underline{B} = -.270$, $\underline{p} \leq .001$).

Although the social support variable did show a direct relationship to other coping variables in the study (see Table 6), these variables were not retained in the regressions with the dependent variables and were dropped from the analysis. See Chapter V for further comments.

Social support also had a significant inverse relationship with total mood disturbance. Therefore, this part of the hypothesis was supported. (X_2 to X_{6x}: $\underline{B} = -.270$, $\underline{p} \leq .001$).

Hypothesis 3. Perceived poor physical health (X_3) is directly and inversely related to coping efficacy (X_5), and positively related to total mood disturbance (X_6). The regression analysis supported this hypothesis in a converse form, in that perceived ill physical health was directly and positively related to the emotional coping strategy of

coping by using fantasy (X_3 to X_{5b}: $\underline{B}$ = .303, $\underline{p} \leq .001$). Poor physical health was also related to total mood disturbance (X_3 to X_6: $\underline{B}$ =.208, $\underline{p} \leq .01$), supporting the latter part of the hypothesis.

Hypothesis 4. Stress perception (X_4) is directly and positively related to potential to abuse (X_7). This hypothesis was not supported by the data.

Hypothesis 5. Coping efficacy (X_5) is directly and inversely related to total mood disturbance (X_6). No significant relationship was found; hypothesis was not supported. However, there was partial support for the converse relationship, coping by self blame (not efficacious) was directly and positively related to total mood disturbance. (X_{5a} to X_6: $\underline{B}$=.382, $\underline{p} \leq .001$).

Hypothesis 6. Internal locus of control (X_{1a}) is inversely related to stress perception (X_4) and potential to abuse (X_7). Analysis of the regression in this instance did indicate a salient inverse relationship between internal locus of control and stress perception (X_{1a} to X_4: $\underline{B}$ = -.164, $\underline{p} \leq .07$). Although there was no notable relationship between internal locus of control and potential to abuse, there was a significant positive relationship between external locus of control (X_{1b}) and potential to abuse (X_{1b} to X_7: $\underline{B}$ =.168, $\underline{p} \leq .05$). The hypothesis was partially supported.

Hypothesis 7. Social support (X_2) is inversely related to stress perception (X_4) and potential to abuse (X_7). The first part of this hypothesis was not supported by the data, whereas the second part of the hypothesis was supported (X_2 to X_7: $\underline{B} = -.287$, $\underline{p} \leq .01$).

Hypothesis 8. Perceived poor physical health (X_3) is positively related to stress perception (X_4) and potential to abuse (X_7). In the analysis, the perception of poor physical health was significantly and positively related to stress perception (X_3 to X_4: $\underline{B} = .332$, $\underline{p} \leq .001$). Therefore, the first part of the hypothesis was supported. Also, there was a significant inverse relationship between perception of poor physical health and the potential to abuse, so the converse of the second part of the hypothesis was indicated (X_3 to X_7: $\underline{B} = -.175$, $\underline{p} \leq .05$).

Hypothesis 9. Stress perception (X_4) is inversely related to coping efficacy (X_5) and positively related to total mood disturbance (X_6). For this hypothesis, the data showed a significant direct positive relationship between stress perception and coping by self blame, non-efficacious coping (X_4 to X_{5a}: $\underline{B} = .203$, $\underline{p} \leq .05$). Other coping variables which had significant relationships with stress perception were coping by help seeking (directly related) and coping by minimizing the threat (inversely related). However, these two coping variables did not remain in the equation when the dependent variables were regressed on

them, and were not retained in the analysis. (Further comments appear in Chapter V.)

Also, there was a significant positive relationship between stress perception and total mood disturbance. (X_4 to X_6: $\underline{B}$ =.187, $\underline{p} \leq .05$). This part of the hypothesis was supported.

Hypothesis 10. Coping efficacy (X_5) is inversely related to potential to abuse (X_7). This hypothesis had mixed results in the analysis. The two emotion focused coping strategies, coping by self blame and coping by the use of fantasy, considered non-efficacious, were related differently to potential to abuse. Coping by self blame had a salient negative relationship to potential to abuse, while coping by the use of fantasy had a significant positive relationship to the outcome variable (X_{5a} to X_7 :$\underline{B}$ = -.180, $\underline{p} \leq .10$; X_{5b} to X_7: $\underline{B}$ =.323, $\underline{p} \leq .01$). This hypothesis was supported only in part.

Hypothesis 11. Total mood disturbance (X_6) is directly and positively related to potential to abuse (X_7). This hypothesis was supported by the data, in that total mood disturbance was found to have a significant direct positive relationship to potential to abuse (X_6 to X_7: $\underline{B}$ = .342, $\underline{p} \leq .01$).

Hypothesis 12. Internal locus of control (X_{1a}) indirectly influences stress perception (X_4) through perceived poor physical health. This hypothesis was not supported.

Hypothesis 13. Internal locus of control (X_{1a}) indirectly influences coping efficacy (X_5) through perceived physical health (X_3) and stress perception (X_4). The first part of this hypothesis was not supported, but the second part was. Internal locus of control did influence coping efficacy through stress perception, in this study.

Hypothesis 14. Internal locus of control (X_{1a}) indirectly influences total mood disturbance (X_6) through perceived poor physical health (X_3), stress perception (X_4), and coping efficacy (X_5). With the exception of a path through perceived physical health, the hypothesis was supported. Internal locus of control influenced total mood disturbance through stress perception and coping efficacy.

Hypothesis 15. Internal locus of control (X_{1a}) indirectly influences potential to abuse through perceived poor physical health (X_3), stress perception (X_4), coping efficacy (X_5), and total mood disturbance (X_6). With the exception of a path through perceived physical health, the hypothesis was supported. Internal locus of control infuenced potential to abuse through stress perception, coping efficacy, and total mood disturbance.

Hypothesis 16. Social support (X_2) indirectly influences stress perception (X_4) through perceived poor physical health (X_3). This hypothesis was not supported.

Hypothesis 17. Social support (X_2) indirectly influences coping efficacy through perceived poor physical health (X_3) and stress perception (X_4). This hypothesis was not supported.

Hypothesis 18. Social support (X_2) indirectly influences total mood disturbance (X_6) through perceived poor physical health (X_3), stress perception (X_4), and coping efficacy (X_5). This hypothesis was supported in part. Social support indirectly influenced total mood disturbance through coping by self blame only.

Hypothesis 19. Social support (X_2) indirectly influences potential to abuse (X_7) through perceived poor physical health (X_3), stress perception (X_4), coping efficacy (X_5), and total mood disturbance (X_6). For this hypothesis, path analysis indicated that social support indirectly influenced potential to abuse through coping by self blame and total mood disturbance only.

Hypothesis 20. Perceived poor physical health (X_3) indirectly influences coping efficacy (X_5) through stress perception (X_4). This hypothesis was supported only with respect to the indirect influence of perceived poor physical health on coping by self blame through stress perception.

Hypothesis 21. Perceived poor physical health (X_3) indirectly influences total mood disturbance (X_6) through stress perception (X_4) and coping efficacy (X_5). With respect to the indirect influence of perceived poor physical health on total mood disturbance through stress perception, and coping by self blame (only), this hypothesis was supported.

Hypothesis 22. Perceived poor physical health (X_3) indirectly influences potential to abuse (X_7) through stress perception (X_4), coping efficacy (X_5), and total mood disturbance (X_6). This hypothesis was supported with respect to the indirect influence of perceived poor physical health on potential to abuse through stress perception, coping by self blame (only), and total mood disturbance.

Hypothesis 23. Stress perception (X_4) indirectly influences total mood disturbance (X_6) through coping efficacy (X_5). This hypothesis was supported with respect to the indirect influence of stress perception on total mood disturbance through coping by self blame only.

Hypothesis 24. Stress perception (X_4) indirectly influences potential to abuse (X_7) through coping efficacy (X_5) and total mood disturbance (X_6). Again, this hypothesis was supported with respect to the indirect influence of stress perception on potential to abuse

through coping by self blame (only), and total mood disturbance.

Hypothesis 25. Coping efficacy (X_5) indirectly influences potential to abuse (X_7) through total mood disturbance (X_6). This hypothesis was supported only with respect to the indirect influence of coping by self blame on potential to abuse through total mood disturbance.

A summary of the analysis by hypothesis reveals that of the 25 hypothesized relationships, only five were fully supported by the data. These are hypotheses number 3, 9, 11, 14, and 15. Not supported were hypotheses number 1, 4, 12, 16, and 17. However, the remainder of the hypotheses (15 in number) were partially supported. The partial (rather than full) support typically occurred due changes in the model. One change was made after examining bivariate correlations and restructuring the model to include physical health perception (X_3) as an exogenous variable. Therefore, any hypothesis with a stipulation that a path was to go "through" X_3 was unsupportable (e.g., Hypotheses 12 and 16).

A second change in the model was made after factoring the B-CALM instrument, the measure of coping efficacy. Although the factoring yielded a succinct coping efficacy pattern with good psychometric properties, neither it nor five of the coping strategy measures in the established

Coping Strategies Inventory obtained significant or salient relationships with the variables at time 4, and were thus not retained in the model. Unfortunately, since the two coping strategies which did remain in the model were emotion focused, they could not be considered efficacious, according to the definition of that term. The way in which this change affected the hypotheses was that the significant or salient relationships involving those variables could be considered only in a converse fashion (e.g., Hypotheses 2, 5, and 10).

Finally, there were discovered in the analysis some significant and salient relationships that had not been hypothesized. For example, the role of external locus of control had not been considered, particularly in relationship to coping by self blame and in relationship to potential to abuse. Also, the effects of the emotion focused coping strategies had not been considered, since the conceptual focus of the study was on coping efficacy. The implications of these findings are explored in the discussion section.

Analysis of Variance: Gender Differences

An original intent of the study was to examine the differences between male and female caregivers relative to the study variables. The study participants consisted of 20% male and 80% female elderly caregivers. Therefore,

analyses of variances (ANOVAs) were conducted for the analyses of group differences in the dependent variable. Results of this procedure brought out a significant difference between the men and the women caregivers in the area of social support. The women sought and used more social support than did the men: $F(1, 109) = 5.68$, $p < .02$.

One ANOVA assumption was that variance due to error in each group was homogeneous. Therefore, the Cochran's C test and the Bartlett-Box F test for homogeneity of variance were performed. In each case, the observed values were lower than the critical values for the test (e.g., Cochran's C .53 versus critical value of .62), indicating that the null hypothesis of no difference between the two groups could be rejected (Winer, 1967).

In this ANOVA series there were also two strong trends, which were somewhat conflictual in nature. As expected, men tended to be more internal locus of control oriented than women: $F(1, 109) = 3.06$, $p < .09$. However, the women tended to use more of the decision and planning coping pattern than did the men: $F(1, 109) = 3.28$, $p < .08$. These results were further discussed in Chapter V.

Post Hoc Analysis

Relationship of Coping Variables with Antecedent Variables

Figure 4 depicts the relationships of the antecedent variables of Social Support and Total Stress to the Decision and Planning (DEPLAN) coping variable and the five coping strategies (Coping by Personal Growth, Coping by Problem Solving, Coping by Using Religion, Coping by Help Seeking, and Coping by Minimizing the Threat) that did not remain in the final regression equations when all endogenous variables were entered. They were, consequently, eliminated from the revised model because of their minimal direct effect on the outcome variables. However, these coping variables were part of several of the hypotheses. They are of considerable theoretical and clinical interest to the study, since one of the goals was to establish a knowledge base for nurses to design interventions which would help to prevent abuse, based on the enhancement of efficacious and potentially productive coping strategies such as the ones mentioned here.

Although these coping variables were not significant vis-a-vis the outcome variables, they evidently were used to a considerable extent by the study participants nonetheless. To assess the veracity of this statement, the means of the coping variables were examined, along with the number of items in each scale. Results of the procedure

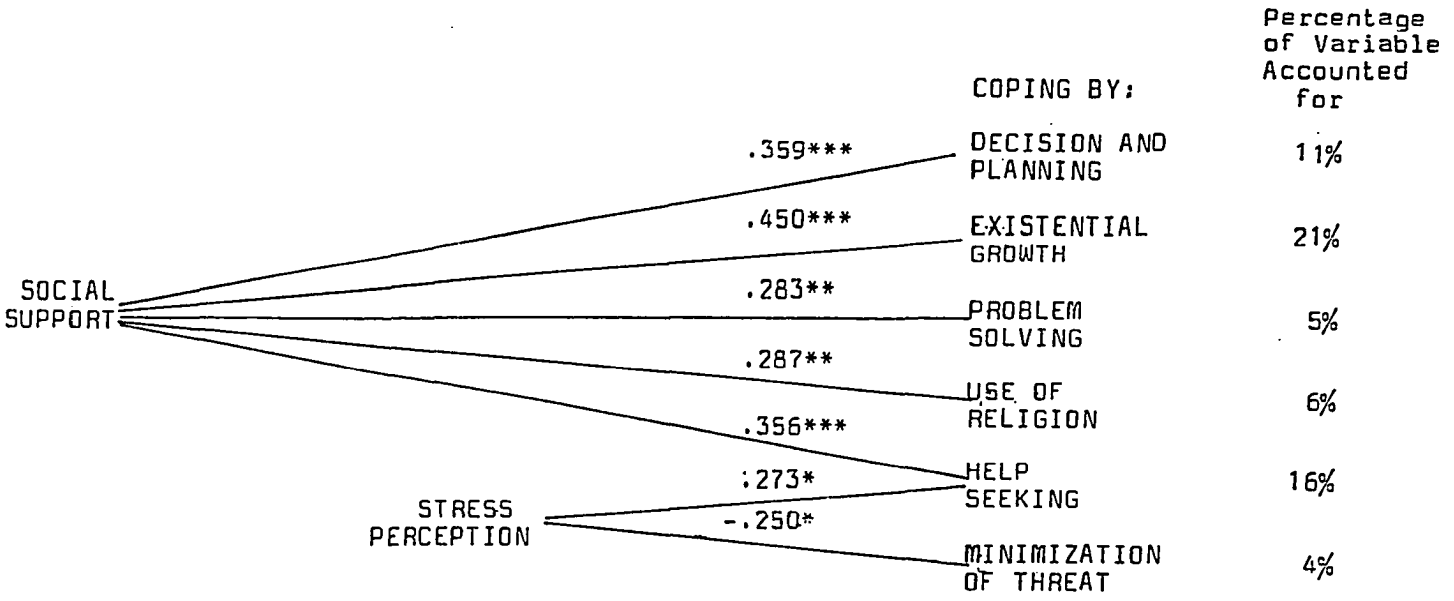

Figure 4. Selected Predictors of Endogenous Coping Variables, Beta Values for the Relationships, and Percentage of Predicted Coping Variables Accounted for by Antecedent Variables.

Legend: * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

^ path coefficients $\geq .150$

gave a measure of the average mean score (A.M.S.). The highest average mean score indicated that the study participants used that strategy the most. The computations were as shown below:

Coping pattern	Mean	#Items	A.M.S.
DECISION & PLANNING	39.02	11	3.55
HELP SEEKING	25.46	8	3.18
PERSONAL GROWTH	25.27	8	3.16
PROBLEM SOLVING	24.84	8	3.11
USING RELIGION	11.41	4	2.85
USING FANTASY	18.60	8	2.33
MINIMIZING THREAT	17.65	8	2.21
SELF BLAMING	17.52	8	2.19

As shown, the coping pattern of Decision and Planning was the most frequently used, followed by the strategies of Coping by Help Seeking, Coping by Existential Growth, and coping by Problem Solving. Used less frequently were the patterns of Coping by Using Religion, Coping by Using Fantasy, and Coping by Minimizing the Threat. The least used strategy, despite its significant effect on the outcome variable of Mood Disturbance, and its salient inverse effect on Potential to Abuse, was Coping by Self Blaming. Coping by Using Fantasy, which had a significant effect on the outcome variable Potential to Abuse, was

nevertheless not used as much as the strategies which precede it, by the participants of this study.

The percentages on the right in Figure 4 represent the adjusted $\underline{R}^2$ that was obtained when the associated coping strategy patterns were regressed as dependent variables in the equation. Since, in the first four cases, the only variable to achieve significance in the equation was Social Support, the adjusted R^2 was taken as an approximate indication of the strength of the relationship in terms of the percentage of the coping strategy influenced by Social Support. With the Coping by Help Seeking strategy, both Social Support and Stress Perception were significant predictors, while with the Coping by Minimizing the Threat, only Stress Perception was.

As evident in Figure 4, four of the five coping strategies and the Decision and Planning coping pattern were directly related to Social Support in a highly significant and positive way. In addition, coping by help seeking was positively related to stress perception, and coping by minimizing the threat was negatively related to stress perception. The implications of these findings for the study goal mentioned above are discussed in the following chapter.

Correlational Examination: Demographic and Study Variables

To analyze the data further, an examination of the correlations between the demographic variables and the study variables was done. Of particular interest was the correlation between amount of education and the variable external locus of control, which was .35, significant at $p \leq .001$. Locus of control is a personality variable, and, as personality develops over time, this finding may indicate that the less education the study subjects had, the more likely they were to subscribe to an external locus of control. The implications of this study result are discussed in the next chapter.

Another correlation of note was the correlation between income adequacy and potential to abuse. This correlation was .36, significant at $p = .000$. The correlation would seem to indicate that if income were perceived as inadequate, it is likely that there would be a potential to abuse. In an attempt to account for the maximum amount of variance in the outcome variable which could be predicted from the independent variables, therefore, it was decided to use income adequacy as one of the predictors in a stepwise regression sequence. When this regression sequence was analyzed, it was discovered that the variables of total mood disturbance, coping by use of fantasy, social support, income inadequacy, coping by self blame, external locus of control, and overall health

perception accounted for 46% of the variance in the outcome variable, potential to abuse. This represents a 5% increase in the variance of this outcome variable, by the addition of the independent variable, inadequacy of income, to the model.

An alternate model for potential to abuse, including the significant predictor of income inadequacy and excluding the non-significant predictors of internal locus of control and stress perception, is presented as Figure 5. Beta for income adequacy was .217, significant at the .003 level. This finding indicated that income inadequacy had an important bearing on the potential to abuse, which is further commented upon in the following chapter.

Analyses of Variance between Groups

A series of one-way analyses of variances (ANOVAs) was performed to determine differences between the study variables in two mutually exclusive groups of caregivers segregated according to whether they were caring for an individual with a mental health condition (Group 1), or with a physical health condition (Group 2). Of the study population, 43 (39%) were in Group 1, and 63 (57%) were in Group 2. (The remaining 4% were caring for persons dually diagnosed.) To test for homogeneity of variance, the Bartlett-Box F and Cochran's C statistics were utilized (Hinkle, Wiersma, & Jurs, 1979).

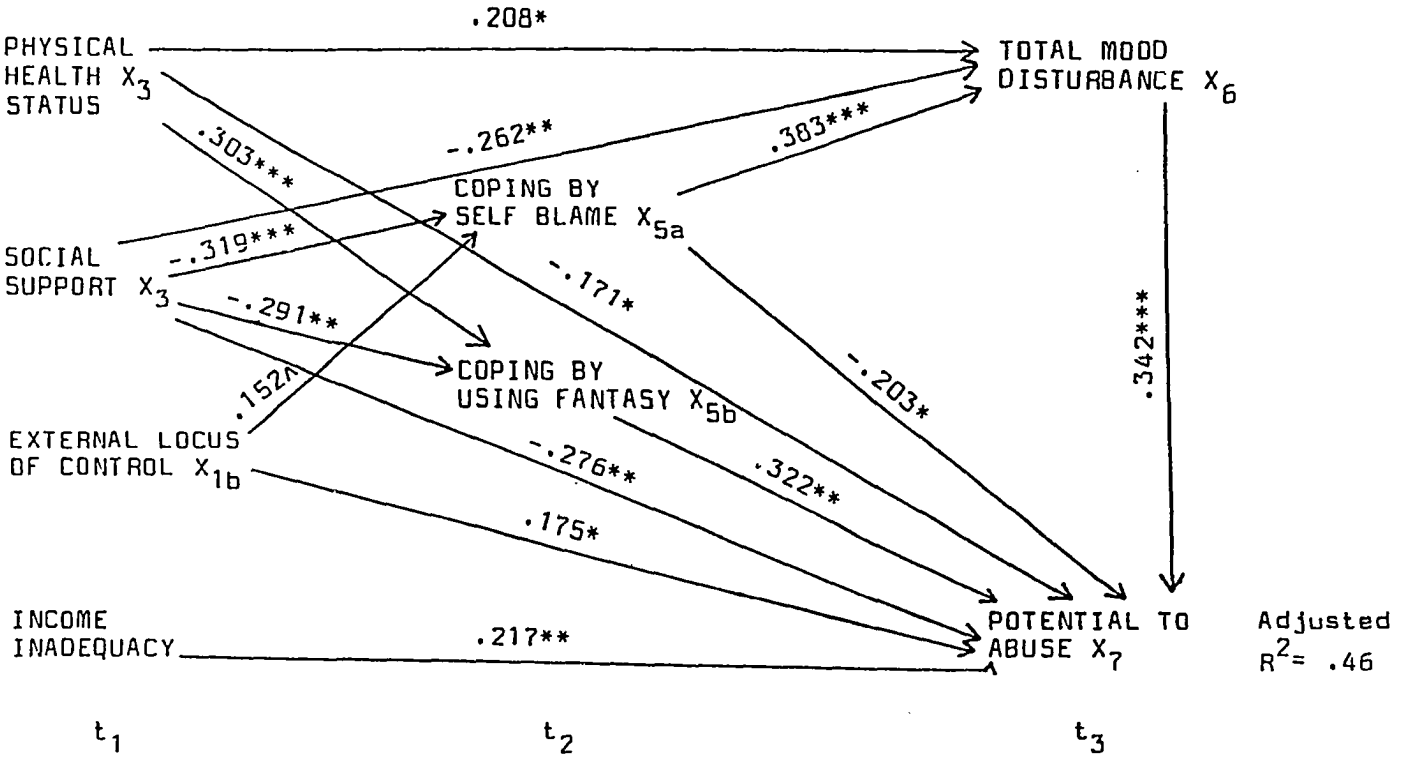

Figure 5. Alternate model for potential to abuse, direct relationships, including the predictor of income inadequacy and excluding the non-significant predictors of internal locus of control and stress perception.

^Path coefficients $\geq$.150 * p $\leq$.05 ** p $\leq$.01 *** p $\leq$.0001

A significant difference was noted in the use of coping by fantasy, between the two groups. Those caring for a person with a mental health condition (Group 1) coped by using fantasy significantly more than those caring for a person with a physical health condition (Group 2): $F(1, 105) = 4.14$, $p<.05$. As in the ANOVA performed to detect gender differences in the dependent variable, both the Cochran's C test and the Bartlett-Box F test results were obtained for this ANOVA and indicated homogeneity of variance.

Two interesting trends were also noted in this ANOVA. First, according to ANOVA results, those in Group 1 tended to cope by self blaming more than those in Group 2: $F(1, 105) = 3.23$, $p<.08$. Second, those in Group 1 tended to have a higher potential to abuse score than those in Group 2: $F(1, 105) = 3.30$, $p<.08$. Chapter V contains a discussion of these findings.

Chapter V

DISCUSSION

A discussion of the study findings is presented in this chapter. The study findings are compared with those of previous research, presented in the literature review, Chapter II. Strengths and limitations of the research are reviewed, and recommedations for future research are given. Implications of the findings for nursing research, nursing practice, nursing education and interdisciplinary matters are discussed.

Discussion of Findings

Potential to Abuse

As anticipated, mood distrubance was the strongest predictor of potential to abuse. However, there were six other significant or salient predictors, accounting for a total of 46% of this outcome variable. Coping by using fantasy, income inadequacy, and belief in external locus of control were directly related related to potential to abuse; the former two were significant and the latter, salient. In addition, the criterion variable had one other significant inverse predictor, social support, and two

other salient inverse predictors, poor physical health and coping by self blame. Also, there were fairly strong ($\geq$ .100) indirect relationships between potential to abuse and perceived poor physical health, potential to abuse and social support, and potential to abuse and coping by the use of fantasy, through the intervening variables. These relationships are displayed on Table 5. With regard to fantasy, for example, mood disturbance seemed to function to enhance the direct effect on potential to abuse.

Since a thorough review of the literature, both before and while conducting this study, did not disclose any studies in which potential to abuse was an outcome variable, the percentage of explained variance cannot be compared. Authors of a recent article which discussed an educational program for "family caregivers ...'at risk' for abuse of their older care recipients" identified their participants by consulting "mental health workers", but no criteria were mentioned for making that judgment; participants were self-referred to the program (Scogin, Beall, Bynum, Stephens, Grote, Baumhover, & Bolland, 1989, p.75). Therefore, for a pioneering study such as the present one, 46% of the explained variance via the preceding variables seems a good place to begin to examine the phenomenon.

Moreover, although the paired outcome variable, total mood disturbance, also was predicted by some of the

preceding variables, these were not, essentially, the same variables, nor were they in the same direction, that predicted potential to abuse. The two outcome variables, then, were distinct in that one cannot assume that they have the same causal factors operating in the same way. The profile of the potential abuser, which emerged from the literature review, garnered support from the findings of this study: a person who had particular characteristics, shaped by the caregiving experience. The person and situation did indeed resemble the stress pile-up model of McCubbin and Patterson (1982), or Dohrenwend and Dohrenwend (1981), where belief in externality of control, inadequate social supports, and lack of problem solving skills led toward a crisis of mood disturbance and loss of rational behavior, which culminated in abuse of one sort or another.

Additionally, it was important to note that there were several variables operating to generate this outcome, and that potential to abuse was not caused by the stressful situation alone. In fact, total stress was not a significant predictor of potential to abuse in this study, contrary to the usual belief commonly held, and in contrast with the findings in other studies (Giordano & Giordano, 1984; Hirst & Miller, 1986; Montgomery & Borgatta, 1987). However, stress was a significant predictor of mood disturbance. The reason for this fascinating distinction was difficult to fathom, but possibly caregivers who

approached the area of abuse were certainly just as stressed as those who did not show a potential to abuse, but their personal characteristics ("I'm not responsible for the situation"), their aloneness (lack of social support to reflect reality and caring), and their use of fantasy ("It's not really happening") were the primary factors which failed them when they reached a crisis point.

Overall, with respect to the outcome variable potential to abuse, of particular import to the goals of this study was the strong inverse relationship between social support and potential to abuse. This result supported recent findings cited in the literature review (McCann, 1988; Poertner, 1986). Nevertheless, in a recent study, it was brought out that the neediest caregivers were those who seemed to receive the least support (Clipp & George, 1990).

Total Mood Disturbance

In this study, there were four strong predictors of total mood disturbance: coping by self blame, social support, perception of poor physical health, and stress perception. Social support had a significant inverse relationship with total mood disturbance; the other variables mentioned had significant direct relationships to total mood disturbance. The four predictor variables accounted for 45% of the explained variance in total mood

disturbance. There were no indirect effects of .100 or above.

As cited in the literature review, Felton, et al. (1984), and Quayhagen and Quayhagen (1988) found that emotion-focused coping strategies were related to mood disturbance. These results have been supported in this study. However, in comparing the predictors of total mood disturbance with the predictors of potential to abuse, it was interesting to note that coping by self blame had a highly significant direct relationship to total mood disturbance, yet had a salient inverse relationship with potential to abuse. The indirect effect, through total mood disturbance, seemed to further enhance this inverse relationship of coping by self blame to potential to abuse. One interpretation of these findings was that, conceivably, if one was coping by blaming the self, and further, if that was mentally disturbing, then one might not be inclined to perpetrate abuse upon the recipient of care, and thus create further guilt and disturbance.

Regarding the direct link between perception of poor physical health and total mood disturbance, that relationship has long been substantiated in the literature (Arling, 1987; Felton, et al., 1984; Markides & Martin, 1979a). The findings of this study supported the earlier research in the area. However, it was argued in recent studies that the directionality was either reciprocal, or

was in the opposite direction from that predicted by the model and findings of this study (Pearlin, Mullan, Semple, & Skaff, 1990; Pruncho, Kleban, Michaels, & Dempsey, 1990; Schulz, Visintainer, & Williamson, 1990). Pruncho, et al. (1990), and Dura and Kiecolt-Glaser (1990) indicated that there may have been a "wearing-out" of caregivers due to continued demands on mental well-being and consequent decline in physical health.

In the present study, there was no evidence to indicate that intense and prolonged caregiver involvement (number of hours involved in caregiving daily plus length of time in the caregiving relationship) was correlated with an increase in mood disturbance or a perception of poor physical health. Indeed, from the burn-out literature, one might have expected that there would have been those correlations (Benner & Wrubel, 1989; McCranie, et al., 1987). However, it might have required a longitudinal study to completely explore this question. What the findings from this study did indicate, was that age of the caregiver was positively related to the perception of physical health conditions-- an inevitable accompaniment of aging (Rosencranz & Pihlblad, 1970).

With total mood disturbance, unlike with potential to abuse, stress did play a significant part in predicting the variance, as indicated by the studies of Husaini, et al., 1982; Kobasa and Puccetti, 1983; and Pearlin and Schooler,

1978. Further, the effect of stress was enhanced by the indirect effect of the intervening emotional coping variables. This finding seemed to support an earlier one in which it was found that elders under stress tended to engage in self blame, to their emotional detriment (Blanchard-Fields & Robinson, 1987).

The fourth variable to have a significant relationship to total mood disturbance was social support, which seemed to have both a strong salutary effect on mental well being and to lessen the possibility that abuse would occur. The studies in the literature review were not in agreement over the role that social support played in preventing mental distress, but all were in agreement that social support was a salient factor in abuse prevention. As defined in this study, the finding that social support buffered against mood disturbance supported the findings of Cantor, 1983, and Ward, et al., 1984.

Finally, it was important to look at the mood disturbance scores of the participants in this study. The authors of the POMS instrument established normality for the scales by testing with college students. In comparison to this group, the participants in the study had a higher mean score for tension, depression, anger, and inertia than their college age counterparts, but also a higher mean score for vigor and friendliness, and a lower mean score for confusion. The finding for the four former sub-scales

was expected; however, the finding for the three latter sub-scales was surprising, especially for the friendliness scale, which was scored nearly twice as high as for the college students. These latter findings may reflect the fact that the study participants were a self-selected group, and thus have had an enduring personality characteristic of friendliness. Overall, the mood disturbance in the study participants was high in the four areas of tension, depression, anger, and inertia, but not as high as for those same areas in a group of psychiatric out patient clinic members, also tested by the authors of the POMS (McNair, et al., 1981).

Coping

Coping was a key variable in the study, and the results were unexpected. Only two of the coping variables, coping by self blame and coping by the use of fantasy, remained in the regression equations with the dependent variables. However, there were several significant relationships with preceding variables in the model, as displayed in Figure 4 and noted on Table 6. Coping by personal growth, coping by problem solving, coping by using religion, coping by help seeking, and coping by decision and planning were all predicted by social support, in a highly significant way, indicating that social support fosters the use of these efficacious coping strategies. On

the other hand, coping by self blame and coping through the use of fantasy were inversely related to social support, in a highly significant manner.

Another interesting finding was that total stress was significantly predictive of coping by help seeking, which was not surprising, but was not predictive of coping by problem solving, as reported in the study by McCann (1988). Coping by minimizing the threat had a significant inverse relationship to total stress, indicating that this population was not likely to view their stressors lightly. This finding can be compared with the one by Blanchard-Fields and Robinson (1987), in that their study found that older persons saw stressful events as less controllable and were inclined to use self blame to a greater extent than other coping strategies. Coping by self blame was significantly predicted by stress perception, in the present study.

Relative to control, a third variable which predicted coping by self blame was external locus of control. The relationship was direct and salient. Although earlier studies had also shown control orientation to be an imporant predictor of effective coping strategies (Colerick & George, 1986; Miller, 1987), the present study did not support these findings.

Lastly, poor physical health was found to be significantly related to coping by the use of fantasy. In

the study by Felton, et al. (1984), the results were not so specific, and the coping was directed at subjects dealing with their own illnesses, rather than coping with the illness of another through caregiving. As pointed out by Lohr, et al. (1988), whatever subjects used as coping strategies did not seem to have an enhancing effect on mental well being. Realizing that the problems (caregiving and poor personal health) could not be changed, participants in this study may have resorted to coping by fantasy as an escape.

Taken together, the findings on the use of coping in this study provided a stimulus for future research. When effective coping strategies were strongly fostered by social support, why did they not ameliorate mood disturbance or potential to abuse? As stated in the literature review, the results of studies by Menaghan (1982) and Soldo and Myllyluoma (1983) indicated that when stress continued over time, adaptive coping mechanisms were often replaced by ineffective ones. Possibly another hint to solve this puzzle can be found in the work of Lohr, et al. (1988), who concluded that coping was not particularly effective when the problem (caregiving) could not be changed. If so, how could the problem be changed? Since social support was an entry variable in this model, no attempt was made to compare the level of social support with levels in other studies. Nor was information on the

normality of social support levels available from the authors of the PRQ85 (personal correspondence with Brandt & Weinert, 1988). It may be that social support levels for elderly caregivers were generally low, as indicated by Clipp and George (1990), and that by raising them we could strengthen effective coping.

As pointed out by Weinert (1987), Weinert and Tilden (1990) social support takes many forms. One is that persons may achieve enhanced social support through the opportunity to self actualize by helping others. This notion was explored in the recent study by Stoller and Pugliesi (1989), whose results indicated that other roles for caregivers (work or community relationship roles, child care roles, etc.) were associated with a rise in caregiver well being. Qualitative data from the present study supported this idea. Caregivers shared with the researcher that when they had children or grandchildren in the home, or when they worked part time, participated in community activities, attended support groups, or even communicated through a telephone chain, they felt supported and were relieved of much of the stress associated with caregiving.

Another way in which social support may be enhanced is through community care, as pointed out in the recent research by Edelman and Hughes (1990). The authors concluded that community care supplemented family care, with respite as a possible outcome for caregivers. In

discussing caregiving with the study participants in the present study, they were indeed glad for the community care they received, expressing that it helped their morale and showed empathy for their plight. When the opportunity presented itself, any instrumental or consultative help by the researcher was much appreciated, as well.

Along the same lines, the recent work of Quayhagen and Quayhagen with cognitive stimulation of Alzheimer's patients (1989) had the secondary gain effect of enhancing the coping resources of the caregivers, and boosting their mental well being. The present study certainly affirmed this conclusion. It would seem, from the present study, that the coping resourses were enhanced in the Quayhagen and Quayhagen (1989) study due to the increased social support those caregivers were experiencing.

Stress Perception

Stress perception had two predictors in this study. Poor physical health was directly and significantly related to stress perception, and internal locus of control was saliently but inversely related to stress perception. Both relationships were expected. The former relationship supported the findings of McCann (1988), and Pruchno and Resch (1989). The latter result was anticipated from the study on burnout by Rich and Rich (1987), cited in the literature review.

Social support, contrary to expectations, did not affect stress perception in the present study. This result conflicted with the hallmark study by Pearlin and Schooler (1978) and others (Billings & Moos, 1981; McNett, 1987; Scott, et al., 1986; and Zarit, et al., 1980) which concluded that social support has a role in lowering the level of perceived stress. Therefore, it was important to point out that elderly caregivers were in an unusual situation, such as the ones described by Krause (1986a). They had difficulty conceptualizing the help and support they needed from others, especially non-family members (Pratt, et al., 1986). Again, qualitative data of the researcher on the present study supported this conclusion. Caregivers looked to family members for both instrumental and emotional support, and were more satisfied with help from family members or close friends.

To reiterate, an unusual finding of the present study was that stress perception did not affect potential to abuse. A recent study (1989) by Pillemer & Finkelhor also concluded that there was more evidence that personality problems of the caregiver were associated with abuse of the elderly than there was support for the idea that caregiver stress is associated with abuse. However, the research of Johnson and Catalano (1983) and the longitudinal study of Zarit, et al. (1986) indicated that stress perception tended to decline with the passage of time in caregiving,

as the caregivers became more stoic. Since the average length of time care had been furnished in the present study was two and a half years, the conclusions of the longitudinal study would seem warranted in this study also.

Physical Health Status

As the model was originally conceptualized, physical health status was positioned at time 2, to be predicted by locus of control and social support. Much of the predicted effect of control and social support on health perception was based on the work of Kobasa and Puccetti (1983). As stated earlier, however, the work of Kobasa and her associates (1982, 1983) was very specific as to the sample and the unique measures used, consequently the results did not generalize well. The present study also did not support the work of Colerick (1985), Krause (1988), and Reker, et al. (1987) in which it was found that the degree of perceived control affected physical health. Again, these researchers were not using caregivers in their sample, which may explain the different results in the present study.

When compared with the study of 1700 older community residents by Rosencranz and Pihlbald (1970), the subject group of this study seemed to be in a somewhat poorer state of physical health than the subject group of the earlier study. The average age of the participants in the present

study (70) was lower than the average age in the earlier study (75), yet fewer of this study's participants (20%) claimed excellent or good health, more (25%) claimed fair or poor health, as compared with 25% claiming good health and only 20% claiming fair or poor health in the earlier study. The maximum number of caregiver health conditions reported in the present study was 22, with a mean of 6, whereas the maximum number in the 1970 study was 17, with a mean of 3.5. Of course, the participants in the earlier study were not identified as caregivers.

The present study also validated the work of Cockerham, Sharp, and Wilcox (1983), in which it was found that older persons tended to perceive their health status more positively if they were more educated, but it did not indicate that persons who were more educated were better able to cope.

One unusual finding in the present study was the effect of poor physical health on potential to abuse. This was an inverse and salient relationship. However, the relationship was entirely cancelled out by the indirect relationships through the intervening variables of stress, coping, and mood disturbance (See Table 5, row X7 X3, columns B, C, and D.) Coping by self blame seems to have played the greatest role in this reversal, possibly due to the psychic energy generated by emotionality and its effect on mood disturbance.

Social Support

Social support emerged as the most significant predicting variable of the study, affecting all subsequent variables except stress perception in the model. The findings validated many earlier studies mentioned in the literature review, and did indicate that the relationship between social support and total mood disturbance was inverse and linear, in line with the studies by Cantor (1983) and Ward, et al. (1984). Results of many other studies mentioned were conflicting. However, the relationship between gender and social support was again confirmed in this study, with women seeking and using more social support than men. Much depended, of course, on the way social support was measured, and the measure in the present study was carefully chosen to measure instrumental support, emotional support, and satisfaction with support received.

Locus of Control

Internal locus of control, in the present study, was the predictor of only one subsequent variable, stress perception, to which it was inversely and saliently related. This result supported those of Manfredi and Pickett (1987) and Medinger and Varghese (1981). Although locus of control was held by many to be a stable and enduring personality construct, this belief has been

challenged (Krause, 1986b), and there was some evidence that locus of control was a learned behavior; therefore it can be unlearned. This notion has implications for education of the caregiver, to the purpose of stress reduction and improved mental well being.

External locus of control and its significant relationship with potential to abuse has been explored earlier. Since the ANOVA results also detected a significant direct relationship between external locus of control orientation and fewer years of formal education, it would seem that if persons could receive more education, that change might effect a change in the development of locus of control. Hence, the development of a personality less prone to fit the profile of the abuser may be possible. External locus of control in the present study also bore a salient direct relationship to coping by self blame, contrary to the study by Blanchard-Fields and Robinson (1987) where it was found that elders with an internal locus of control tended to engage in self blame. Also, it was not borne out with the study population in the present study that an external locus of control was protective against stress perception. Studies linking locus of control (and other personality variables as well) with the caregiving function were sparse, and need to be incorporated in future research designs, based on the

findings of the present study and the potential for change that manipulating these variables could mean.

Adequacy of Income

In the study by Pillemer (1985) and others mentioned in the literature review, finances did play an important role in domestic violence against the elderly (Hall, 1986; Steinmetz, 1988; Steuer & Austin, 1980). Finances were also influencial in the present study, in that caregivers with inadequate incomes also scored higher on the potential to abuse scale.

Income inadequacy was incorporated into an alternate model when it was discovered that it accounted for 5% more of the explained variance in potential to abuse. Income is positively related to well-being in general, which comes as no surprise to most of us. Income enables us to cope with and solve the problems of life, by offering financial resources to provide more alternatives (Billings & Moos, 1981; Thoits, 1982). But, as expressed in the causal study by Markides and Martin (1979a), the influence of income on life satisfaction of elders was associated with the activities made possible by a higher income. Pleasant activities were described in the study, which focused on activities as an intervening variable between health and socioeconomic status and life satisfaction. Results showed that income had only a minor direct effect on life

satisfaction, but was influencial indirectly though activity.

The above finding relates to the (at first) somewhat puzzling results about financial status obtained in the study by Colerick and George (1986). These investigators found that persons who gave up the caregiving role tended to be in the higher income group, where they did have the financial resources to keep their patients at home. These caregivers expressed dissatisfaction with their inability to pursue recreational activities, in the confining nature of the caregiving role.

At the same time, caregivers in lower income brackets often gave financial necessity as a reason for maintaining the in home caregiving role (Cantor, 1983; McCann, 1988). Consequently, if one must be a caregiver, with all that role entails in terms of giving up treasured activities, what follows may well be resentment and anger over having to relinquish precious resources of time and money to the care of an ill or disabled elder (Steinmetz, 1988; Steuer & Austin, 1980). And, indeed, in Hall's (1986) study, persons in the lower income groups tended to be the most likely targets for abuse. Because of their prevalence in the lower income groups, their relative social isolation, and their higher rate of identified caregivers, minority elders also were more prone to be the victims of abuse.

Not only the adequacy of the income, but also its source, often can play a role in elder abuse. Unlike children, elders can have an independent souce of income that is prey to unscrupulous caregivers. At times, material abuse has occurred because the elder was robbed of money or property, or coerced to give up same in exchange for caregiving (Fulmer & Cahill, 1984). This theme was also explored in a case-control study of physical abuse of the elderly by Pillemer (1985). Pillemer found that, instead of the elderly care recipient being financially as well as physically dependent upon the caregiver, the caregiver was actually financially dependent upon the care recipient. In some instances, the abused elder was neither ill nor disabled, but, although fully functional, was older and not as strong physically as the abuser. Abuse then occurred because the caregiver perceived him or herself in a position of powerlessness and entrapment. Often, the caregiver was in poor mental health, altering the relationship between the dyad and comprising a possible reason for both the dependency status and the abuse.

Apparently, the role of income inadequacy was not a simple matter of dollar amounts, but rather concerned the independence an adequate income can involve, the tangible help it can provide, and the notion of empowerment that an adequate income can symbolically convey. The findings of this study, when enriched by the broad field of data from

other studies, provided a better understanding of the possible reasons why income inadequacy was a factor in the potential to abuse. This area is a fruitful one for further research in the social sciences.

In summary , the study results indicated that potential to abuse was directly influenced by total mood disturbance, coping by using fantasy, external locus of control, and inadequacy of income. It was inversely influenced by coping by self blame, perceived social support, and physical health deficit. These variables accounted for 46% of the variance in potential to abuse. The result was not compared with other studies, since none have been located which measure potential to abuse as an outcome variable. This represented a uniqueness and a strength of the present study. The exploration of the phenomenon and testing of the model represented a new addition to the body of knowledge on elder abuse.

Gender Differences Relative to the Study Variables

Gender differences appeared, on examining the study variables, in three variables: social support, locus of control, and coping pattern used. With social support, the finding that women significantly sought and used more social support than men did concurred with the results of many other prior studies (Billings & Moos, 1981; Holahan & Moos, 1985; Husaini, et al., 1982). It has also been

noted, in the study by Zarit, et al. (1980) that women tended to report greater strain than men in spousal caregiving relationships. This factor, although not explored in the present study, may have accounted for their seeking out social support more than the men did. However, it was also possible that women, by nature of their socialization process, had developed and retained a greater supportive social network than men. The investigators formerly named in this paragraph implied that from the results of their studies.

The finding that men tended to be more internal locus of control oriented than women agreed with findings from previous studies (Holahan & Moos, 1985; Husaini, et al., 1982; Krause, 1987; Miller, 1987). Again, this gender difference in control orientation may have been a function of the early socialization process of this generation of elderly female caregivers. Girls of that generation were taught to rely on the masculine members of the family and of society for their control orientation -- an external locus of control. Indeed, there was very little in that highly structured, sex segregrated society that was under the control of the woman, outside of the autonomous functioning in her own home.

The result that women tended to use more of the decision and planning coping pattern seemed to be at odds with the results in the hallmark study by Folkman and

Lazarus (1980), in which they found that men used more of the problem solving coping strategies than women did. This apparent discrepancy of findings may be due to the notion that there really is a conceptual or quantitative difference between planning and problem solving. Women have often made decisions and planned, of course, but may not have been as knowledgeable or innovative in the area of problem solving skills as the men were, due to men's previous training, type of education, and socialization to the dominant provider role. But it was possible that women were more competent than men in making decisions and planning in domestic situations, of which caregiving in the home was one.

Possible Effects of Demographic Variables on the Model

Demographic factors which had been associated with potential to abuse in other studies did not necessarily enter the picture with this group of caregivers. For example, the age of the caregiver and/or the care recipient was not a factor in potential to abuse in this study, unlike in other studies where the caregiver tended to be the adult child, and thus younger than the care recipient (Pillemer & Wolf, 1986; Scogin, et al., 1989; Tornstam, 1989). However, given that 54% of the variance in the outcome variable potential to abuse had not been accounted for by the variables in the model for this study, some

attention was paid to demographic variables (other than income inadequacy, previously discussed) which may have affected potential to abuse. Although none of these remaining demographic variables correlated at above .30 with either of the outcome variables, they may nonetheless have been, singly or in combination, residual factors which affected the outcome variable in a linear or non-linear fashion.

The demographic factors for which there was some evidence (from other studies) of influence on the model variables were gender, age, marital status, education, social status, intensity of and length of time in the caregiving role, age of the recipient of care and relationship to the caregiver, size of housing and family density, and additional responsibilities and employment. Consequently, these variables were included in the study questionnaires.

Age. Feinstein and Thoits (1986) found that age was not a predictor of psychological distress among older adults. On the other hand, a longitudinal study (Costa, Zonderman, McCrae, Cornoni-Huntley, Locke, & Barbano, 1987) showed that older persons tended to be higher in mood disturbances than younger persons. The findings of the present study do not support this latter result. Blanchard-Fields and Robinson (1987) also found a positive

relationship between aging and stress perception, such that older persons saw stressful events as less controllable than younger people viewed them, and tended to use ineffective coping strategies such as self blaming, with a consequent negative effect on mental well being. It is true that participants in the present study scored high in self blame. However, whether using this coping strategy was a function of age or of the cargiving situation or of some other variable cannot be determined from the data of this study.

Social support seemed to have a relationship to age that was quite complex. While it was important for elders, as uncovered in the research by Ward, et al., (1984), its relative presence and strength may have depended upon external factors such as how much it was perceived that the older person needed support (Colerick & George, 1986), or the number and closeness of persons in the support network (Ward, et al., 1984).

Finally, age did seem to have a relationship to abuse, according to the literature. In the investigation by Hall (1986), it was found that patients over the age of 85 were much more likely to suffer abuse than those between 65 and 85 years of age, and less likely to be considered in need of protection. As explained by Phillips and Rempusheski (1985), and validated in the small exploratory study by Fulmer and Cahill, (1984) the older and frailer the

patient, the more vulnerable he or she was to abuse. Age of the caregiver, too, appeared to be related to potential to abuse. In the absence of hard empirical data, according to qualitiative assessments, it was the younger caregiver (usually the son or daughter) who was more frequently the abuser (Hirst & Miller, 1986; Steinmetz, 1988). In the present study, where all of the caregivers were over the age of 55, no significant correlation was found between age and any of the study variables.

Marital status. Contrary to the conventional wisdom in which marital status is believed to assist in coping with the stressful events in life, McNett (1987) found, in her study on the disabled, that being married actually had detrimental effects on the stress perception and coping ability of the patients. The effect of marital status was more specifically spelled out in Thoits' (1982) research, where it was found that both unmarried persons and married women, but not married men, suffered more from stressful life events. Mood disturbance was significantly higher in married persons of both sexes when a number of undesirable events were encountered. Caregiving status could be perceived as an undesirable, stress-producing event in a family. For example, in the exploratory study by Steuer and Austin (1980), the notion was advanced that high stress

perception in an already stressed marriage causes resentment and hostility to surface, resulting in abuse.

In the present study, most persons who were married tended to have been married for a long time. The quantitative data does not show a significant relationship between marital status and other variables. However, there was some qualitative data gathered which seemed to indicate that persons who were not married to each other (e.g., siblings) and persons who had not been married very long tended to exhibit more friction in the caregiving relationship. In the study by Soldo and Myllyluoma (1983), it was found that non-spouse caregivers tended to be less committed, and potential neglect to the patient could occur.

Cantor (1983), however, discovered an inverse correlation between the closeness of the relationship and the ability to get along together. The enmeshing nature of the situation, as pointed out by Johnson and Catalano (1983), caused the social network to shrink. The situation became especially dangerous if the health of the caregiver deteriorated.

Educational status. Better educated persons were able to cope more effectively and used more problem solving methods of coping, according to several researchers (Billings & Moos, 1981; Thoits, 1982). In the present

study, there was a significant relationship between amount of education and locus of control, with the better educated persons having a more internal locus of control orientation. This was especially interesting in light of the finding that persons with an external locus of control orientation scored significantly higher on the Assessed Potential To Abuse tool. By inference, possibly the better educated persons would, therefore, be less likely to abuse.

Better educated persons over the age of 60 tended to perceive their health status more positively than persons with less education, according to Cockerham, et al. (1983). The finding was supported by the data of the present study, which also showed a significant correlation between these two variables. This may be because persons with more education tended to know more about the subject of health in general, and were not inclined to pursue habits detrimental to their health.

Education, in the sense of attaining knowledge about the caregiving role, also emerged as an important factor in preventing abuse in the qualitative study by Phillips and Rempusheski (1985). After all, how many lay persons know how to turn the bedfast, transfer patients from bed to chair, or properly give hygenic care to an invalid? These basic nursing functions, so taken-for-granted by health professionals, are foreign to most lay persons (Steuer and Austin, 1980).

Time and intensity of the caregiving relationship. In her descriptive study of caregivers over the age of 60, McCann (1988) reported that there was a range of duration which extended from 1 to 25 years, with a mean of 6 years. The range in the present study was 6 months to 10 years, with a mean of 2 1/2 years. In the McCann (1988) study, the stress generated induced problem solving coping, but the caregivers tended to be in isolated situations, with a high potential to abuse. Physicians sometimes had to intervene and place the patient in a nursing home to preserve the health of the caregiver. This engendered feelings of guilt in the caregiver, who, although at times merely resigned to the caregiver role, felt that s/he had failed in a promise to take care of the other for all of their life.

These feelings of guilt were also found in the study by Colerick and George (1986). Caregivers whose charges had been placed in a nursing home were more likely to lose social support, become depressed, and resort to poor coping methods such as drug use. Although it seemed that the time and intensity of the relationship was high in the present study, there was no significant correlation with other study variables. There may have been mediating factors. For example, the McCann (1988) study took place in a rural or semi-rural area, where the caregivers may have been more isolated than the caregivers in the present study, which

took place in urban and suburban neighborhoods with community centers and other social resources.

Family relationships, density, and employment. Abuse tended to occur in households that had a number of residents, either extended family members or non-relatives, according to Hall (1986). Yet this relationship did not always hold. First of all, the presence of other family members could mean that the extended family or friends participated as caregivers (Phillips, 1983; Soldo & Myllyluoma, 1983).

On the other hand, family relationships may have become strained in this situation, and old unresolved conflicts may have arisen, leading to a tense and abuse-provoking atmosphere (Steuer & Austin, 1980). The homes with only two residents, the patient and his or her elderly caregiver (usually the spouse), were the ones in which the greatest satisfaction with the caregiving relationship was seen, according to Colerick & George, (1986).

Conversely, one might realize that small children can add cheer and love to a grim situation, and lighten the stress perception of both the caregiver and the recipient of care (Ward, et al., 1984). (This is the philosophy of the hospice, in allowing the whole family to visit.) Teenagers, for all of their negative stereotypes, can be

sensitive and supportive, in psychosocial as well as instrumental ways. Although there were no quantitative data in the present study to support this point of view, qualitatively the caregivers in the study expressed the idea that the presence of children and grandchildren in the home lightened the caregiving responsibilities for all.

Regarding employment, Steinmetz (1988) proclaimed that employment of the primary caregiver outside of the home constituted an added family stressor in the caregiving situation. Accordingly, caregivers were assessed for their employment situation, in this study. Although the proportion of elderly caregivers employed full or part time outside of the home was small, in this study, qualitative data supported the position that employment outside of the home constituted an emotional safety valve for the caregiver, giving him or her necessary diversional activity.

In summary, the conclusion reached was that the influence of demographic variables, except for income inadequacy, was a highly individual matter with the caregivers in this study. Again, personality factors seemed to confound the issues. The study participants were a friendly group of people, according to the results of the POMS scores on that scale. Friendly people tend to take more things in stride.

Limitations and Strengths

Limitations to the proposed study arose as threats to internal validity in the following ways:

1) In the area of translation fidelity of the model to operational procedures, it was possible that the concepts (variables) were not completely assessed by the instruments chosen for the study. Although the theoretical assumptions of the model had been compared as closely as possible to the theoretical underpinnings explicated by the designers of the instruments, the first difficulty was encountered with the locus of control variable. The Levenson (1974) instrument had been successfully used to measure the variable with adults, but the age cohort of this study had some problems relating to a few items because, e.g., the participants are not, in their situation, aspiring to "become a leader".

Second, instruments with high indices of reliability and validity, and stability over time were chosen, but there are two exceptions to that statement: first, a new measure (the B-CALM) was used to measure coping efficacy, as an adjunct measure. Content validity for the instrument has been established, discriminate validity has been examined by testing with the Defense Mechanisms Inventory (DMI: Ihilevich & Gleser, 1983), and the instrument has been analyzed for reliability via test-retest procedure.

However, the instrument is still in a state of development, and was factored in this study to further that effort. Thus, an established coping measure was used as a multiple measure, the Coping Strategies Inventory (Quayhagen & Quayhagen, 1988).

Next, the original H.A.L.F. instrument had not been tested for validity or reliability by the authors (Ferguson & Beck, 1983). The instrument was modified for use in this study, as described. It had been processed for content validity by a panel of experts in the areas of mental health, abuse, and gerontology. Determination to use the modified instrument was based on the fact that, at this stage in the study of elder abuse, an exhaustive search did not produce an instrument with established psychometric properties. In this study, reliability testing and factoring were used to enhance the power of this instrument.

2) In the area of demonstrated relationship, the precedence of cause has not been clearly established for several of the variables, as indicated in the literature review. The assumptions of the model, for example, predict a recursive relationship between mood disturbance and coping efficacy, and this assumption was supported by the results of several studies (Kobasa & Puccetti, 1983; Wheaton, 1983). However, Aldwin & Revenson (1987) have

recently questioned the assumption within the framework of contextual factors, in accordance with the results of their study. Since the weight of evidence was on the side of support for the precedence of cause as presented in the model, this model testing study attempted to reinforce the assumption in the model, with mixed results. It was demonstrated by the study data that emotion focused coping such as use of self blame and use of fantasy did indeed affect mood disturbance, but the problem solving strategies did not significantly influence mood disturbance. Not to have discovered a salient inverse relationship between efficacious coping (e.g., problem solving, help seeking, decision and planning) and mood disturbance was disappointing, given the implications such an outcome may have had for nursing practice.

3) One rival explanation for high scoring on total mood disturbance might be endogenous depression which could occur independently of the influence of other variables. However, in the judgment of the experienced psychiatric nurse researcher, such an eventuality did not occur with the participants of this study, and hence the outcome was not altered by this possibility.

4) Loss of subjects or data from the study was a possibility; partial control of the data base was achieved through having 50 more subjects than required. Another way

in which loss of data was prevented was by maintaining tight security over the data collected. Since the data was all collected at one interview, or within one mailing, loss of subjects did not occur in the study.

5) Since the study was a model testing one, credibility of the results was a serious consideration. Therefore, it was gratifying to find that several of the hypothesized relationships showed strength in the predicted direction.

With respect to external validity, threats arose as follows:

1) Subjects were not completely representative of the target group. Subjects were self-selected and volunteered to participate in the study. Therefore, not all ethnic, racial, and cultural groups were represented. This was a serious limitation of the present study, since it has been substantive knowledge that different cultural groups experience the caregiving situation differently, according to the values of their sub-culture and their support systems. Also, the study findings cannot be generalized to other sections of the country, or to the situation of rural caregivers.

Socioeconomic groups, however, were realistically represented in the study as they occur in the general

population. The subjects were all over the age of 55, so the results will not necessarily generalize to other age cohorts; however, this was an intentional part of the design of the study.

2) Experimenter expectancies may have influenced subject responses. To ward off this possibility, interviews were structured, with the interviewer assisting and encouraging the elderly caregivers in completing the instruments, rather than directing them. As far as can be acertained, the study responses are entirely of the participants' own choosing, and were not influenced by the researcher's actions.

3) In terms of resource allocation, the researcher had to consider the characteristics of the subject group. Older persons may tend to become fatigued easier, have limitations such as less acute vision or hearing than younger persons, or have difficulty processing the information (instructions, for example) in the way that it is presented. Hence, some sacrifice, in using the short forms of instruments, seemed prudent, although also striving for a balance which would not compromise the results (Krathwohl, 1985).

Fortunately, these anticipated difficulties in working with an older cohort did not materialize. In fact, the participants were interested in the study, patient and

thorough with the completion of the instruments, and did not hesitate to ask for clarification of what they did not understand. There were many opportunities for the collection of qualitative data, which will be reported upon in subsequent articles. The pace of the interviews was unhurried, with a stretch break midway, and instruments were administered in a sequence planned to be balanced and enhancing, as follows: HAS, Demographic, LOC, PRQ85, SEQ (break) CSI, APTA, POMS, and B-CALM.

It was refreshing for the participants to be asked first about <u>their</u> health, for a change, and relaxed them to trust a caring professional. They expected the demographic, and laughed at the questions on the LOC. The PRQ85 brought their situation into focus, and the SEQ was often an emotional experience-- hence the need for a break following. The CSI gave them confidence and hope, while the APTA gently prodded the realities of the caregiving situation, followed by the feeling tones of the POMS. Finally, it was story time, and the B-CALM gave them a chance to put themselves in a different situation. It went well.

Implications and Recommendations

The three areas of nursing research, nursing practice, and nursing education are used to identify implications and recommendations generated by this study.

Nursing Research

The theory of elder abuse is in its infancy, just as the theory of child abuse was in the 1960s, and spousal abuse in the late 1970s and the 1980s. Although there are some similarities in the overall phenomenon of family violence, there are conceptual differences in the cause and effect patterns in each of the three areas. This study has attempted to ferret out some of the significant factors tending toward potential to abuse. However, as in any pioneering research effort, there were bound to be many unanswered questions that surfaced. The present study was completed with the participation of elderly caregivers, but needs to be replicated with younger caregivers, with non-family caregivers, and adapted for use with institutional caregivers (Scogin, et al., 1989; Tornstam, 1989).

In addition, since caregivers to the mentally ill tended to have a higher potential to abuse than caregivers to the physically ill, studies which examine this difference more thoroughly would be helpful. The two groups also differed in the way in which coping strategies were used, and these group differences may have contaminated the overall results with regard to coping patterns. It is possible, for example, that in a study of caregivers to the physically ill only, the results would

indicate a preponderance of problem solving coping strategies.

Further, the differences between mood disturbance and potential to abuse require exploration. Stress perception, so long implicated as a causative factor in cases of abuse, did not predict potential to abuse in this study-- would it with another subject group? Why, for example, did one method of coping (self blame) predict mood disturbance, but was inversely related to potential to abuse? And what was the role of personality variables such as locus of control (and there may be others) in the abuse picture?

Coping continues to be a dynamic subject for nursing research, because of the potential impact that effective methods of coping can have upon health maintenance, overcoming disease processes, and adjusting to a variety of human relations and situational problems. Effective coping, logically, should have an enhancing effect on mental well being, and an ameliorative effect on potential to abuse. Yet the results of this study did not permit that conclusion, since the strong relationships that the strategies usually considered effective had had with the exogenous variables in the earlier time ordering did not remain in regressions with either outcome variable. It was suspected that another factor was affecting their influence.

What this factor (or factors) may be requires further theorizing and changes in the model or the adaptation of a different model to more thoroughly explain the effects of coping. It was possible, for example, that personality variables played a more important part in potential to abuse than was previously thought. At any rate, not many studies on abuse have considered personality variables until recently, and there were few precedents for their placement and directionality in explanatory models. For instance, consider their placement between coping and total mood disturbance, instead of as exogenous variables. If a person was internally oriented and tried coping by problem solving, but that did not work, what effect would that have had on mood disturbance?

Social support, a strong variable in this study, had been the focus of many studies in the past. There seemed to be little doubt that it could be an effective deterrent to mood disturbance and potential to abuse, but there may be problems in trying to implement social support to the caregiver. First, providing community care supportive services is costly, in most instances, and may not be providing the right support at the right time to the right recipients (Edelman & Hughes, 1990). Second, there are gaps and overlaps, and knowledge deficits regarding resources. Third, there seems to be either a reluctance on the part of men caregivers to seek social support, or a

lack of ability to discern how the proffered support could be used. Nursing researchers would do well to investigate these factors, as well as doing a thorough assessment of the family social support potential.

The variable of the caregiver's own health, especially in an older caregiver, was crucial (McCann, 1988). Before doing any discharge planning, it is essential to investigate who will be providing the care, whether or not that person is able and knowledgeable enough to provide the care, and whether or not he or she knows what resources are available. Too often, in the experience of this researcher, these issues have not been addressed. In this research there were caregivers who were gravely disabled, attempting to care for a spouse even more gravely disabled, with little or no resources, because resources were not available or were not known about. In some instances, the caregivers had been in good health at the start of the caregiving relationship, but began to suffer failing health after months or years. When, under these circumstances, they fail at their tasks, can it be called abuse?

Nursing Practice

In addition to the areas discussed above (investigation, assessment, and planning) which also refer to nursing practice, there are opportunities for case finding, health counseling, and health teaching in the

areas of elder abuse. This study has focused on the quantitative aspects of elder abuse potential. However, the qualitative aspects have not gone unnoticed. Biopsychosocial issues in aging have not been addressed when considering the elderly caregiver. Potential caregivers need to be psychologically and socially prepared for caregiving, as well as educated to the physical aspects of the task. Emotional as well as instrumental support can be given by a caring nurse.

Further, the issue of abuse, intentional or unintentional, needs to be faced squarely as an existing possibility, and introduced at the time of caregiver preparation. The potential caregiver needs an opportunity to vent frustration and despair at being thrust into what may be a perceived as a burdensome role he or she does not feel confident in handling. The caregiver needs also to be helped with concrete problem solving (nursing procedures and their rationales are not inborn knowledge). Stress reduction techniques and anger management should be part of the preparation, as well as instruction in cognitive restructuring coping strategies that will help in seeing positive aspects in the situation. Finally, the potential caregiver needs to know where to turn for help. The practicing nurse must develop sensitivity to this need and sensitivity to discern when physical or psychological abuse or neglect is occurring. Support and training for

potential abusers, and persons who have actually abused their children, is now available. Similar programs need to be established for psychologically distressed caregivers of elders.

Nursing Education

As nursing moves from the confines of the hospital to community care, nursing education has an induced responsibility to prepare nurses for this arena of practice. As described in the previous paragraphs, nursing education needs to be structured so that new practitioners will know how to do an assessment of the community and its resources, will be prepared to investigate the family social support network, and will be comfortable in training the caregiver for his or her role. Further, it is essential that the developing professional nurse be imbued with a little old fashioned dedication, to become the nursing expert with the sensitivity needed to supply support and empathy. Nursing instructors serve as role models for their students, of course, so they must first prepare themselves by their own involvement.

Nurse educators have a civic responsibility as well. This responsibility involves informing the average citizen about the existence of elder abuse, preparing other disciplines (such as social welfare personnel) to intervene in cases of suspected abuse, establishing community

training programs and support groups for caregivers, and promoting legislation that will protect and compensate the abused. Knowledge about reporting laws-- what and when to report, to whom and by whom, must be part of the nurse's knowledge base so that he or she can disseminate this information to the public. Finally, a nursing education (and also education in other disciplines such as business, psychology, sociology, or education) that does not include gerontology as a component in this era of a rising elderly population is an incomplete education. Through an informed electorate, social policy makers need to be made aware of the effects of an inadequate income upon the potential to abuse, particularly in an older caregiving population.

Summary

Interest in studying the phenomenon of elder abuse is timely and began with a study of hospital discharge planning policies and their aftermath. This was followed by the researcher's experience in an extensive survey of the residential care facilities in New York State, where elder abuse was a scandal. Recently, a qualitative exploration of the caregiving situation in San Diego was afforded while working as a home care nurse and attending graduate school classes focused on gerontological issues.

This model testing study of elder abuse potential employed path analysis to examine relationships and the

influence of predictive variables on the two dependent variables, total mood disturbance and potential to abuse. Following a careful literature search, a theoretical framework was designed, which included the variables of locus of control, social support, health perception, stress perception, and coping as the predictor variables. Relationships between predictors and mood disturbance were supported by previous research; relationships between predictors and potential to abuse were predicated from the newly evolving theory of elder abuse.

The data were gathered by interviewing older caregivers, and analyzed by multiple regression procedures. The research met the validity criteria of the power analysis, and for internal and external validity according to Krathwohl (1985). Findings provided information on the phenomenon of potential to abuse for nursing education and practice, as well as directions for future research.

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APPENDICES

APPENDIX A

CONSENT FORM

DEMOGRAPHIC DATA FORM

HOLLINGSHEAD TWO-FACTOR INDEX OF SOCIAL POSITION

UNIVERSITY OF SAN DIEGO

CONSENT TO ACT AS A RESEARCH SUBJECT

You are being asked to participate in a study of the isues associated with caregiving. If you agree to participate, you will be asked about these issues, as well as about your general health, your personal views, your social circle, the stressful life events you have experienced, the ways in which you cope with stress, and the moods and satisfactions associated with your life. Data will be collected by pencil and paper check list or completion questionnaires. The data gathering sessions will last a total of approximately one to one and a half hours.

To preserve anonymity, your name and this consent form will not be attached to any of the question sheets. The data of the study will be analyzed in group form only. Your demographic data sheet, which does not contain your name, will become part of the group data. Only the researcher will see this consent form.

No discomfort is expected to ensue from this study. Participation is voluntary. You may refuse to participate or may withdraw from the study at any time. There is no agreement, written or verbal, beyond that expressed on this consent form. Please ask the researcher any questions you may wish at any time. For questions the researcher may be unable to answer, contact Dr. Mary Quayhagen at the School of Nursing. Thank you.

I have read the above and questions have been answered to my satisfaction. I agree to participate in this study on caregiving issues.

_____ Date_____
Signature of Subject

_____ Date_____
Location (e.g., San Deigo, CA)

_____ Date_____
Signature of Researcher

_____ Date_____
Signature of Witness

DEMOGRAPHIC DATA

1) Sex_____ 2) Race_____

3) Marital Status_____ 4) Your Age_____

5) Formal education:

A) Less than 7 years of school_____
B) Junior high school_____
C) Partial high school training_____
D) High school graduate_____
E) Partial college training_____
F) Standard college or university graduate_____
G) Graduate professional training_____

6) What is the highest level of occupation you have attained in your lifetime?_____

7) Is your residence: (check one)

A) A small apartment (studio or one bedroom)_____
B) A two or three bedroom apartment_____
C) A large (more than 3 bedrooms) apartment_____
D) A trailer_____
E) A small condominium (studio or one bedroom)_____
F) A large condominium (two or more bedrooms)_____
G) Small private house or mobile home (1 bedroom)_____
H) Private house or mobile home with 2-3 bedrooms_____
I) A large private house (more than 3 bedrooms)_____

8) How adequate is your living space?

A) More than adequate_____
B) Adequate_____
C) Less than adequate_____
D) Crowded_____

9) How many hours per week do you have the sole responsibility for furnishing total, continuous care of a dependent, ill or disabled adult 60 years-old or older, in your household?

Number of hours_____

10) How long have you been furnishing this care?

_____months _____years

11) How old is the person to whom you give care?_____

12) His or her relationship to you_____Dx_____

13) Persons in your household (Please state the number of persons in each of the following categories):

A) Children under age 5_____
B) Children age 5 to under age 13_____
C) Adolescents age 13 to under age 20_____
D) Adults age 20 to below age 40_____
E) Adults age 40 to below age 60_____
F) Adults age 60 and over_____

14) How many persons in your household are in *

Poor health_____ Fair health_____ Good health_____

* (Do not include the patient in this answer.)

15) How many hours per week do you work outside the home?

A) Do not work outside the home_____
B) Work less than 20 hours/wk outside home_____
C) Work 20 to 34 hours/wk outside home_____
D) Work 35 to 40 hours/wk outside home_____

16) With regard to income, do you find that it now

A) is adequate for your needs_____
B) is more than adequate_____
C) is less than adequate_____

17) Indicate, by placing a number in the blank, the person in your household who furnishes the largest amount of income (1), and the next largest amount of income (2).

Husband_____ Wife_____ Father_____
Mother_____ Son_____ Daughter_____

Other (who?)*_____

*Note: "Other" can mean a relative or friend not living with you, or it can mean an agency fund such as S.S.I., Social Security, Pension fund, etc.

18) What is the annual income for the household? (Check one)

A) Below $10,000_____
B) $10,000 to $20,000_____
C) $20,000 to 30,000_____
D) $30,000 to $40,000_____
E) $40,000 to 50,000_____
F) Above $50,000_____

APPENDIX B

LEVENSON LOCUS OF CONTROL SCALE

PERSONAL RESOURCE QUESTIONNAIRE

HEALTH ASSESSMENT SCALE

STRESS EVENTS QUESTIONNAIRE

COPING STRATEGIES INVENTORY

BENDIK COPING APPRAISAL LIFETIME MEASURE

PROFILE OF MOOD STATES

THE CAREGIVER AND THE RECIPIENT OF CARE

Scale I

Instructions: Here are a series of questions concerning your physical health. Please complete the form as indicated.

1. In general, how would you rate your health? (Please circle one answer.)

Excellent Good Fair Poor

2. In the past month, how many times have you seen or called your doctor? _____ times.

Scale II

Instructions: Here is a list of illnesses adults may experience. Please check those that are a chronic problem for you. Next, please check any illnesses which are new or for which your symptoms have been worse in the past month. Lastly, if you were confined to your home or in the hospital because of an illness, please indicate the number of days of confinement for each.

Illnesses	Chronic Problem		New/Worse Since Last Mo.		# of Days Confined: Past Month				
	Yes	No	Yes	No	0	1-7	8-14	15-21	22+
1. Heart trouble									
2. High blood pressure									
3. Hardening of the arteries									
4. Stroke									
5. Paralysis									
6. Tumor, cyst or growth (non-cancer)									
7. Cancer, leukemia									
8. Anemia									
9. Arthritis, rheumatism									
10. Asthma									
11. Emphysema or chronic lung prob.									
12. Sinus trouble									
13. Kidney or bladder problem									
14. Prostate or female complaints									
15. Diabetes									

Illnesses	Chronic Problem		New/Worse Since Last Mo.		# of Days Confined: Past Month				
	Yes	No	Yes	No	0	1-7	8-14	15-22	22+
16. Stomach Problems									
17. Intestinal disorders									
18. Liver or gall bladder complaints									
19. Bone fractures									
20. Back or spinal problems									
21. Thyroid or other gland problems									
22. Injuries from accidents									
23. Vision defects (not correctable with glasses)									
24. Hearing impairment									
25. Nervous system disorders									

Scale III

Instructions: Please check the correct answer to the questions below.

1. Have you taken tranquilizers in the past month?..Yes___ No___

2. If yes, how much compared to last month?
   More_____ Less_____ Same_____

3. Do you consider this a problem?.....Yes___ No___

4. Have you taken sleeping pills in the past month? Yes___ No___

5. If yes, how much compared to last month?
   More_____ Less_____ Same_____

6. Do you consider this a problem?.....Yes___ No___

7. Have you taken anti-depressant pills in the past month?
   Yes___ No___

8. If yes, how much compared to last month?
   More_____ Less_____ Same_____

9. Do you consider this a problem?.....Yes___ No___

10. Have you taken any other medicine?.....Yes___ No___

11. If yes, what medicine?_____

12. How much compared to last month?
More_____ Less_____ Same_____

13. Do you smoke?.....Yes___ No___

14. If yes, how much are you smoking now compared to last month?
More_____ Less_____ Same_____

15. Do you consider this a problem?.....Yes___ No___

16. At this time, would you say your appetite is:
Poor_____ Fair_____ Good_____ Too good_____

17. Have you noticed any change in your appetite over the past month?.....Yes___ No___

18. How is your weight now compared to last month?
More_____ Less_____ Same_____

19. Have there been any big ups or downs in the past month?
Yes___ No___
Amount of loss or gain_____

20. Do you drink any alcoholic beverages?.....Yes___ No___

21. If yes, is the amount you drink over the past year:
More_____ Less_____ Same_____

22. Like a lot of people, do you sometimes drink more than is good for you?.....Yes___ No___

23. Do you consider this a problem?.....Yes___ No___

24. Have you had trouble sleeping in the past month? Yes___ No___

25. If yes, what was the problem?

Nightmares_____
Trouble falling asleep_____
Awakening in the middle of the night_____
Other (specify)_____

26. How much do you sleep now? Number of hours_____

STRESS EVENTS QUESTIONNAIRE

INSTRUCTIONS

This checklist consists of events which are sometimes important experiences. We would like to find out what events have happened to you in the past year, or two to three years ago. Please read down the list until you find events that have happened to you personally, regardless of how important they were. Then indicate three things:

1. When did the event occur?
   In appropriate box in "Time period" column, check each event as many times as it happened.

2. Your feelings about the event now.
   In appropriate box in "Feelings re: event" column, check whether you felt:

   Very Happy Somewhat Happy Somewhat Unhappy Very Unhappy

   If an event happened more than once, check how you generally feel about this kind of event.

3. How much do you still think about the event?
   In the "Think about it" column, check whether you still think about the event:

   A lot Some Not at all

Remember, check only those events which you yourself have actually experienced.

SAMPLE

	Time period			Feelings re: event				Think about it		
	Past 2-3 years	Past 1-2 years	✓ Past ✓ 0-1 year	Very Happy	Somewhat Happy	✓ Somewhat Unhappy	Very Unhappy	A lot	✓ Some	Not at all
1. Major change in eating habits										

Instructions
Here is a list of events which have sometimes happened to others similar to you. Which of these has happened to you?

PERSONAL EVENTS	Time period			Feelings rei event				Think about it		
	Past 2-3 years	Past 1-2 years	Past 0-1 year	Very Happy	Somewhat Happy	Somewhat Unhappy	Very Unhappy	A lot	Some	Not at all
1. Major change in eating habits										
2. Major change in sleeping habits										
3. Major change in physical appearance										
4. Change in vision or hearing										
5. Change in memory or thinking processes										
6. Change in the level of physical activity										
7. Change in sexual behavior or function										
8. Change in ability to take care of yourself										
9. Change in ability to control your own life										
10. Personal injury or illness										
11. Lack of information regarding illness or treatment										
12. Occurrence of bad dreams or nightmares										
13. Preoccupation with death and time you have left										
14. Changes in the way you feel about birthdays, anniversaries, and holidays										

	Time period			Feelings re: event				Think about it		
	Past 2-3 years	Past 1-2 years	Past 0-1 year	Very Happy	Somewhat Happy	Somewhat Unhappy	Very Unhappy	A lot	Some	Not at all
15. Concentration on how your life might have been different										
16. Search for meaning and purpose of life										
17. Filling out complicated forms (wills, insurance, taxes, etc.										
18. Cited for traffic violation										
19. Problems getting access to health care, Social Security, housing, etc.										
20. Arrested for a serious violation of the law										
21. Declared incompetent (legally)										
EVENTS CONCERNING WORK										
22. Change in responsibilities at work										
23. Change in working hours or conditions										
24. Change in your ability to work										
25. Quitting your job										
26. Retirement from work										
27. Major change in financial situation										
28. Cease driving										
29. Doing a different type of work										

	Time period			Feelings re: event				Think about it		
	Past 2-3 years	Past 1-2 years	Past 0-1 year	Very Happy	Somewhat Happy	Somewhat Unhappy	Very Unhappy	A lot	Some	Not at all
EVENTS CONCERNING PHYSICAL ENVIRONMENT										
30. A move of your home or living situation to another town or neighborhood										
31. Giving up your home										
32. Change in your living situation (type of living quarters and household composition)										
33. Change in amount of space for personal use										
34. Change in amount of privacy										
35. Loss or absence of personally valued objects										
36. Change in the ability to come and go as you please										
37. Change in ease of getting around by driving or being driven										
INTERPERSONAL EVENTS										
38. Loss or long absence of spouse										
39. Loss or long absence of family member										
40. Loss or long absence of close friend										
41. A new friedship										
42. Major change in health of family member										
43. Loss or absence of loved pet										

	Time period			Feelings re: event				Think about it		
	Past 2-3 years	Past 1-2 years	Past 0-1 year	Very Happy	Somewhat Happy	Somewhat Unhappy	Very Unhappy	A lot	Some	Not at all
44. Change in social activities										
45. Change in number of social contacts with family, friends, and acquaintances										
46. Conflicts or intense disagreements										
47. Critical comments from others										
48. Familiar problems										
49. Divorce or separation										
50. Marriage (your recent)										
51. Change in religious activities										
52. Victim of crime										
53. Personal achievement										
54. Major change in intellectual or leisure activities										
55. Marriage of a family member, birth, or adoption										
56. Change in ease with which you manage social events										
57. Other events of importance to you (Please specify)										

COPING STRATEGIES INVENTORY*

The purpose of this questionnaire is to find out how people deal with stresses in life. Which of the following coping strategies do you use to cope with the problems we have just discussed?

For each strategy, please place a check in the column that best describes how likely you are to use it when confronted with your present problems.

HOW LIKELY ARE YOU TO:	Very Likely	Somewhat Likely	Not Very Likely	Not At All Likely
1. Wish you could change the way you felt?				
2. Accept sympathy and/or understanding from another?				
3. Sit down and talk out conflicts?				
4. Change or grow as a person?				
5. Expect the worst from every situation?				
6. Keep your feelings to yourself?				
7. Feel your faith influences your reactions to situations?				
8. Keep out of the way of others for a while?				
9. Talk to someone to find out more about the situation?				
10. Read/search for information about the situation?				
11. Change yourself so you can better handle the situation?				
12. Go over and over the situation in your mind?				
13. Go on as if nothing has happened?				
14. Daydream or imagine a better time or place than the one you are in?				
15. Talk to someone who can help?				
16. Try to find a fair compromise?				
17. Rediscover what is important in life?				
18. Become angry and irritable at those around you?				
19. Refuse to believe the situation has happened?				

*Quayhagen, M.P., & Quayhagen, M., 1980; Modified, 1983.

HOW LIKELY ARE YOU TO:	Very Likely	Some-what Likely	Not Very Likely	Not At All Likely
20. Seek God's guidance when making important decisions?				
21. Sit back and wait for things to work out?				
22. Discuss your concern about the situation with others?				
23. Draw on past experience from a similar situation?				
24. Concentrate on good aspects of the situation?				
25. Criticize or lecture yourself?				
26. Joke about what has happened?				
27. Fantasize or daydream about how things might work out?				
28. Get together with others who have had similar problems?				
29. Do something definite to remedy the situation?				
30. Come out of the experience better than when you go in?				
31. Blame yourself for the problem?				
32. Make light of the situation; refuse to get too serious about it?				
33. Use prayer to help you deal with this situation?				
34. Eat, drink or take a pill to take your mind off the situation?				
35. Read about how others have handled similar situations?				
36. Make several alternative plans for handling the situation?				
37. Remind yourself that bad situations can have some good?				
38. Feel that you brought the problem on yourself?				
39. Keep others from knowing how bad things are?				
40. Withdraw from the situation or problem?				
41. Ask someone you respect for advice?				

HOW LIKELY ARE YOU TO:	Very Likely	Some-what Likely	Not Very Likely	Not At All Likely
42. Complain to people in charge of the situation?				
43. Find new faith or important truth about life?				
44. Stick to yourself and stay away from others?				
45. Try to forget the whole thing?				
46. Feel your faith sometimes restricts your actions in this situation?				
47. Wish the situation would go away or somehow be over with?				
48. Talk to someone about how you feel?				
49. Rehearse in your mind the plan for handling your problem or situation?				
50. Convince yourself that things will get better?				
51. Feel lost and confused about what to do next?				
52. Not let the situation bother you; refuse to think about it?				

♀

Instructions: During their lifetimes, people often face situations of moderate or severe crisis proportions. This questionnaire is designed to find out what people are apt to do in some of these situations. The situations described here are imaginary, but they represent things that could happen and probably have happened to numerous people. There are no right or wrong answers. For some of the situations, you may rightly think that the persons would do any or all of the suggested behaviors! Therefore, score the answers according to how apt you would be to make such a response. Please place an X in the appropriate box.

Situation One

Edith has just been fired from a job she worked at for ten years. She and a co-worker made a mistake--Mary has been caught "punching in" for Edith. What might Edith say or do when she gets home? (For example, what might you say or do?) Some possible answers are listed below. Please check your choice.

	Most like me	Somewhat like me	Not usually me	Definitely not me
A. Slam the door. This action would be				
B. Use some relaxation exercises before breaking the news. This action would be				
C. Say, "No big deal. I'll get another job tomorrow," even though she knows jobs are scarce now. This action would be				
D. Express regret that it happened and explain that what occurred was a direct result of a faulty decision she made. This action would be				
E. Explain what happened, then vow to try hard to get job and to keep it next time. This action would be				
F. Edith doesn't say anything about what happened, and tries to keep from thinking about it. This action would be				
G. Edith calls everyone she knows, trying to get emotional support, and asking her friends if they know of any jobs available. This action would be				
H. Edith spends the rest of the day angrily blaming herself for what happened. This action would be				

Most like me	Somewhat like me	Not usually me	Definitely not me

I. Edith explores alternatives with friends and family. (For example, given an apology, the boss may reconsider the firing.) This action would be_____ ☐☐☐☐

J. Edith says "everyone" punches in for their friends, and admits she would probably do it again on another job. This action would be_____ ☐☐☐☐

Situation Two

Larry and Susan have been married for seven years, and they have two children. Larry has been unemployed for six months. Neither he nor Susan have had success finding work. Any money they had saved is now gone, and the three-year-old is sick. What might they do in such a situation? What would you be inclined to do? Several possibilities are listed below. Please place an X in the box of your choice.

A. They would avail themselves of a service like Catholic Charities. This action would be_____ ☐☐☐☐

B. They would blame their troubles on a cruel twist of fate. This reaction would be_____ ☐☐☐☐

C. They would do a lot of drinking to forget their troubles. This action would be_____ ☐☐☐☐

D. They would set some new priorities; for example, they might have to consider selling their car to pay bills. This behavior would be_____ ☐☐☐☐

E. They become angry with society in general, and plan how they will rob a 7/11 convenience store. This reaction would be_____ ☐☐☐☐

F. They discuss different ways of earning money-- a cottage industry, door-to-door sales, handyman jobs, etc. This action would be_____ ☐☐☐☐

Most like me	Somewhat like me	Not usually me	Definitely not me

G. They plunge into the depths of despair over the hopelessness of their situation. This reaction would be_____ | | | | |

H. They let things slide. The house is dirty and messy, their personal appearance is unkempt, and the children are neglected. This action would be_____ | | | | |

I. They take some assertiveness training courses offered free in adult education, and develop job-hunting skills that are successful. This action would be_____ | | | | |

J. They reinforce each other's strengths, each believing that they can overcome this problem through their own efforts. This action would be_____ | | | | |

Situation Three

It is three months since Betty's husband died. People have gone about their business since then and have left her to her own devices, although they were very supportive immediately after Fred died. What can Betty do, now that Fred is gone? They were married for 30 years, but had no children. What might you do, in Betty's situation? Below are some possible answers. For each, check how you might respond.

A. Betty has removed all reminders of Fred, and she tries not to think of him at all. This reaction would be_____ | | | | |

B. Betty realizes that she does have the ability to change her situation; she is in charge of herself. This reaction would be_____ | | | | |

C. Betty has tried all sorts of things to relieve her loneliness, but nothing she has tried has helped. Nevertheless, she continues to use these same methods-- putting an ad in the "personals" section of the newspaper, for instance. This action would be_____ | | | | |

Most like me	Somewhat like me	Not usually me	Definitely not me

D. Betty attends meetings for widows at her church. She asks people there about their experiences to learn how to help herself. This action would be____

E. Betty has become a "secret drinker" since Fred's death. This action would be____

F. Betty has made a list of the things she needs to do first, then next, and so on, in order to get her life going again. This action would be____

G. Betty wonders why her friends are not as attentive as they were when she was first bereaved, and does not like this lack of sensitivity. She thinks that her friends do not like her as much as she thought they did. This reaction would be____

H. Betty feels that her husband was taken from her much too soon. These should be the best years of their life! If his company hadn't been so demanding, Fred would never have had his fatal coronary! This reaction would be____

I. Betty continues to seek solace in prayer. Such action would be____

J. Betty decides that there are things she may be able to do with her life. For example, she could go to school, get a job, or do volunteer work. Such action would be____

Situation Four

Jack and Eva have been married for 25 years. Jack is an executive with a high income. Eva has played the perfect executive wife for years. Lately, Eva has been concerned about Jack because he does not look well, pays less attention to his appearance, is forgetful, and lets things slide. She insists that Jack go to their physician, who later takes Eva aside and says, "Face it, Eva. Your husband is an alcoholic!" Eva is shocked. She did not realize the extent of his drinking-- socially, at the office, and at home. How will Eva handle this situation? What might you do? Following are some actions that might be taken. For each, indicate how like your way of handling the situation the action is.

Most like me	Somewhat like me	Not usually me	Definitely not me

A. Eva reflects about some of the people they know socially; many of them drink heavily. So what's the big deal? Drinking is a way of life in their social circle. This reaction would be_____ ☐☐☐☐

B. After talking it over with Jack, Eva realizes there are some hard decisions to be made. What sort of treatment program is best, for example? This response would be_____ ☐☐☐☐

C. Consideration of treatment programs results in their choosing one. It is a very expensive program, but has a high rate of success. This action would be_____ ☐☐☐☐

D. Even though Jack has begun a treatment program, Eva continues to worry and fret about his addiction. What if the treatment is not successful? What if he has some physical damage from drinking? This behavior would be_____ ☐☐☐☐

E. Eva recognizes Jack's alcoholism problem as one with which they both must strive and contend. They need to defend the marriage that has been so good for so many years. This reaction would be_____ ☐☐☐☐

F. Eva views the whole situation as hopeless. She has seen alcoholics before. They end up on skid row. This reaction would be_____ ☐☐☐☐

G. Eva searches for an understanding of Jack's addiction. She talks with others who have dealt with the problem, and reads books written by persons who have been involved with alcoholism. This action would be_____ ☐☐☐☐

Most like me	Somewhat like me	Not usually me	Definitely not me

H. Eva acknowledges that Jack has a problem but thinks that nothing much can be done about it. They will live with the problem as best they can. This reaction would be_____ ☐☐☐☐

I. Eva expresses guilt for Jack's addiction. Perhaps she has been too busy with her own concerns to pay enough attention to her dear husband. This response would be_____ ☐☐☐☐

J. Eva considers herself a resourceful person and believes she can effect change through her own efforts. She vows to do all within her power to help Jack and to save their marriage. This action would be_____ ☐☐☐☐

INSTRUCTIONS: In the caregiving relationship, the following 11 items refer to you, as the caregiver. Please circle the response which applies.

1) I can get out socially or have friends come to my home.

Almost always Some of the time Never

2) There is someone close who comes over to relieve me or to help me when I need a break.

Almost always Some of the time Never

3) I believe that the recipient of my care is not as ill or disabled as he or she appears to be.

Almost always Some of the time Never

4) I think that aging is an interesting part of living, and gives people different opportunities for growth.

Almost always Some of the time Never

5) I am constantly being advised, criticized, and directed by the family member for whom I am providing care.

Almost always Some of the time Never

6) Taking care of a family member gives purpose and meaning to my life.

Almost always Some of the time Never

7) I put the needs of the family member for whom I care first, ahead of my own needs, which are secondary.

Almost always Some of the time Never

8) I think I should be able to do more for this family member than I seem able to do.

Almost always Some of the time Never

9) I think this family member should know better than to do some of the foolish things he or she does.

Never Some of the time Almost always

10) Despite how this family member or others may feel, I know I am a capable person and am doing my best.

Almost always Some of the time Never

11) Caring for this person interferes with my privacy.

Almost always Some of the time Never

THE FOLLOWING 11 ITEMS refer to the family member for whom you are providing care:

12) In general, this family member's health is

Good Fair Poor

13) Although he or she is dependent on me for necessary care, in other respects this family member is quite independent and self-sufficient.

Almost always Some of the time Never

14) This family member was very close to and dependent on another family member, who is now deceased.

Almost always Some of the time Never

15) Our conflicts have always tended to be more physical than verbal.

Never Some of the time Almost always

16) He or she has friends who call or visit.

Almost always Some of the time Never

17) He or she has a positive attitude about growing old.

Almost always Some of the time Never

18) He or she is forgetful and does things which are unsafe

Never Some of the time Almost always

19) This family member tries to control others by giving them money or gifts.

Never Some of the time Almost always

20) His or her savings have been exhausted.

Yes____ No____ He or she had no savings____

21) If and when this family member is entitled to some financial aid, he or she refuses to apply for it.

Never Some of the time Almost always

22) His or her needs are a drain on the family budget.

Never Some of the time Almost always

APPENDIX C

LETTER OF INTRODUCTION TO AGENCIES

ANNOUNCEMENT TO CAREGIVERS

EXPERIMENTAL SUBJECT'S BILL OF RIGHTS

7415 Ballinger Ave.
San Diego, CA 92119

July 18, 1989

To Whom it May Concern:

I am a University of San Diego nursing major doing a study on the stressful experiences of senior caregivers. This is my doctoral research for the degree of Doctor of Nursing Science (DNSc).

During my long years of experience as a practicing R.N., it has come to my attention that there is a group of elderly caregivers (age 55 and over) who furnish full or partial care for an ill or disabled senior who is living with them. Often these caregivers labor under a heavy burden of stress, not only from the physical stress of the caregiving itself, but from other stresses that are so much a part of the lives of the older citizens.

My purpose in choosing caregiver stress and coping as my research topic is to assess the way in which these factors affect the lives of the caregiver and the person receiving care. Second, the research effort is directed toward discovering what help the caregiver needs, and how that help can best be furnished by society, especially to the shut-in and overwhelmed caregiver. The accompanying Research Proposal, which was approved by the Committee on Protection of Human Subjects of the University of San Diego, describes the study in more detail.

There are two methods of gathering data for the study, by interview or by mail. I would greatly appreciate any assistance you can provide toward access to potential study participants. For the mail returns, a self-addressed, return postage envelope is provided for each person's completed questionnaires. Each participant will receive a summary letter of the study results on completion of the research, later in the year. Thank you.

Sincerely yours,

(619) 698-0816

Marjorie F. Bendik, R.N., MSN,
DNSc candidate, U.S.D., and
Assoc. Prof. Psychosocial Nurs.
Point Loma Nazarene College

ANNOUNCEMENT

I am a University of San Diego nursing major (also a senior citizen), doing a study on the stressful experiences of senior caregivers. I am looking for study participants, age 55 and over, who are furnishing full or partial care for an ill or disabled senior who is living with them. In exchange for an hour's mutually arranged interview time with the caregiver, I offer any of the following that would meet caregiver needs:

Transportation: I agree to drive the patient to the doctor, beauty parlor, day care, or religious services. (Depending on mutual scheduling considerations.)

Consultation: As an R.N. skilled in home care, I am able to offer assistance in problem solving of care or resource issues.

Respite Care: I offer to stay with the patient while the caregiver goes shopping or attends to other needs. Or, I will do errands or help with a meal, etc.

Friendship: If you want to talk about anything, call me! Keep in touch; I care.

Call Marjorie Bendik, R. N., at 698-0816 any time, to talk or to leave a message. Thank you.

EXPERIMENTAL SUBJECT'S BILL OF RIGHTS

Any person who is requested to consent to participate as a subject in a research study involving a medical experiment, or who is requested to consent on behalf of another, has the right to:

1. Be informed of the nature and purpose of the experiment.

2. Be given an explanation of the procedures to be followed in the medical experiment, and any drug or device to be used.

3. Be given a description of any attendant discomforts and risks reasonably to be expected from the experiment.

4. Be given an explanation of any benefits to the subject reasonably to be expected from the experiment, if applicable.

5. Be given a disclosure of any appropriate alternative procedures, drugs or devices that might be advantageous to the subject, and their relative risks and benefits.

6. Be informed of the avenues of medical treatment, if any, available to the subject after the experiment if complications should arise.

7. Be given an opportunity to ask any questions concerning the experiment or the procedures involved.

8. Be instructed that consent to participate in the medical experiment may be withdrawn at any time, and the subject may discontinue participation in the medical experiment without prejudice.

9. Be given a copy of a signed and dated written consent form when one is required.

10. Be given the opportunity to decide to consent or not to consent to a medical experiment without the intervention of any element of force, fraud, deceit, duress, coercion or undue influence on the subject's decision.

If you have any questions regarding a research study, the researcher will be glad to answer them.

I acknowledge that I have received, dated and signed a copy of this Experimental Subject's Bill of Rights before consent to participate in any medical experiment has been given.

Dated:_____ _____

APPENDIX D

UNIVERSITY OF SAN DIEGO

COMMITTEE ON PROTECTION OF HUMAN SUBJECTS

June 14, 1989

No human subjects will be involved in this research prior to meeting the requirements of the Committee on the Protection of Human Subjects (CPHS). This project will not be begun until the researcher receives approval of the project from the CPHS. I agree to comply with all of the directives of the CPHS, and respectfully request a review of my proposal. Thank you.

Marjorie F. Bendik, R. N.

Research Proposal

Background and Purposes of Research

The purpose of this study is to examine the effects of caregiving status and other major influences upon physical health, stress perception, coping efficacy, and mental well-being in a elderly population. Mental well-being, thus assessed, will then be compared with an indexing variable, potential to abuse, the measure of which is based on the newly emerging theory of elder abuse. The results of the study should provide a base of nursing knowledge about the effects of caregiving status on the mental health and potential to abuse in an elderly population, and to point the way to nursing interventions which will provide support for elderly caregivers and increase their ability to cope.

Coping with stressful life events and their effects on people's lives has been the focus of much research in recent years (Burckhardt, 1985; Hollingshead & Redlich, 1958; Holmes & Rahe, 1967). From all the research on life events, stress, and coping, one theme emerges: these three interacting factors are individual and situation dependent (Folkman & Lazarus, 1980; Kobasa & Puccetti, 1983; Pearlin & Schooler, 1978). In some situations, and with some persons, the effects of stressful life events are devastating and may precipitate an episode of mental illness (Dohrenwend & Dohrenwend, 1981). On the other hand, other individuals are able to cope with the worst possible crises situations or episodes of sustained stress, yet still maintain high level mental and functional well-being (Caplan, 1981; McNett, 1987). What factors account for these individual differences in the way that stress is perceived? How do the effects of sustained stress, such as the stress from a continuing caregiver role, influence mental well-being? What determines the level of coping effectiveness in individuals? What parts do hardiness and social support play in coping effectiveness? These intriguing questions provide the focus for an investigation into the variables influencing coping and mental well-being in an elderly population.

One situation, with which elders today often have to cope, is the assumption of a caregiver role. Gerontological research, in particular, has begun to examine the strain of caregiving in an aging population (Cantor, 1983; Robinson, 1983; Zarit, Todd, & Zarit, 1986). In the stress literature, it is the perception of stress by the individual that has the power to influence other variables, such as coping effectiveness and mental well-being (Cantor, 1983; Zarit, et al., 1986). In these studies, stress perception was inversely associated with mental well-being in caregivers. More recently, the literature on burnout has exposed the negative effect of high stress preception in the caregiving situation upon the caregiver's mental well-being and ability to cope, resulting in patient abuse and neglect (Benner & Wrubel, 1989; McCranie, Lambert, & Lambert (1987). What has not been examined, however, is the influence of mental well-being in

the elderly, family caregiver upon his or her attitudes toward and activities with the recipient of care. This study will compare these factors.

In the past few years, research on caregiving has assumed prominence in the literature (Cantor, 1983; Scott, Roberto, & Hutton, 1986). The consensus seen in these studies is that caregiving has a detrimental effect on the mental well-being of the caregiver, although a recent study by Colerick & George (1986) indicates that this effect can be ameliorated by assistance to the caregiver. This study also refutes the findings from other research, in that the results showed that increased caregiver burden does not necessarily increase stress perception in the caregiver. However, it may result in lower coping efficacy (Robinson & Thurnher, 1979). Although caregivers may perceive stress and suffer strain, only one study was found which linked caregiving status with the use of effective coping strategies (Quayhagen & Quayhagen, 1988). More research in this area is obviously needed.

Coping responses have been examined, as personality variables affecting mental well-being, by numerous authors in the past (Billings & Moos, 1981; Folkman & Lazarus, 1980; Pearlin & Schooler, 1978). Others have focused on distress and its antecedents, while not including coping responses (Arling, 1987; Hirsch & Rapkin, 1986). The role of coping in buffering the effects of stress has been explored by several authors (Billings & Moos, 1981; Kessler, Price, & Wortman, 1985). Foster and Gallagher (1986) linked coping in a positive fashion to mental well-being. To explore this relationship is a major concern of the present study.

A limited number of studies were found which dealt specifically with the effects of physical and psychosocial factors indigenous to an elderly population in their attempts to cope with perceived stress. An intent of this study, therefore, is to examine and describe the effects of hardiness, social support and physical health upon stress perception, coping efficacy, and mental well-being in an elderly population of caregivers. It is expected that the results may differ from those which may be obtained by a study of a younger population. The anticipated discrepancy is based upon the notion that the elderly have experienced many more life situations than younger persons, and may have developed greater coping ability over time (Manfredi & Pickett, 1987).

Conversely, older individuals may be less efficacious copers than younger persons, because of being at greater physical and social disadvantage or because of the unrelenting nature of their problems (George & Gwyther, 1986; Zarit, et al., 1986). Before such comparisons can be made, however, it is necessary to have a data base on coping effectiveness in an elderly population. To obtain the data base is important in this study. The significance of such a data base for nursing becomes apparent when it is considered that: 1) the

elderly are the fastest growing segment of the population (Robinson, 1986), 2) three times as many impaired persons are living at home than in all institutions combined (Bowers, 1987), 3) about 50% of the caregivers are the impaired elder's spouse (Poulshock & Diemling, 1984), 4) the spouses and other elderly caregivers are the highest risk group among caregivers because of enduring stress, failing health, and financial problems (Cantor, 1983), and 5) an increasing number of elderly people are discharged earlier, and sicker, to home from the hospital (Waters, 1987). Cantor (1983) asks us to consider what can be done to ease the burden of caregiving for the good of the family.

Research Methodology

Subject population: One hundred ten adults age 55 and over, living in private residences, will participate in the study. They will be adults able to care for themselves.

Facilities where research will be conducted: Subjects will be recruited through physician referrals, and from senior citizen centers, church groups formed for elder activities, and the following organized groups:

1) Alzheimer's Disease & Related Disorders Association,
2) Association for the Help of Retarded Children & Adults,
3) Head Injury Support Group, and
4) Chronic Obstructive Pulmonary Disease Support Group.

Persons agreeing to participate will be asked to complete data gathering forms at the facilities or in their homes.

Research Procedure or Protocol: Access and permission to recruit subjects will be obtained from physicians and from the various agencies. Individually and at assemblages of the prospective subjects, the study will be explained as research examining the effects of the caregiving role. (The terms "abuse and neglect" are not part of any of the data gathering instruments, and will not be mentioned.) Informed consent will be obtained from each subject. A standard consent form will be used (see Form C). Confidentiality of responses will be acertained.

Measurement of the variables will be achieved with a variety of pencil and paper instruments. After a pilot test, (Aug. 1989) a substitution of instruments was made for two of the variables, with Dr. Quayhagen's approval. Levenson's Locus of Control scale was substituted for the Personal Views Survey, since the latter is lengthy and seemed to confuse some participants. Also, a new instrument, the Stress Events Questionnaire (SEQ) replaces the Stokes/Gordon Stress Scale (SGSS), since the SEQ measures stress perception by the individual more accurately than does the SGSS, which is based on normative stress values. Copies of the two replacement instruments accompany this proposal. A debriefing session will follow the

administration of the instruments. During this session, subjects will be encouraged to ask any questions and to express their feelings and concerns on being a part of the study. Concerns will be resolved by the researcher. Subjects will be told approximately when they can expect to have the researcher's report about the study.

Demographic data will be descriptively analyzed. In testing the causal model for the study, the data will be group analyzed and subjected to a series of regression analyses through linear structural equations, as appropriate for this predictive study. Beta weights will be compared to establish probability levels and to determine the amount of variance accounted for by each variable. A comparative correlational analysis will then be made, of the outcome variable, mental well-being, with the indexing variable, potential to abuse. A simplified model will be devised, based upon the complete analysis.

Estimated duration of subject participation and of the study: The data gathering session will be approximately one to one and a half hours duration, for the subjects. The procedure is expected to extend over about eight weeks. The data analysis and written report of the study will consume an additional six to seven months of the researcher's time.

Subject's Risks/Benefits

Potential risks: Minor fatigue is the only risk anticipated from participation in the study.

Risk management procedures, including informed consent procedures: Participation in the study will be entirely voluntary; subjects may withdraw at any time. Confidentiality will be maintained throughout the study; only the researcher sees the consent form, where the subject's name appears. Data gathering will be in the privacy of the subjects' homes. Consent will be informed in terms of explanation of the study purpose and procedures, addressing the issue of minor fatigue, assurance of confidentiality, and statement that the participation is voluntary. Coded data, key to the code, and consent forms will be stored and locked securely.

Potential benefits: The only benefits to the subjects are inherent satisfaction in having participated in a study of potential value in nursing research and practice, and an opportunity to have the results of the study shared with their interest group.

Risk/benefit ratio: Neither risks nor benefits of particular import for the individual subjects are expected to ensue from this research.

Expense to subjects: No expense will be incurred by the subjects as a result of participating in this study.

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ORIGINAL INSTRUMENTS PLANNED FOR THE STUDY

CONCEPTS	INSTRUMENTS	AUTHOR/DATE	REFERENCE
Hardiness (changed after pilot)	Personal Views Survey (PVS)	Kobasa & Puccetti, 1985	Personality & Social Psychology, 45, 839-850
Perceived Social Support	Personal Resource Questionnaire (PRQ85)	Brandt & Weinert, 1985	Nursing Research, 36, 273-277
Perceived Physical Health	Health Assessment Scale (HAS)	Markides & Martin, 1979	Research on Aging, 1, 97-112
General health rating			
Measure of illness		Rosencranz & Pihlblad, 1970	Journal of Gerontology 25, 129-133
Health habits & Problems		Demi, 1978	UCSF, unpublished dissertation
Stress Perception (changed after pilot)	Stokes/ Gordon Stress Scale (SGSS)	Stokes & Gordon, 1988	Nursing Research, 37, 16-19
Coping Efficacy	Coping Strategies Inventory (CSI)	Quayhagen & Quayhagen, 1982	Research on Aging, 4, 364-377
Positive & Negative Coping	Bendik Coping Appraisal Lifetime Measure (B-CALM)	Bendik, 1987	Approved by CPHS, 4/12/88 (Now has psychometric properties)
Mental Well-Being	Profile of Mood States (POMS)	McNair, Lorr, & Droppleman, 1981	EDITS manual for the POMS
Potential to Abuse	(Modified) H. A. L. F. (attached)	Ferguson & Beck, 1983	Geriatric Nursing, 4, 301-304
Demographic Data sheet	(attached)		