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SOCIAL SUPPORT OF CHINESE ELDERLY: AN EXPLORATORY STUDY IN CALGARY

by

ANGEL YUEN HUNG LI

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ABSTRACT

This study is an attempt to identify the factor structure of social support measures for Chinese elderly in the city of Calgary. Four measures were selected to operationalize emotional and instrumental support. They were administered to 100 Chinese elderly as part of a structured interview and included demographic data, health status, depression, and life satisfaction. The study also represents an attempt to understand the social support systems of the Chinese elderly in Calgary.

The results provide evidence that social support is a multidimensional construct including both subjective and objective measures of emotional and instrumental factors. A principal axes factor analysis followed by oblique rotation generated a five factor solution. The derived factors were interpreted as (I) perceived emotional and instrumental support from friends and neighbors, (II) perceived emotional support from family members, (III) instrumental support from relatives, (IV) satisfaction of social relation, and (V) frequency of contacts.

These five dimensions exhibit different relationships with depression, economic factors, life satisfaction, marital status, gender, formal group participation, and physical health measures. The data provides some serendipitous evidence that the elderly who perceived they have support from family members, friends, and neighbors are more likely to report that they are in good physical health and are less depressed. There is also evidence that the demographic profile of the Chinese family is changing. These changes in family structures and social environment lead to a gradual shift of support resources.

Further research is needed to improve the instruments and to assess the generalizability of the current findings to a larger Chinese sample. Research is also needed to understand the role of the family in the support networks and in the dynamics of the formal and informal support interface. This would promote understanding about changes in cultural familial patterns of the Chinese elderly in Canada.

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CHAPTER 1

INTRODUCTION

In the past two decades, the concept of social support has received increased attention. Many investigations have suggested that social support can directly affect physical and emotional health as well as buffer stressful life events. Cobb (1976), one of the early investigators, examined the role of social support in a variety of life settings, including pregnancy, recovery from illness, bereavement, and aging. He concluded that social support reduces the severity of physical and emotional illness during crisis.

The positive role of family members and friends in the promotion of health and prevention of illness has gradually become an area of research interest. Previous research has investigated the role of the family as the source of a wide variety of problems, most notably those associated with the burdens and responsibilities of family, and ethnic, and social group membership (Heller, 1979). The emphasis on the positive role of social support on family and friends is a new one.

Within the last 5 years, the amount of research on social support has expanded greatly. One of the reasons for its popularity is that the term social support is easy to understand and meaningful to the lay public. Interest in this topic also comes at a time when public formal resources are becoming increasingly inadequate to meet the demand to care for the old, the sick, and the frail. This is a critical issue in gerontology. The changing demographic patterns of North America make care of the elderly a heavy financial burden for the public (Rathbone, Hooyman & Fortune, 1985). The notion that informal support from family, friends, and neighbors may play an important role in maintaining health

and decreasing susceptibility to illness among elderly has thus emerged as an important social and public policy priority (Kiesler, 1985). Social support as a mediator of well-being in the elderly is of particular interest to many gerontological researchers (Treas, 1977; Kahn, 1979; Wan, 1982; Gallo, 1984; Coe, et al., 1985). The aged, they have pointed out, are at high risk both for illness and for disruptions. Their traditional sources of social support, can be disturbed by the death of a spouse, retirement, or sudden geographic relocation. In times of major life events and chronic life strains, research indicates that individuals with strong social support will be protected from developing symptoms of psychological distress (Thoits, 1984).

The study of social support and gerontological health is currently the subject of considerable research (Kaplan et al., 1977; Cohen and Brody, 1981, Cohen et al., 1985, 1986; Pearlin et al., 1981; Berkman, 1984). Previous research suggests that social support may play a critical role in the determination of general mental health (William et al., 1981), psychological distress (Turner, 1981), well-being (Wan, 1985; Ward, et al., 1984), physical symptoms (Gore, 1978), and mortality (Berkman & Syme, 1979; Blazer, 1982). Wan and Weissert (1981) found that the presence of social support had a positive effect on the physical and mental health in an elderly community population.

In an epidemiological study, Berkman and Syme (1979) studied the relationships between social ties and mortality in a follow-up of 6,928 community subjects over a 9-year period in Alameda County, California. They found that people who lacked social and community ties were more likely to die from various causes such as ischemic heart disease, cancer, diseases of the digestive and respiratory system, accidents,

suicide, etc. in the follow-up period than those with more extensive contacts. Blazer (1982) also demonstrated there is a direct beneficial association between social support and mortality in a community sample consisting of 331 persons, aged 65 years and older. These results have prompted researchers to hypothesize that factors such as social support may be an important mediator of health outcomes. On purely theoretical grounds one would expect the social aspects of people's lives to have an impact on their health as well as for a wide range of physical and psychological conditions.

The concept of social support as a mediator of well-being originated from the recognition that the social aspects of an individual's life provide, not only noxious, but also protective, stimuli (Cassel, 1976; Cobb, 1976). Social support is a particularly attractive concept as it seems easier to strengthen support mechanisms through intervention than to decrease social stress (Cassel, 1976). Research indicates that the greater the support the individual receives through close relationships with family members, friends, acquaintance, co-workers, and the larger community, the less likely it is that the individual will experience stress or illness (Dean & Lin, 1977; Nuckolls et al., 1972).

Some factors associated with the aging process reveal the significance of social support. For instance, the elderly are at risk of losing significant attachments from the social environment. Social isolation has been demonstrated to be related to an increased incidence of psychiatric disorders in the aged (Lowenthal & Robinson, 1976). Older people may also need increased social support, both in terms of the provision of tangible services and in their perception of the dependability

of network members. Social networks were found to be important to the psychological well-being of the elderly since they preserve the aging individual's continuity in identity and reduce demoralization in later life (Blau, 1961). The precise mechanisms in this process are still unclear. According to Caplan (1981), social support reduces the impact of stress by allowing the stressed individual to have a better understanding of the situation and to develop a more sensible plan of action to deal with the problem using feedback from others. Caplan also suggested that social support can enhance one's positive self-image and assure him or her that although a situation may be difficult, it can be tolerated and that successful outcomes will follow his or her actions.

Despite the intuitive appeal of the positive tie between social support and well-being, there is no adequate empirical confirmation. Conner et al., (1979) found that both number and frequency of social contacts were unrelated to life satisfaction. Although children play important roles in the support networks of the elderly, family availability and interaction exhibit little relation to subjective well-being (Glenn & McLanahan, 1981; Hoyt et al., 1980). A recent study found that involvement with kin, friends, and neighbors and access to instrumental and expressive support were only weakly related to overall morale (Ward et al., 1984).

One of the reasons for these inconsistent findings has been the lack of attention to the conceptual and methodological properties of measures of social support (Thoits, 1982; Revicki & Mitchell, 1986). Most investigators have not attempted to formulate a precise conceptual definition of social support, and few have attempted to develop valid or reliable indicators of the concept. Researchers such as Myers et al.

(1975), Eaton (1978), Brown et al. (1975), and Lowenthal and Haven (1968) extracted items from available data (e.g., presence or absence of spouse, confidant, live alone or with others), term these items social support or social integration, and then proceed with analysis. Conceptual definitions are not attempted. The imprecise conceptualization has, in many cases, resulted in questionable, possibly invalid, operationalizations.

Another related conceptual problem is treating social support as an unidimensional construct. A growing number of researchers (e.g., Dean and Lin, 1977; House, 1981; Thoits, 1982) assert that social support is a multidimensional concept. The amount, types, and sources of support are equally important dimensions when assessing the construct. Neglect of multidimensionability seems to be especially problematic for work in this area.

There has been no agreement as to how to define social support. It ranges from parallel concepts such as social integration, (Myer et al., 1975) ego strength (Nuckolls et al., 1972), and surrogate empirical variables (e.g., the use of marital status as an indicators of social support, Berkman & Syme, 1979; Paykel et al., 1980; Thoits, 1982), to more elaborate conceptualizations and syntheses such as the work of Bowlby (1969), Cobb (1976), Gottlieb (1981), Henderson (1977) and others. Although definitions continue to display confusion and diversity, there appears to be an emerging consensus that the concept is multi-dimensional (Thoits, 1982; Dean and Lin 1977; Broadhead et al., 1983; Lin, Dean, & Ensel, 1986, Revicki and Mitchell, 1986). However, there is not yet an agreement as to what these dimensions are.

A few researchers (e.g., Lin, Dean & Ensel, 1981b; Donald & Ware, 1984) have made systematic attempts to develop social support scales. Scales are often constructed in an ad hoc manner; or proxy measures such as marital status are used as indicators of social support. Some researchers contend that quality of social support (i.e., quality or content of social relationships) is a better predictor of health-related outcomes (Broadhead et al., 1983; Blazer, 1982; Donald & Ware, 1984; Ward et al., 1984) than the quantity of social support. Other researchers have found that subjective measures of social support were more important than objective measures in explaining the variance in interviewer-rated mental health, self-rated mental health, and MMPI scores (Harel & Deimling, 1984). The most serious shortcoming of these measures is that they offered no explicit or precise conceptual definitions of their terms (Thoits, 1982).

Moreover, most studies of social support and health combine different subscales into a single global measure of support. According to Thoits (1982), treating social support as a unidimensional construct may dilute its statistical associations with other variables and may fail to isolate the relative importance of the specific effects of different attributes of support. Thus, these researchers suggest that it is necessary to specify the structure, nature, and the degree of support from varying sources in the support system to determine how social relationships affect mental and physical health and facilitate adjustment to life changes. The identification and measurement of social support as a multidimensional construct will provide insight into the dynamics of social support and its association with health and well-being in the elderly.

In addition, there is no empirical evidence to support the view that these measures operate similarly in different social and cultural contexts. Other issues include determining whether social support is distributed similarly across population subgroups, and if there are similar associations obtained between measures of social support and morbidity in these subgroups (Mueller, 1980). It is important to examine the distribution of social support by subgroup characteristics such as ethnicity. This information not only has methodological implications but is of interest in its own right. McQueen and Celentano (1982) suggest that there is little baseline data on social support regardless of how it is measured. Some current measures of social support can be employed in different ethnic groups to contribute baseline information. Moreover, an examination of the demographic variables associated with social support in the Chinese ethnic group would provide some indications of whether or not measures operate similarly in this group. This data may also be used to address substantive issues such as whether or not there are ethnic differences in social and political participation or in the structure of social networks and resources. The present dearth of knowledge available to professionals seeking to ensure the elderly Asians' well-being makes the systematic studies relevant and urgent.

Given the distinct differences in basic life orientations between Chinese and Canadian elderly one might speculate that there may be differences in the relationships between social support and well-being. Western culture emphasizes independence and individuality, whereas the Chinese culture emphasizes social interrelatedness, and the importance of dependence on the group for support and guidance (Doi, 1981; Tung, 1984). Despite the growing body of literature on the relationships

between social support and health status in the elderly, there are only a few studies which report on this issue in Chinese populations.

An investigation of these issues is of particular importance with respect to the Chinese population because patterns of family life undergo considerable change in immigrant populations, and it may be that these changes result in a breakdown of traditional systems of support with unfortunate consequences for the health and well-being of the elderly. Thus an investigation of patterns of social support in the aging Chinese population may have some important ramifications for individual's involved in implementing social policies to effectively respond to changing family structure and behavior in the community.

The present study was undertaken with two specific objectives in mind. First, to identify the underlying factor structure within a group of social support measures in a Chinese elderly sample. Secondly, to examine the relationships between the derived social support factors and selected mental, physical health, and psychological measures.

It does not appear that there are systematic measures of social support and networks in the Chinese population. The inadequate measures of social support and family networks of exchange can potentially mask subtle ethnic differences and tell us little about how ethnic factors influence the way illnesses are dealt with, how old age is perceived or how the realm of social networks actually contributes to or diminishes the successful functioning of the elderly in the family and the community (Sokolovsky, 1985). The present study is an attempt to contribute information to this area.

CHAPTER 2

A REVIEW OF THE CONCEPTS AND BASIC RESEARCH

"Social support" is a concept everyone seems to understand. A specific definition has not, however, been agreed upon. Studies have ranged from interactions among mice litter mates to collegiality among university students (Conger et al., 1958; Henry et al., 1967; Berkman, 1984). Although the nature, definition, and measurement of this term are still being intensely debated in the literature (Gottlieb, 1981; Lin et al., 1981b; Thoits, 1982; Krause et al., 1989), social support has been claimed to have positive effects on a wide variety of outcomes, including physical health, mental well-being, and social functioning (Wan & Weissert, 1981; Wan, 1985; Ward et al., 1984; Gore, 1978; Turner, 1981).

On the basis of hundreds of previous works (e.g., DiMatteo & Hays, 1981; Donald & Ware, 1984; Shumaker & Brownell, 1984; Shinn et al., 1984), social support is currently regarded as a central psychosocial issue in health research. Popular interest in social support has created problems for scientific inquiry in the field. Researchers have been inconsistent and loose in both the definition and measurement of social support (Berkman, 1984). There is no consensus regarding the definition of the construct. Similarly, researchers have not been specific about the appropriate measurement of social support. This lack of specificity is the major problem with the research literature.

This chapter will discuss the conceptual and methodological issues of defining and measuring social support. Because there is no research done on social support and the health of Chinese elderly immigrants, the research present will document the relationship between social support and health of the Caucasian aged. A brief account of background informa-

tion regarding the traditional value and support systems of the Chinese elderly will also be discussed. The chapter concludes with a summation of the studies reviewed and a proposed approach to the quantification of social support in a Chinese aging population.

DEFINITIONS OF SOCIAL SUPPORT

Numerous definitions of the concept of social support have been provided in the literature (Caplan, 1979; House, 1981; Gottlieb, 1981; Thoits, 1982). The question of how social support should be defined is an important one because the definition has implication for measurement. As both House (1981) and Thoits (1982) have noted, many of the early investigators have not attempted to formulate a precise conceptual definition of social support. For instance, House criticizes Lin, Simeone, Ensel, and Kuo's (1979, p.109) definition of social support. Their construct is defined as "support accessible to an individual through social ties to other individuals, groups, and the larger communities". This definition is essentially defining social support as support that is social. Similarly, Thoits (1982) notes that Kaplan (1975, p.50) define social support as "the relative presence or absence of psychological support resources from significant others" and the term support resources is too imprecise to be theoretically useful.

This imprecision in the conceptions of support is mirrored in operationalizations of the construct. As noted by House, some investigators have included very diverse elements such as financial resources, self-esteem, and job satisfaction, "conglomerations of anything that might protect people against stress and disease" (House, 1981, p.15) to define social support. The results of these studies can be very mislead-

ing because they may confound these variables rather than reflect the primary effect of social support.

Some researchers have offered more explicit and precise definition of social support (e.g., Cobb, 1976; Pinneau, 1975; Gottlieb, 1978; House, 1981; Kahn & Antonucci, 1980; Thoits, 1982). These researchers have approached the task of defining social support in a variety of ways. Some have focused on the types of support (Cobb, 1976; Kaplan et al., 1977; Pinneau, 1975; Gottlieb, 1978; House, 1981); others have defined support on the basis of subjective perception (Procidano & Heller, 1983; Tolsdorf, 1976; Caplan, 1979; Liang et al., 1980; Harel & Deimling, 1984); some have suggested that support should be defined in terms of its positive or negative outcome (Lin et al., 1979; Beels, 1981); and still others have defined support as a reciprocal process between individuals (Shinn et al., 1984; Shumaker & Brownell, 1984).

Types of Support

A pioneer researcher, Sidney Cobb attempted to define types of social support more specifically. In his major review paper on social support, Cobb (1976) defines social support as information leading the individual to believe that (i) he or she is cared for and loved, (ii) he or she is esteemed and valued, and (iii) he or she belongs to a network of communication and mutual obligation in which others can be counted on should the need arise. Cobb (1979) explicitly excluded from consideration instrumental, active (e.g. mothering), and material support. In Cobb's view, social support consists entirely of information and the information can provide the individual with emotional support. Although Cobb's definition of social support is unduly restrictive, consisting of

only one type of support, it does provide a more precise and clear implication for operationalization (Turner, 1981).

Kaplan et al. (1977) define social support in a similar manner. They suggest that support is the degree to which an individual's need for affection, approval, belonging, and security are met by significant others. This is also an operationalizable definition and can easily be developed into a scale which measures the degree of affection an individual receive from his or her significant others (Kaplan et al., 1977).

Caplan and Killilea (1976) suggest social support should be seen as attachments among individuals or between an individual and a group that serve to (i) promote emotional mastery, (ii) offer guidance, and (iii) provide feedback about one's identity and performance. The first two components are the same as emotional and instrumental support. The last component suggests a mutual relationship in which both emotional and instrumental elements are involved.

More recently, researchers have focused on three or four different types of support somewhat related to the information outlined by Cobb (1976) and the mutual relationship suggested by Caplan and Killilea (1976). Many other researchers have adopted positive aspects as part of their own definitions. For example, Kahn and Antonucci (1980) define social support as "interpersonal transactions that include one or more of the following key elements: affect, affirmation, and aid." They go on to define affect as "expressions of liking, admiration, respect, or love" including what Cobb terms "emotional" support and "esteem" support. Affirmation refers to "expressions of agreement or acknowledgment of the appropriateness or rightness of some acts or statement of another person." Finally, aid refers to "transactions in which direct aid or

assistance is given, including things, money, information, time and entitlements", which Cobb prefers to label as "material", "active" support rather than social support.

Pinneau (1975) distinguishes different types of support, including tangible, appraisal (information), and emotional support. Tangible support is assistance through an intervention in the person's objective environment or circumstances, for example, providing a loan of money or other resources. Appraisal or information support is a psychological form of help which contributes to the individual's body of knowledge or cognitive system, for example, informing the person about a new job opportunity, explaining a method of solving a problem. Emotional support is the communication of information which directly meet basic social emotional needs, for example, a statement of esteem for the person, and attentive listening to the person. The term psychological support may be used to subsume both appraisal and emotional support (p.2).

Following Cobb's idea, Gottlieb (1978) classified social support using four categories: emotionally sustaining behaviors, problem-solving behaviors, indirect personal influence, and environmental action.

Gottlieb's first major element of "emotionally sustaining behavior" appears to subsume what Cobb term "social support", what Kahn and Antonucci term "affect" and "affirmation", what Pinneau term "emotional support", and what Caplan describes as "promoting emotional mastery" and perhaps "feedback... that validates... [one's] identity and fosters improved performance based on adequate self-esteem." Gottlieb's second element of "problem-solving behaviors" subsumes aspects of Cobb's "instrumental", "active" and "material supports", Kahn and Antonucci's "aid", Pinneau's "appraisal" and "tangible" supports, and Caplan's

"guidance". Gottlieb's third element, "indirect personal influence", seems to be similar to his first element "emotionally sustaining behavior". From his study, it refers to a trusting relationship (e.g., She's there when I needed her, or He'll do all he can). His last element "environmental action" seems to be another form of his "problem-solving behaviors" (e.g., She helped by talking to the owners and convincing them to wait for the money for a while).

Gottlieb's classification fits reasonably well with prior definitions and concepts of support and also provide clarification of the more abstract ideas in those conceptions. Other researchers add to the variety of definitions of support and its component elements. Thoits (1982) picks up the threads of Kaplan's et al. (1977) definition and defines social support as the degree to which a person's basic social needs are gratified through interaction with others. Basic social needs, she goes on to suggest include affection, esteem or approval, belonging, identity, and security.

House (1981) suggests that social support be examined in the context of "who gives what to whom regarding which problem?" He postulates the forms of social support in terms of source-by-context matrix. In this matrix, sources of support include spouse/partner, other relatives, friends, neighbors, work supervisor, co-workers, service or care giver, self-help group, and health/welfare professional. The context of support includes emotional, appraisal, informational, and instrumental support. His effort can be viewed as an elaboration and integration of the works of Cobb, Kahn and Antonucci, Pinneau, and Caplan on the content of support as well as elaboration of the social relations involved. House's

definition of social support has a clear implication for measurement (e.g., House & Wells, 1978; House, 1981).

Subjective Perception of Support

Another group of researchers has attempted to define social support on the basis of individual's perception of support. One of the earliest gerontological studies of social support was reported by Lowenthal and Haven (1968). They focused on the role of intimacy as a critical resource in the lives of older people. The Lowenthal and Haven study used a subjective definition allowing each individual to decide what he or she considered an intimate relationship. Tolsdorf (1976) defines social support as any action or behavior that functions to assists the focal person in meeting his or her personal goals or in dealing with the demands of the particular situation. The focal person generally makes the subjective evaluation.

In the gerontological literature there is some research on the structure, quality function, and interaction dimensions of support networks. These dimensions are related to the perceived support, coping, eventual adjustment, and well-being in old age. Blazer (1982) studies mortality risk among 331 men and women 65 years of age and older in Durham County, North Carolina. Eleven items from the Older Americans Resources and Services Community Survey (OARS) Questionnaire regarding social support are included in the study. There are three categories in the OARS questionnaire: roles and attachment available (marital status, number living children and siblings), frequency of interaction (telephone calls and visits with friends and relatives during past week), and perception of social support (lonely even with people, someone cares what happens to you, enough contact with confidante, seems like no one

understands, someone would care if subject became ill or disabled). Age, gender, race, economic resources, physical health, activities of daily living, stressful life events, symptoms of major depressive episode, cognitive dysfunction, and cigarette smoking are the control variables in the analyses. Blazer (1982) notes three significant predictors of early mortality among the aged: decreased social interaction, impaired roles and attachments and low perceived support. Moreover, the mortality rate among those with low perceived support is 3.5 times higher in a 30-month follow-up than for those with moderate to high perceived support. In this survey of older men and women, the category with the highest predictive value was "perceived social support". Blazer points out this measure is a subjective appraisal of the adequacy of support, rather than the more objective characteristic of one's social network.

Most studies of social support do not distinguish between objective and subjective measures of support. Recently, however, there have been attempts to differentiate between objective and subjective indicators of social support (Liang et al., 1980). Caplan (1979) for example, called for a distinction between objective and subjective dimensions of support. The objective aspects of support are observable indications of support provision. Information can be gathered from others and is independent of the individual receiving support. On the other hand, the individual's subjective understanding and evaluation of support reflect reality as the individual perceives it. According to Caplan (1979), actual and perceived support may be consistent with each other for some individuals and not for others.

Wellman (1981) asserted that, although the literature generally equates social support with positive functions, the degree and extent of

support may vary according to the objective nature of the social support and to the individual's subjective interpretation of its role and function. In their study examining the importance of objective and subjective measures of social support have in determining mental health among elderly adults, Harel and Deimling (1984) found that subjective measures of social support were more important than objective measures in explaining the variance in interviewer-related mental health, self-rated mental health, and MMPI scores.

The term "perceived support" became a focal point of study. Procidano and Heller (1983) address the importance of perceived support. They refer to it as generalized appraisal individuals develop in various role domains of their lives. Individuals believe that they are cared for and valued, significant others are available to them in times of need, and they are satisfied with the relationships they have. The researchers go on to elaborate that this perception may not be anchored in any specific relationship, nor does it necessarily refer to the perceived effectiveness of help given in any particular stress-related transaction. The primary component of perceived support currently is not known. However, Heller and Swindle (1983) believe that esteem-enhancing appraisals derive from one's appraisal of other people's views of self.

Outcomes of Support

Support has been defined in terms of outcomes, especially positive outcomes. Cutrona, Russell and Rose (1986) examine the effects of stress and social support on the physical and mental health of the elderly. They define social support as interpersonal processes presumed to result in positive outcomes and to buffer stress. Lin et al. (1979) and Wan (1982) define social support as support accessible to an individual

through social ties to other individuals, groups, and the larger community. They also considered social support as one of the coping or adaptive resources that serves to prevent, avoid, or control emotional distress. Recently, C. Beels (1981, p.60) defines social support as, "those factors in the environment that promote a favorable course of an illness". These can be treated as positive factors in the prevention of illness or emotional distress.

In focusing on the positive effects of interpersonal relationships, researchers often overlook the troublesome aspects of relating to others, and the uncertain effects of attempting to obtain support (Coyne & Delongis, 1986). The researchers have, in only a few studies, considered both the positive and negative aspects of social involvements. For instance, in a study of patients with Alzheimer's disease, Fiore et al. (1983) assessed how helpful and how upsetting each member of the social network was. They found no relationship between helplessness and depression but the degree of upset associated with network members was positively related to depression scores.

Sandler and Barrera (1984) examined the number of people who were a source of both supportive and upsetting interactions, as well as the number of persons who were mentioned only as a source of support. The number of network members who were sources of conflict was positively related to various stress-related symptoms. There were no direct or indirect effects for the number of people who were only sources of support. Another study by Abbey (1985) suggests that the presence of conflict is most detrimental to the provision of support in an individual's closest relationship. Measures of support and conflict were not correlated, except when respondents rated the person closest to

them. Rating of support and conflict associated with this most intimate relationship was strongly negatively correlated.

Fischer (1982a) noted, "many people [are] socially burdened by alcoholic husbands, delinquent children, senile parents, and the like ... We must not exaggerate the supportiveness of personal relationships" (p.3). Antonucci (1985a) posits that the outcome-oriented definitions assuming a positive outcome of support are problematic. Hammer (1981) agrees and suggests that the term "social support" already is associated with a positive bias that confounds independent behaviors or actions with their effects. For example, it might be considered supportive if an elder parent took the advice of an adult child who suggested he or she should move into a nursing home for better care and professional aid. But should that action be labeled supportive if the parent, rejecting the child's suggestion, thought that the child was going to abandon him or her?

Kahn and Antonucci (1984) pointed out that family and friends can exaggerate the humiliation of the elderly and "in the name of support deny them the privileges of adulthood - such as choosing one's own food, clothing, and entertainment" (p.213). The assumption that the intent and outcome of social interactions are always positive is questionable. For instance, Person A intends to be supportive but does not do so or Person A acts supportively but Person B does not feel supported. Antonucci (1985b) labelled these behaviors as maladaptive forms of support. It is possible that the intent of the "supporter" or "caregiver" is positive but the outcome for the recipient of that support is negative. It would be easier to separate the intent and outcome of the interaction rather than assume all supports are positive.

Reciprocity of Support

Another approach to define social support is based on the norm of reciprocity operating in western culture. People should return the benefits they receive from others. Some researchers believe this has important effects on how the individual receives, provides, and perceives the exchange of support (Greenberg, 1980; Shinn et al., 1984; Shumaker & Brownell, 1984; Antonucci, 1985a).

Greenberg (1980) notes that accepting a benefit may place the recipient in an uncomfortable state of tension. In order to reduce the tension, the individual may refuse the benefit or reciprocate it. If these options are not available, the individual is forced to accept assistance where an opportunity to reciprocate in kind is limited or unavailable. When this occurs, according to Greenberg, the individual finds alternative ways to reduce his or her discomfort, such as refusing to accept more help even though he or she needs it or deriding the person who helped him or her. Another way to reduce the individual's discomfort is to help someone else or reevaluate the original exchange to decrease their perception of debt (Shumaker & Jackson, 1979).

The norm of reciprocity is a salient issue for the frail or needy elder. Antonucci (1985a) hypothesizes that older people may maintain a sense of reciprocity by using a life-course accounting system. According to Antonucci, we maintain an imaginary support account, similar to a bank account, into which they deposit (provide support to others) and from which they withdraw (support receive from others). They strive to maintain a balance at minimum but prefer a support "reserve" that can be drawn on in times of need.

Antonucci's recent work with Akiyama (1987b) provides considerable insight into Antonucci's theory of life-course accounting system of reciprocal support. In their study, they hypothesized that older individuals would receive more support and they would provide fewer supports to others. Based on the life-course accounting system, the researchers hypothesized older people would feel comfortable receiving support even when they were unable to provide it. The result reveals older people did report they provided fewer support to fewer people than younger people. The older people also reported they received support from fewer people. According to Antonucci & Akiyama, once the older individuals become frail, they may use the life-course accounting system to maintain reciprocity. Therefore, an older individual might prefer to receive support from a relative with whom he or she has a lifelong reciprocal relationship. The receipt of tangible aid, especially when it cannot be reciprocated, may be more acceptable from a family member for the frail elder because of a perception of life-course reciprocity. However, the researchers (Antonucci & Akiyama, 1987b) suggest that the receipt of support from a friend with whom one can assume a reciprocal relationship may be perceived as more healthy and beneficial to the psychological well-being of the older people. In this way, elderly people continue to maintain the norm of reciprocity. A final point regarding this concept is that reciprocity is less formalized with intimates than with more distant friends (Rubin, 1973). Accounting is less exact among close friends or family member. An extended imbalance in reciprocity would however eventually threaten even the closest relationships (Walster et al., 1978).

The reciprocity model addresses the interdependency of relationships involved in supportive exchanges. It suggests this interdependence may affect support seeking and acceptance, as well as the quality of relationships over time. However, there are limitations in the degree to which reciprocity concepts, derived from economic theories, are relevant to support. Chester and Barbarin (1984) point out that the process of giving and receiving is more fluid than is implied by economic modeling and the imposition of reciprocity concepts can reduce mutual caring to a cost benefit analysis. Moreover, the reciprocity model implies the nurturance offered to others is quantifiable and a value is affixed to the resource. It is difficult to affix a value to what is gained by providing assistance to significant others (Chester & Barbarin, 1984).

The value of the reciprocity model is awareness of factors inhibiting people's willingness to seek and accept help. By being sensitive to situations in which the norm of reciprocity is salient (e.g., overextended periods of recipient need) researchers can determine whether people are unwilling to accept assistance, or lacking access to find the source of support (Shumaker & Brownell, 1984).

To recap, it seems that there is growing support among researchers for a definition of social support as an exchange of resources including emotional concern, instrumental aid, information and/or appraisal between people. Subjective perception of social support is important because it is likely to be effective only to the extent it is perceived. This exchange of resources is generally regarded as beneficial and healthy to the recipient. To understand such an exchange, researchers have taken various approaches to measure this construct ranging from indicators of people's participation in voluntary organization to their

receipt of specific types of aid from specific sources. Three of the most commonly used strategies in the measurement of support are: measures of existence or quantity of social relationships, social network properties, and functional content of social support. Each of these strategies will be elaborated upon, and relevant research findings involving them are briefly reviewed in the following section.

MEASUREMENT OF SOCIAL SUPPORT

Social Relationships

Measures of social relationships frequently employed are: marital status, participation in community organizations, living arrangement (e.g., living with others or living alone), and frequency of social contact (Berkman & Syme, 1979; Lin et al., 1979; Blazer, 1982; House et al., 1982). House and Kahn (1985) point out that these measures are more accurately described as "social contacts and resources" or "existence or quantity of social relationships" than as social support. Barrera (1981) argues that these measures are relevant to the study of social support because they "provide information concerning the extent to which individuals are linked to significant people and have opportunities to interact in ways that might foster the expression of support" (p. 71). It is believed that social relationships must exist in some quantity before they can have a structure and supportive content. Syme (1982) posits that the sheer existence or quantity of relationships is consequential to health and well-being. The popularity of these measures probably stems from their relative objectivity, stability over time, ease of assessment, and independence from other variables such as stress and mental health.

The goal of the quantification of social contacts and resources leads researchers to investigate all forms of social relationships. Of all social relationships, family has been the most studied and most consistently related to health. Durkheim (1951) was among one of the early investigators documenting unmarried people are more likely to commit suicide than those who are married. Many cross-sectional, retrospective, and longitudinal studies have shown a higher incidence of psychological illness and physical mortality risk among the unmarried (Berkman & Syme, 1979; Palmore, 1976; Shanas, 1979 a,b; Wan & Weissert, 1981; Donald & Ware, 1982; Wan, 1985; Hanson & Sauer, 1985).

In their study, Kahn and Antonucci (1984) found that married people had larger social networks than people who are separated, divorced, widowed, or never married. Longino and Lipman (1981) compared people of different marital status and found that married women had the largest support networks and unmarried men the smallest. However, there are gender differences within the larger networks of married people. Wives are less likely than husband to report receiving support from their spouses, but wives are also more likely than their husbands to report that they provide their spouses with support (Depner & Ingersoll, 1983). Women report providing and receiving more support from their children and female friends than men (Quam, 1983).

An interesting variable appears to be the gender of the other person(s) in a relationship or network. Belle (1982) has found evidence that relationships with women may be more supportive and health promoting than relationships with men. He also suggests that the degree to which men rely on women for support may be deleterious to women's health. There is also evidence that marriage does not confer the same

degree of protection from morbidity and mortality on women as it does on men and women benefit more from relationships with friends and relatives of the same gender (Ernster et al., 1979; Heller & Mansbach, 1984; Quam, 1983). House and Kahn (1985) explain the gender differences with the reciprocal theory. They hypothesize that women benefit more from relationships with other women because they are more reciprocal, not because they are less demanding.

The role of family as support providers is further illustrated by research comparing marital and parental status. Hanson & Sauver (1985), for instance, reported that being married and having children are among the most important factors preventing institutionalization. They also found that married people have better support networks than unmarried people, but childless married people tend to be more isolated than childless unmarried people. Childless unmarried, on the other hand, were more resourceful and had greater diversity in their social networks (Connidis & Davies, 1990).

Seelback (1977) gives some insight by examining parents' beliefs about filial responsibility. He found that women had much higher expectations for personal care from their children than men. Campbell (1980) points out that parent-child interaction patterns are not likely to emerge in late life. The parent-child interaction is a lifelong relationship which becomes more evident with years. Troll and Smith (1976), in a three generation sample of women, found that family bonds override distance and separation regardless of age or generation placement. The pattern of relationships does not seem to emerge with old age but rather appears to be present at different ages and among different generations.

Recent research has addressed the special situation of widowed women. Lopata (1975, 1978, 1979) conducted a large study of the support networks of women in the Chicago area. She found that widows were generally involved in extensive support networks and that the role of children, particularly daughters, was crucial. She also noted the absence of men in the networks. Evidence in Shanas's (1979b) study suggest children of widows are more involved in the social networks of widowed mothers than in the networks of widowed fathers.

Relations with siblings and grandchildren have also recently begun to be explored. Cicirelli (1977) reports that women provide more emotional support to their siblings than men. Sisters appear to be closer than brothers. In another study, Cicirelli (1985) has reported that most older people have at least one living sibling and that more than half of them live within a 100 miles radius. Although 88% of the older subjects reported they were on good terms with their siblings, there was some indication that negative relationships with siblings have deleterious effects on well-being. However, Lee and Ihinger-Tallman (1980) report no relationship between siblings interactions and morale in older people. The role of grandparents does not seem to relate to increased well-being or morale in old age (Wood & Robertson, 1978). More research is needed to understand the relationship between interactions with grandchildren and the well-being of aging adults.

Although most research focuses on the role of family in the lives of the elderly, there are some notable exceptions. Arling (1976) and Wood and Robertson (1978) have reported that support from friends is a better predictor of well-being than support from family. In his study, Griffith (1985) found that two-thirds of adults in a random sample indi-

cated their support came from family members. This same group, however, also reported that the most sought after support provider was a same-gender friend. Similarly, Johnson (1983) noted that most of the older people in need of family support while recuperating from a hospital stay relied upon an age peer rather than a younger individual. This does not seem to detract from the important and central role of family as support provider. Cantor (1979b) describes a hierarchy of support providers that seem to exist among older people, which includes spouse, children, friends, relatives, and neighbors.

Shanas (1979 a,b) proposes a similar model called "substitution" whereby family members are available to support older members in serial order. This model has been supported by research demonstrating that a spouse is usually the primary caregiver. The child assumes primary responsibility for care if a spouse is not available. When children are unavailable, other relatives or friends provide support as needed (Shanas, 1979 a, b; Johnson, 1983).

The existence and quantity of contacts with friends and relatives has been found to relate to lower rates of psychological and physical disorders and mortality (Shanas, 1979a, b; Berkman & Syme, 1979; Donald & Ware, 1982; Quam, 1983). Membership and attendance in church, and participation in other voluntary organizations also shows a positive relationship to well-being (Steinitz, 1982; Sherwood & Bernstein, 1986; Lin et al., 1986). These results are more sparse and variable than in the case of family supports, but still relatively consistent.

Three prospective mortality studies of broad community samples have shown independently that people with low levels of social relationships have at least twice the risk of mortality from all causes than people

with moderate to high levels of relationships (Berkman & Syme, 1979; Blazer, 1982; House et al., 1982). Funch and Marshall (1983) reported that among breast cancer patients those with higher levels of organizational involvement had a significantly longer survival period. In a follow-up period of one year, Wan and Weissert (1981) found that older people living alone were significantly more likely to be institutionalized. Lower levels of social contacts and activities have also been related cross-sectionally (Henderson et al., 1982) and longitudinally (William et al., 1981) with symptoms of poor mental health. Several researchers (e.g., Berkman & Syme, 1979; Blazer, 1982; House et al., 1982) have suggested that relatively isolated persons with few or no social relationships are especially at risk. Increases above a moderate number of relationships appear to provide diminishing returns to health.

The results of these studies are especially impressive because they consistently demonstrate the effects of social relationships on health, including important outcomes such as mortality, in well-designed and well-controlled prospective studies of large and broad-based samples. It is also evident that the size of the social network is an salient factor in predicting health. However, the hypothesis that social relationships can buffer people against stress has not really been tested in most cases, and when tested the results are not conclusive (Eaton, 1978; William et al., 1981).

Although they represent very crude assessments of the nature of an individuals' social worlds, simple measures of the existence and quantity of social relationships are relatively objective, reliable, and not confounded with other variables. There is also substantial evidence for their construct validity in terms of their relationships with health

outcomes (Donald and Ware, 1982). Some studies (Blazer, 1982; Gove et al., 1983) have suggested that it is the quality of these relationships, particularly the perceived support they offer, that largely accounts for their effect. The fact that the beneficial effects of social relationships derive from the content and quality of those relationships should not lead to the neglect of measures of existence and quantity. House et al. (1982) maintain that until the effects of social relationships on health can be empirically accounted for, assessment of existence or quantity of major social relationships should be a standard part of studies of social support.

Social Networks

Another approach to measuring social support is studying a person's social network, the set of relationships among a particular group of people (Hirsch, 1979; Lopata, 1978; Wan, 1982; Lin et al. 1981b, 1986; Gottlieb, 1981, 1983; House & Kahn, 1985; Wellman, 1979; Wilcox, 1981b). The growing interest of gerontologists in social networks is reflected in the expanding literature (Cohen et al., 1985; Scott & Roberto, 1985; Quam, 1983; Wan, 1982; Sullivan, 1986; Wood & Robertson, 1978; Blau, 1961; Wan & Weissert, 1981; Gallo, 1983, 1984; Coe et al., 1985; Cantor, 1975a). The bulk of the gerontological literature indicates that social networks have generally positive effects on older adults' physical functioning and psychological well-being. Research suggests that the greater the support the individual receives, in the form of relationships with family members, friends, acquaintances, co-workers, and the larger community, the less likely it is that the individual will experience stress or illness (Dean & Lin, 1977; Gottlieb, 1981; Wan, 1982).

Unlike social support, the definitions of social networks have more consensus among researchers. Antonucci (1985a) defines social network as "vehicles through which social support is distributed or exchanged" (p.96). Mueller (1980) refers social network as "interpersonal linkages among a set of individuals" (p.147). Gallo (1983) extends this definition to "a set of interpersonal links from which dependable others gratify an individual's psychosocial needs." (p.65). In his study of stressful life events, social networks and gerontological health, Wan (1982) operationalizes social network as a support system that provide not only emotional support, but also instrumental support, including goods, services, monetary aid ... etc. For the purpose of this study, a social network is defined as consisting of the people who are providing and/or receiving social support.

According to Marsella and Snyder (1981), social networks can be characterized by four dimensions: structure, interaction, quality, and function. Structure includes morphological variables such as size (i.e., the number of individuals with whom the focal person has direct contact), density (i.e., the extent to which members are in contact with one another), and frequency of interaction. Interaction consists of variables that describe the relationship between various network members. Therefore, reciprocity, symmetry, and directionality (e.g., are relationships reciprocal or does aid flow in one direction only?) are interaction characteristics. Quality includes variables that describe the affective quality of the linkages. A network can be described in terms of the level of friendliness, intimacy, or affection. Function describes the specific function served by network members. A network can

provide information and feedback, comfort and cheer, material aid, advice, help in constructive problem solving and so forth.

Several characteristics are also mentioned by other social network analysts as important to measure: geographic proximity or dispersion - the extent to which network members live near the focal person; homogeneity of network members - the extent to which network members are similar, in terms of age, social class, religion (Fischer et al., 1977; Mitchell, 1969; Wellman, 1979; 1981). Also important to consider are the quality of interaction, durability over time, and strength (Granovetter, 1982). Each of the above characteristics can apply to a particular source or kind of network (i.e., kin, friends, neighbors, work associates).

In analyzing the network characteristics, researchers have found that older people perceive the informal networks of kin (e.g., spouse and children), friends, and neighbors as the most appropriate source of support in most situations and it is to this network that older people turn first and most frequently (Cantor, 1975a; 1983; Shanas, 1977; Brody, 1980). Only when assistance from the informal system is unavailable, or no longer able to absorb the burden of such care, is help sought from formal organizations. Cantor (1983) reports a pattern of reciprocal aid between generations, including emotional gratification, economic aid, child care, household management, and health care. She further states that the amount of help older people received from their adult children is related to the age of the parent and paucity of income. Cantor (1983) concluded that as older people become more vulnerable their children respond with more assistance.

More striking is the role of kin and significant others in providing services in the home when older people are sick or become frail. Data from the 1975 national survey of the noninstitutionalized community aged indicates that the immediate family of the old person, husbands, wives, and children, is the major support of the elderly in time of illness (Shanas, 1979b).

In an earlier study, Cantor (1975a) notes the importance of friends and neighbors in the life of the urban elderly. She points out that even if the older people have a weekly or biweekly visit from a child, such visit do not replace their need for intimacy and interaction on a day-to-day basis. She also suggests that city living, with its high density and accessible transportation, encourage extensive interaction between the elderly and those living around them. Blau (1973) finds that friendship networks in old age are important for preserving the aging individual's continuity in identity and for reducing demoralization in later life. People who have friends have less fear from significant role losses since they can continue to feel needed and influence others. Shanas et al. (1968) suggests that morale in old age may be even more highly related to association with friends than to association with children.

Coe et al. (1985) compared the use of health services by a random sample of 394 noninstitutionalized elderly. They found that the elderly persons without family used hospital emergency services 7 to 30 times more often than elderly persons with family in the area. This study provides some evidence that elderly persons without access to a family support network will have higher rates of utilization of community health services.

In recent years, some applications of network analysis to the study of stress have produced intriguing results (Wellman, 1979; Hirsch, 1981; Wilcox, 1981b; Heller & Swindle, 1983). For instance, small network characterized by close relationships have generally been regarded as most supportive in time of crisis (Caplan, 1974). Researchers (e.g., Hirsch, 1980) have hypothesized that under some circumstances dense and small networks may entrap people by providing limited norms, information, and social contact. As Wellman (1979) points out close friends tend to hear about the same things at the same time and new or weaker ties are often the source of novel news. Weaker ties can therefore be unique channels to new, diverse sources of information. These ties may provide more useful information than strong ties in cases where obtaining new information is important. Evidence suggests that when a crisis necessitates obtaining new information or adopting new roles, low-density networks help adaptive striving more than high-density networks (Hirsch, 1981; Wellman, 1979; Wilcox, 1981b).

There are differences in the social network of men and women. Women have larger and more multifaceted social networks than men (Kahn & Antonucci, 1983). The nature of the social ties between women seems to be different from that of men. Men turn to their wives for support, whereas women turn not only to their husbands but also to children, other family members, and friends. Hess (1979) has argued that women have better interpersonal skills than men and that these skills become important and highly functional in old age. Women use their interpersonal skill and their multifaceted network to achieve greater flexibility within their support network. This is especially important

as network members become unavailable through death, illness, frailty, or geographical distance.

In another study, Babchuk (1978-79) indicates no differences in the number of primary relations reported by men and women, but there were differences in the number of confidante relatives. According to Babchuk (1978-79), men were likely to list only one confidante, whereas women commonly listed more than one. If the primary confidante, most likely the spouse, is available, no problem surfaced. However, when that confidante is not available, as is the case among widows and widowers, the greater flexibility of a larger network including several confidantes is extremely advantageous. This interpretation is consistent with the findings of Hirsch (1981) that the size and density of one's social networks is related to mental health, coping, and adaptation.

Demographic variables such as socioeconomic status, income, and education also affect a person's social network. According to Fischer (1982a) and Babchuk (1978-79), people who have lower socioeconomic status, lower income, and less education tend to have smaller networks consisting mainly of family members. Members of these networks naturally know each other, and network membership is stable. Relationships tend to be multiplex; that is, the same person exchanges a variety of different types of support. They also compared this group to people from higher socioeconomic status, with higher incomes, and with more education and found that these people generally report a larger networks with a diverse membership consisting both family and friends. Network members of the latter group are less likely to know each other, are likely to have known each other for less time, and are more likely to involve uniplex or single support exchanges.

Parks and Pilisuk (1981) in their study of 50 older Southern Californians indicate that lower income and less education are correlated with increased contact with formal network (such as doctors, social workers, clergy members, etc.). Consistent with their earlier study, Pilisuk and Froland (1978) found that people in tightly knit networks, characterized by a predominance of family members, are more likely to seek professional support than people with loosely knit networks. They also noted that there are certain kinds of characteristics such as high income and education which are correlated with loosely knit network. The researchers concluded that people with higher income and education are less likely to seek formal support.

There is considerable evidence that social networks or resources are related to health outcome. House and Kahn (1985) suggest that such measures should be a standard part of studies of social support. They also acknowledge that it is extremely time-consuming to assessing a person's complete social network and define its characteristics. House and Kahn (1985) further suggest that network analysis should be used selectively and be limited to between 5 and 10 individuals the respondent has identified as close or important to him or her.

Functional Content

The final approach is to measure social support of the functions performed for a distress individual by different sources, such as family members, friends, relatives, co-workers, and neighbors. These functions typically include emotional, instrumental, and informational aid (House, 1981; Turner & Noh, 1983). Emotional aid refers to expressions or assertions of love, caring, esteem, sympathy, and group belonging (Cobb, 1976; House, 1981). Instrumental aid refers to actual helping behaviors

or materials provided by others to enable the fulfillment of ordinary role responsibilities (House, 1981). Information aid refers to communications of opinion, advice, personal feedback, and information that might make an individual's life circumstances easier (House, 1981).

Most researchers agree with Caplan (1976) and House (1981) that emotional, instrumental, and informational aid are three important factors in a support transaction. The ways these factors are operationalized, however, varies greatly. After reviewing the published studies, the measures of social support, in terms of the functional content of relationships, may be organized into two main divisions: global and differentiated. The former measures refer to the assessment of support concept in a global measure and the latter as different aspects of support such as quantity, availability, sources, and types of support.

A number of researchers have developed global measures to establish social support (Lowenthal & Haven, 1968; Pearlin et al., 1981; Turner, 1981; Procidano & Heller, 1983). Lowenthal & Haven (1968), for example, developed the simplest measure which involves only a one or two-item assessment to establish the presence or absence of a confidant. Pearlin et al. (1981) used a variant of this approach in their longitudinal study of the stress process in a representative sample of adults aged 18-65 in Chicago area. In their study there is a summative index of two confidant items. One is for the spouse and the other is for friends and relative. The longitudinal analysis indicates that the index has main effects on both the measure of well-being and the buffering of the impact of job disruption. Turner (1981) used the same approach, but tested a smaller sample.

Some researchers have used fairly lengthy (20-40 items) scales to generate one or two global measures of support. For instance, Procidano and Heller (1983) have developed a lengthy scale to assess the extent to which people perceive that their needs for support are fulfilled. Barrera, Sandler, and Ramsey (1981) have developed a 40-item Index of Socially Supportive Behaviors (ISSB) which yields a single global score. House and Kahn (1985) criticized these measures as not being cost-effective for use in the general population.

Billings & Moos (1982), and Holahan & Moos (1982), based on Moos's (1974) Family Environment and Work Environment Scales, formulate three instruments: a Quantitative Social Support Index (QSSI), a Family Relation Index (FRI) and Work Relation Index (WRI). These instruments are global measures of support from various sources. Also, they provide a quantitative index of social resources in the areas of family, relatives, friends, job, and community involvement.

Several investigators have suggested that support is a multi-dimensional concept (Dean & Lin, 1977; House, 1981; Kaplan et al., 1977; Thoits, 1982). Not only is the amount of support important, but types of support (e.g., emotional and instrumental) and sources of support (e.g., spouse, children, friends, neighbors) are also important dimensions. Furthermore, the structure of the social support network may have a powerful influence on the flow of supportive resources to an individual. There is at least some evidence that not all sources or types of social support are equally effective in promoting health or well-being (Dean et al., 1980; House, 1981; Eaton, 1978). As Thoits (1982) points out, assessing social support with a single global measure and treating social support as an unidimensional construct may dilute its

statistical relations with other variables and may fail to isolate the relative importance of the specific effects of different attributes of support. She further suggests that it may be very valuable to use a measuring approach that enables one to assess different types of support.

In recent years, a number of such scales have been developed (e.g., Cronenwet, 1983; Holahan & Moos, 1980b; Cohen & Hoberman, 1983). For example, Cohen and associates (Cohen & Hoberman, 1983; Cohen, Mermelstein, Kamarch, and Hoberman, 1985) have developed the Interpersonal Support Evaluation List (ISEL) to assess four types of function of social support in a university-based smoking cessation program: appraisal support (e.g., "There is someone I could turn to for advice about changing my job"), feelings of belonging (e.g., "I do not often get invited to do things with others"), tangible support, and esteem support (e.g., "Most people I know think highly of me"). The investigators reported cross-sectional and some longitudinal correlations of the total score and subscales of the ISEL with mental and physical health. They found evidence that these measures, with the exception of tangible support, buffer the relationship between stress and health. In the smoking cessation program the intercorrectional among the appraisal, belonging, and self-esteem ranged from .61 to .73, very close to the maximum possible estimated reliabilities .6 to .8. The ISEL seems to be able to clearly differentiate the two functions of support (tangible versus the emotional support).

The value of particular kind of support may well depend on who provides it. It is therefore important to assess different types of support from different sources. Most of the instruments that allow an assessment of different types of support focus on the network as a whole (e.g.,

Cohen & Hobermen, 1983). There are a few scales that enable the researchers to measure different types of support provided by different sources (e.g., Cronenwet, 1983; Holahan & Moos, 1980b). The most successful scale was developed by Kahn and associates (Kahn & Antonucci, 1978, 1979, 1980, 1984). In this scale, subjects are asked to identify people "who are important to you or to whom you are important" in each of six categories: spouse and partner, family members or relatives, co-workers, supervisors, professionals (e.g., doctors, social workers, clergy members), and friends. Subjects are then asked to indicate on a 12 five-point scale the extent to which the network as a whole, and the most important member in each of these six categories, provides the three supportive functions of aides, affect, and affirmation. This scale provides a more complete assessment by measuring both types and sources of support.

House and Kahn (1985), however, point out two limitations of this approach. First, each of the subjects must identify his or her own specific sources of support, the sources are not comparable across subjects. Secondly, since the number of sources mentioned is allowed to vary, indices of number of sources of support and amount of support is confounded. House and Kahn (1985) therefore suggest that the sources of support be standardized in order to avoid this problem. That is, each subject should rate each source on each type of support.

In a comprehensive review, Wortman and Dunkel-Schetter (1987) point out the limitations of the existing measures of social support. Most of the existing instruments have been designed for general use, although some have been developed and validated primarily with college student populations (e.g., Cohen & Hoberman, 1983; Procidano & Heller, 1983;

Sarason et al., 1983). A few of these instruments have been carefully validated on general populations (e.g., Henderson et al., 1980; Holahan & Moos, 1980b). Some of the most well-conceptualized measures of social support such as Brandt & Weinert (1981), and Cronenwet (1983), have been developed for use in only a single study. Although these scales appear to be promising, its reliability and validity have yet to be established (Wortman & Dunkel-Schetter, 1987).

Many of the available scales have been developed to assess particular types of support from different sources in a specific population. Thus most scales are not suited to assessing support in just any population. In most cases, the content of the items does not focus on the problem that are prevalent in a particular population under study. If the researchers decide to use the existing scales to assess social support in different populations, Wortman and Dunkel-Schetter (1987) suggest a modification of the scales is needed.

SOCIAL SUPPORT AND HEALTH OF THE ELDERLY

The notion that social support may play an important role in maintaining health and decreasing susceptibility to illness among the elderly has been suggested by a number of researchers (Shanas, 1979b; Wan & Weissert, 1981; Cantor, 1975a, 1983; Blazer, 1982; Gallo, 1984; Coe et al.,1985). For example, Cobb (1976) examined the role of social support in a variety of life settings, including pregnancy, recovery from illness, bereavement and aging. He concluded that social support protects the individual from physical and emotional illness during crisis.

However, the underlying mechanisms that link social support and health have not been well established. Broadhead and his colleagues (1983), for instance, have critically examined the multitudes of studies that purportedly show a causal relationship between social support and health outcomes. They found that many early studies were cross-sectional or retrospective associations, they cannot establish a temporal relationship between variables, a condition necessary for causality.

They also pointed out that some researchers included two dimensions of support in a single variable -- qualitative (e.g., perception of support, presence of confidant) and quantitative (e.g., size of the network and frequency of contact). These two dimensions are two separate concepts and combining them may yield spurious results and lead to incorrect conclusions.

As previously discussed, the conceptual confusion and multiplicity of measures used to examine social support have made it exceedingly difficult to understand the unique contributions of this phenomenon and to differentiate its effects from those of other psychological or psychosocial variables. These difficulties take on added dimensions with a specific focus on the aged.

With aging, a variety of circumstances interact to reduce the amount and availability of social support, for example, the death of a spouse, retirement, or sudden geographic relocation. In examining social support, it is helpful to utilize Kahn's (1979) theory of convoy to denote the movement of each individual through life surrounded by a set of others to whom he or she is related through the giving or receiving of social support.

As individuals age, people are added to or subtracted from their convoys through birth, death, changes in job and family life, and geographic moves. With these changes, the potential of a social network for providing social support varies over time. The convoy characteristics of older persons, according to Kahn (1979), include: (i) increased asymmetry (receiving without having the opportunity to give); (ii) reduced initiative (ability to initiate interaction rather than waiting for it); (iii) increased instability (loss of convoy member); (iv) reduced convoy size (because of loss without opportunity for replacement); and (v) changes in type of interaction (relatively less receiving of affect and affirmation and increase in some forms of direct aid).

In a preliminary study of about 300 adults of all ages in one community, Kahn (1979) tested these hypotheses. He found that the size of the convoy increase during young adulthood and is quite stable from age 35 to 55. The pattern of affective expression did not decrease within this age range, but the receiving of aid and assistance in various forms increased with age.

In principle, this model is longitudinal and, as indicated earlier, refers to a lifetime pattern of support relationships. Much of the research of this model, however, is based upon cross-sectional data (Kahn & Antonucci, 1980). It will be possible to explicate the model more fully when longitudinal data becomes available.

In studying social support and aging, empirical research shows that the experience of major life events, such as widowhood, retirement, or changes in residence, has been associated with increased morbidity and mortality (House et al., 1982; Ward, 1985; Minkler, 1981; Lawton, 1980 a,b; Wan, 1982). Berkman and Breslow (1983) reported a survey of a

sample of noninstitutionalized adult residents of Alameda County, California conducted by the Human Population Laboratory in 1965. Questionnaires were returned for 86% of the enumerated population, yielding 6928 respondents. Mortality data were collected for the nine-year period between 1965-1974. In the survey, basic information on several essential aspects of an individual's personal network was collected. A social network index was developed based on four types of social interactions: marriage; contacts with extended family, and friends; church group membership; and other group affiliations. Contacts with friends and relatives were measured by the number of close friends and relatives a subject reported and the frequency with which he or she saw them. The Social Network Index reveals a consistent pattern of increased mortality rates associated with decrease in social contacts. When the network index was examined in relation to separate causes of death, the researchers found that people with few connections were actually at increased risk of dying from several causes of death, such as ischemic heart disease, cancer, cerebrovascular, and circulatory disease.

In the same study, Berkman and Syme (1979) studied the relationship between social ties and mortality after a 10-year period and found that people who lacked social and community ties were more likely to die in the follow-up period than those with more extensive contacts.

Studies of mortality alone do not tell us where along the spectrum of disease social support has its greatest impact. For instance, how social support influences disease incidence, and recovery, or how social support interacts with important biological risk factors, such as blood pressure or serum cholesterol. The only specific disease for which data on support networks and incidence or prevalence currently exist is

coronary heart disease. However, the only population examined was Japanese migrants in the United States (Marmot et al., 1975, 1976; Joseph, 1980). Although there are significant relationships between social networks and coronary heart disease, these groups of migrant may have unique patterns of networks and thus the degree to which one may generalize these findings to other groups is unclear (Joseph, 1980).

Gerontological research indicate that social support is seen as a mediating force that helps chronically ill persons cope with deterioration of physical or mental functioning. Such social support is thought to shorten the length of stay in institutions or reduce the possibility of being placed in nursing homes (Wan, 1976, 1979; Wan et al., 1980; Blazer, 1982).

An examination of studies relating social support to institutionalization indicates some interesting observations. The institutionalized elderly had a disproportionally larger number of persons who had never married or were widowed than the noninstitutionalized elderly in the community (Shanas, 1979b). As Shanas (1979b) observed, the chronically ill elderly without a spouse, probably living alone, are more likely to seek institutional care. It appears that the presence of immediate family reduces the chance of being institutionalized. Brody (1978) reported that the placement of older persons in either an institution or a community was not determined by their functional capacity. Rather, such placement was determined by the absence of the family support network such as spouse or children.

Barney (1977) examined the nursing home residents and found that residents who are married, those with children, and those regularly visited by family members were likely to be more dependent. Those with no

close relatives and no regular visit, however, were found to have a greater capacity for independence. Barney (1977) found that those individuals lacking strong social support are more likely to be prematurely admitted to a nursing home. He also noted that fewer married than unmarried persons in the nursing home population were found to be in need of institutional care. It appeared that marital relationship may act as a buffer between illness and institutionalization. With the presence of a caring family, Barney concluded that the chronically ill elderly may be maintained in the community until need becomes such that a skilled nursing home facility is the best solution.

Problems in the definition and measurement of social support also become compounded in studies specifically of the older age groups. Most of the literature on social support and aging focused on the network characteristics (e.g., Blau, 1961; Wood & Robertson, 1978; Scott et al., 1985; Heller & Mansbach, 1984; Sherwood & Bernstein, 1986) and excluded the instrumental support that is of particular importance to many of the aged. Over one-third of the elderly require some degree of long-term supportive service, and an estimated 80-90% of this instrumental support is provided by family members (Brody, 1980). It is necessary to include this often neglected dimension when assessing social support in this age group.

Despite impressive findings supporting the notion that social support is related to good health and well-being, the conclusion that social support is of heightened importance to this age group has not been confirmed. The difficulties inherent in examining the social support and health relationship are compounded by several factors when working with the elderly. As Satariono and Syme (1981) have pointed out,

it is difficult to differentiate analytically among disease processes, the processes of normal aging, and the disease outcomes or exacerbations associated with stressful life events (e.g., retirement or bereavement). Traditional definitions of health, based on an absence of disease model, are particularly inappropriate with reference to those aged 65 and over, an estimated 86% of whom have at least one chronic illness (Shanas & Maddox, 1976).

Several gerontologists (e.g., Lawton, 1971; Shanas & Maddox, 1985; Sherwood & Bernstein, 1986) have suggested an alternative way to define health among the elderly. The alternative definition of health is based not on pathology or diseases state but on level of functioning. Functional definitions of health assume that both the individual and the physician may have relevant and possibly conflicting information about health status (William & William, 1982). Patients and their physicians may see the same event from different perspectives. The patient may not report environmental factors (such as death of spouse or retirement) and consider them as irrelevant, although such factors may influence the disease or its symptoms. Symptoms may be attributed to disease by the patient and to aging by the doctor, or vice versa (Kart, 1981).

An important study utilizing a functional assessment instrument was conducted at Duke University (Maddox & Dellenger, 1978; Duke OARS, 1975), using a Multidimensional Functional Assessment Questionnaire designed to rate five levels of functioning - social, economic, mental, physical, and activities of daily living.

Maddox & Douglas (1973), in their discussion of the findings of the Duke University longitudinal study of the elderly, compared the medical and functional evaluation of an initial sample of 270 elderly persons in

a study that covered 15 years and six observations. Over time, the older person's and the physician's rating of health tend to be congruent. From one observation to the next, the self-health rating of the individual was a "better predictor of future physicians' ratings than the reverse". However, these researchers maintain that although self-reported health should not be substituted for clinical diagnosis, it is useful as well as reliable information.

Fillenbaum (1979) compared the health self-assessment of male and female community residents with both the number of their health problems and their disabilities. Their illness was reported individually and verified by a knowledgeable informant. For persons living in the community Fillenbaum found that self-assessment of health was a useful predictor of health status. The assessment of institutionalized persons, however, is not related in a consistent manner to objective measures of health status as compared to the community residents. She believed that institutionalized residents may emphasize their sickness and dependency because they are placed in institutions for the sick and infirm.

Although gerontologists have increasingly pressed for a redefinition of health of the elderly based on the functional model (Branch, 1980; Hickey, 1980; Sherwood & Bernstein, 1986), this perspective has yet to be operationalized and used by social scientists. Instead, the research on social support and health in the elderly has tended to focus on mortality rates and/or on morbidity measures. These measure, as pointed out by Satariano and Syme (1981), are unlikely to capture the quality of life dimensions of health status of the elderly.

TRADITIONAL VALUES AND CHANGING FAMILY PATTERNS AMONG CHINESE ELDERLY IMMIGRANTS

An important feature of traditional Chinese society is the cultural value of filial piety. It was the foundation of all virtues including loyalty and devotion to one's country. The word "filial" indicates the relationships between children and their parents and the concept of "piety" includes respect, honor, fidelity, devotion, dutifulness, and sacrifice.

The first recorded document on filial piety can be found in the Classics, specifically the anonymously written twenty-four volume Canons of Filial Piety (The Hsiao Ching). Confucius and his students elaborately depicted the standards of proper behavior of children towards parents, and by extension, to all elders in society. Confucian doctrine stipulated that "the man of great filial piety, to the end of his life, has his desire toward his parents". Confucius said, "Are not filial piety and fraternity the basis of benevolence?", "a youth should be filial at home and fraternal when away", and "in serving his parents, he should exert his utmost strength". (Sih, 1961).

The Confucian concept of filial piety is central to the Chinese culture. "The Confucian life pattern thus is cyclical within the interdependence of the family, the son reciprocates the nurturance he receives in the childhood dependency by nurturing his parents in the dependency of their old age. In childhood one depends on one's parents, and in old age, on one's children; thus, for the filial individual, life comes a full circle." (Hsu, 1970, p.317) This philosophy is the reason why the care of the elderly has not been a major social problem in China for many centuries. The Confucian teaching of The Hsiao Ching has become

deeply rooted in the Chinese culture (Chang et al., 1984). It is the family's responsibility to take care of its elderly. People may sacrifice or starve the young, but never the aged. The virtue of filial piety (Hsiao-Ching), which includes not only physical care and financial aid, but a sense of veneration and emotional caring, binds each generation of the family to the preceding generation. The Chinese elderly have represented honor, dignity, pride and wisdom, and there is a reserved place of honor for the oldest generation.

However, due to western cultural influences and social structure, traditional values and attitudes towards the aged has been gradually changing. These changes become more apparent among Chinese immigrants. The literature on the aging Chinese immigrants in North America is extremely sparse. In a study of the newly arrived elderly Chinese immigrants, Wu (1974) found that the elderly perceived a reduction in societal status in their families where children were more important than parents. Although the majority are well cared for physically and materially by their children, they express feelings of loneliness and unhappiness. Because of urbanization and emphasizes on nuclear family, the traditional large family is practically nonexistent (Wong, 1985; Tu et al., 1989). The change of living arrangements results in little contact between grandparents and children (Wu, 1974; Chang et al., 1984).

Very few aged Chinese speak or understand English. Due to the language barrier, the elderly are not able to enjoy television, read newspapers or magazines, or make use of public transportations to visit friends or shop, a forced disengagement (Wong, 1985; Hsu, 1970; Con et al., 1982; Weeks & Cuellar, 1983). They are socially isolated not only from the community but also from their own family because few local born

grandchildren speak Chinese, and all the family conversations are in English. The elderly described themselves as "imprisoned" and as practically "deaf, dumb, and blind" (Wu, 1974; Tu et al., 1989; Con et al., 1982; Weeks & Cuellar, 1983).

Most of elderly who have followed their children to North America have found themselves in a role reversal from that of an authority in the household in their homeland to a powerless and dependent position in their children's homes (Yu, 1984). Not knowing English and the new country, parents have to depend on their children for instrumental support such as providing transportation, shopping, interpretation, financial support, and information. "Since society has not yet provided adequately for all of our aged, there is a gap between the expectation and reality, leading to a role conflict among parents and children, and personal trouble" (Glasser & Glasser, 1962, p.51). This is particularly true for the newcomers because they are not eligible for pensions and other social programs, or they have no knowledge of such assistance.

However, the Chinese elderly have adjusted unexpectedly well to the new country (Wu, 1974). Wu attributed that to their culture value of endurance. Cheng (1978) described the culture and life-style of the Chinese elderly in San Diego County, and reported that the majority of the respondents were satisfied with their immediate neighborhood and their personal health. In another study Chan (1983) interviewed 26 elderly Chinese women in Montreal to study their coping behavior. She noted that intergenerational conflicts in value of life-style and a sense of isolation were some of the problems these women experienced. Traditional values of hard work and devotion to duties, however, seemed to facilitate adjustment to old age.

There are few studies examining relationships of social support and well-being among Chinese elderly. For instance, Chow (1983) studied the Chinese family and support of the elderly in Hong Kong and described their problems as the results of western influence. Kuo and Tsai (1986) examined the social networking, hardiness, and mental health of four different Asian groups in United States. Recently, Tu, Liang, and Li (1989) compared the mortality rate and family structure between the elderly in mainland China and Taiwan. Since no research has been done on the social support and well-being among Chinese elderly immigrants in Canada, the present study focuses on this specific population and the effect of social support on their well-beings.

SUMMARY COMMENT ON THE LITERATURE

This chapter has addressed the issues of conceptualizing and measuring social support. There are as many definitions and instruments for measuring social support as there are studies. Only selected approaches to define and measure the construct were discussed.

There are four approaches which have been discussed to define social support. Some define social support in terms of different types of support. Some focus on the individual's subjective perception of support received. Others examine the construct based on its outcomes, and others define social support as the reciprocal relationship between care giver and support recipient.

In the early studies, there was only one type of support being examined, emotional support (e.g., Cobb, 1976). As the studies become more sophisticated, more supports emerged. There appear to be many different kinds of support, such as affect, affirmation, aid (Kahn & Antonucci,

1980), tangible, appraisal, emotional support (Pinneau, 1975), and emotional sustaining behaviors, problem-solving behaviors, indirect personal influence, and environmental action (Gottlieb, 1978). Although the terminologies are different, emotional and instrumental support are the two key elements in these different types of support.

Another approach to defining social support is an individual's perception of support. Most previous studies did not distinguish between objective and subjective measure of support. The information on objective support can be collected from a third party and is relatively objective and independent of the support recipient. Empirical research, however, indicates that subjective perceived support is a better predictor of early mortality among the aged (Blazer, 1982). The subjective perception of support may not suggest a secure relationship, nor the actual help received. Instead, it is the individual's understanding and evaluation of support he or she believes to have received during a time of need.

Many definitions assume that social support is based on supportive social interactions and that the outcome of this interaction is beneficial and favorable to the recipient. Some researchers (e.g., Fischer, 1982a; Antonucci, 1985a; and Hammer, 1981) argue that not all social interactions have positive involvement and some types of social interactions may even have negative effects. To assume all social relationships have a positive outcome is problematic (Antonucci, 1985a). Thus, a careful consideration of the negative aspects of social involvements is necessary for the definition of social support.

The final approach to define social support is based on the reciprocal model. This model suggests that people often return the benefits

they receive from others. The life-course accounting system theorized by Antonucci (1985a) is very illuminating when applied to explain reciprocity in old age. According to Antonucci (1985a) and his work with Akiyama (1987b), older adults would prefer to receive help from a family member or relative with whom they have a life long reciprocal relationship, especially when the aid cannot be reciprocated by the elderly person. However, a reciprocal relationship (such as receiving and returning support to a friend) is believed to be healthier for the psychological well-being of older adults (Antonucci & Akiyama, 1987b).

There are many different approaches used to measure social support. Three of the most commonly used strategies in the measurement of social support have been discussed. The first approach is to measure social support in terms of social relationship or the existence or quantity of social contacts or resources. The most frequently assessed social relationships are marital status, participation in community organizations, living arrangement or frequency of social contact. Research indicates that people with low levels of social relationships have higher risk of mortality from different causes as compared to people with moderate to high levels of relationships (Berkman & Syme, 1979; Blazer, 1982; House et al., 1982). The popularity of this approach is accounted for by its relative objectivity reliability and lack of confounding with other variables.

The second approach is to assess social support in terms of networks. There is more consensus among researchers regarding the definition of social networks than of the definition of social support. In this study, a social network is defined as consisting of the people who are providing and/or receiving social support.

Network characteristics such as structure (i.e., size, density, and frequency of interactions), interaction (i.e., reciprocity, symmetry, and directionality) quality of relationship, function, geographic proximity, homogeneity of network members, etc. can be applied to analyze any particular source or kind of network. From network analysis, researchers have found that older people perceive family members as their primary source of support in most situations (Cantor, 1975a, 1983; Shanas, 1977, 1979b; Brody, 1980). Friends and neighbors are also an important source of support in the life of urban elderly (Cantor, 1975a). There is evidence that older people with no access to a family support network tend to utilize more community health services (Coe et al., 1985).

A small network with close relationships and strong ties have been perceived as most supportive in a time of crisis (Caplan, 1974). Some researchers have found that a weakly tied and loosely-knit network is more helpful when the crisis necessitates obtaining new information or adopting new roles (Hirsch, 1981; Wellman, 1979; Wilcox, 1981b).

They have also noted differences in the social networks of men and women. Women have a larger network than that of men. In times of need, men usually turn only to their wives for support while women turn to a larger network including spouse, children, relatives, and friends (Kahn & Antonucci, 1983; Hess, 1979; Babchuk, 1978-79).

Demographic variables such as socioeconomic status, income, and education can also affect an individual's network. People with lower socioeconomic status, less income, and less education tend to have a smaller network when compare to people with higher socioeconomic status, income, and education (Fischer, 1982a; Babchuk, 1978-79). Lower income

and less educated elderly are also more likely to have increased contact with community services such as doctors, social workers, and clergy members (Parks & Pitisuk, 1981).

The final approach of measuring social support is to examine the different functions performed by the caregiver for the distressed individual. There are two main divisions of the functional content of social relationships, global and differentiated measures. The global measure is used to assess social support with a single measure and treat the concept as unidimensional. The differentiated measure, however, is used to assess different aspects of support and views social support as a multidimensional construct. The later measure is preferred by recent researchers because it allows the researchers to examine different types of support from different sources.

As reviewed thus far, there seems to be no magical solution to the multileveled, complex problems of inadequate definition and measures. The study of social support and the aging population make the problem more complex. When people age, a variety of circumstances interact to affect the amount and availability of social support and the size of social networks. Empirical research indicates that social support plays an important role in decreasing morbidity and mortality (Berkman & Breslow, 1983; Berkman & Syme, 1979; Marmot et al., 1975, 1976; Joseph, 1980). Social support is also seen as a mediating force that helps to reduce the length of stay in institutions or the possibility of being placed in nursing homes (Wan, 1976, 1979; Wan et al., 1980; Blazer, 1982).

However, the conclusion that social support is related to well-being and good health has not been established. One of the most prominent problem is the traditional definition of health which is based on the

absence of a disease model. The definition based on the pathological model is not appropriate for those aged 65 and over as the majority of them have at least one chronic illness (Shanas & Maddox, 1976). An alternative definition of health based on patient's self-reported level of functioning was suggested by several researchers (Lawton, 1971; Shanas & Maddox, 1985; Sherwood & Bernstein, 1986). Data from a longitudinal study revealed that the self-health rating of the individual was congruent with the physician's rating (Duke OARS, 1975).

For the purpose of this study, social support is defined as interpersonal transactions between the support provider and support recipient involving two key elements: emotional and instrumental support. Emotional support involves affection, sympathy, understanding, and esteem from a family member, relative or close friend. Instrumental support is oriented toward help with household maintenance, medical needs, transportation, and required daily tasks. The functional attributes of a support system are identified in this study as the perceived quantity and adequacy of emotional and instrumental support obtained from others.

Since social support is seen as an exchange behavior among the individual and his or her network members, questions involving the reciprocal behavior are included. The structural characteristics of support system such as its size, source, and frequency of contact are also included. However, positive outcomes are not assumed. Consequently, apparently negative results of supportive behaviors must also be considered (Heller, 1979). In this study, social support is identified as a multidimensional construct (Kaplan et al., 1977; House, 1981; Broadhead et al., 1983; Donald & Ware, 1984). In order to have a better understanding of the construct, it is necessary to specify the structure,

nature, and the degree of support from varying sources. It is also important to determine how social relationships influence mental and physical health and facilitates adjustment to major life changes. An alterative definition of health based on the model of level of functioning reported by the individual is used (Duke OARS, 1975).

Respecting and taking care of the elderly has long been the traditional value and practice among Chinese. It is the family's responsibility to take care of its elderly both in terms of emotional caring and tangible aid including physical care and financial support. Because of western influences, these values have changed gradually especially among Chinese immigrants.

Most of the Chinese elderly do not speak or understand English. The language barrier restrains them from communicating with society, enjoying social functions and communicating with their own family. The older adults in this population described themselves as "deaf, dumb, and blind" (Wu, 1974; Weeks & Cuellar, 1983). Being new to the country and unable to speak the language, the elderly depend on their children for instrumental aid and information. Thus, the role of the aged changes from an authoritative role to a dependent role within the family. Although Chinese elderly adjust relatively well in a new country, they experienced unhappiness and a sense of isolation both in their roles and in the new environment (Tu et al. 1989; Con et al., 1982; Chan, 1983).

Despite a growing number of Chinese immigrants in North America, substantive knowledge about them is still in a primitive state. Something is known of their life-styles and the problems they experience but little is known about how their ethnicity relates to their patterns of aging. If ascriptive traits, such as race, ethnicity, and achieved sta-

tus (such as education and income) are intertwined in determining one's life chances, self-image, perception toward external environment, and attitudes toward interpersonal relationships, to what extent do these variables affect the social support pattern? Despite the general understanding that Chinese are more familistic in terms of caring for the elderly, the change of family structure and social environment has forced many contemporary elderly to live outside of the traditional family structure. Will these changes influence the physical health status and psychological well-being of the elderly? This study attempts to understand how the changes in Chinese family structure affect the mental and physical health status of these elderly in the city of Calgary.

CHAPTER 3

METHODOLOGY

Sample

The available census data revealed that in 1981 there were 289,245 Chinese in Canada, and 15,545 Chinese in Calgary (Statistics Canada, 1981). It was estimated that those aged 60 and over comprised about ten percent of the city's total Chinese population. This estimate results in a figure of approximately 1,600 aged Chinese in the city. Since no demographic data are available regarding their specific age, gender, marital status, address, province of origin in China, or dialect spoken, it is difficult to recruit a representative sample.

After considerable exploration, a total of 100 adults aged sixty and over were surveyed. They were drawn from a sample frame constructed from three sources: (1) members from the Calgary Chinese Senior Citizen Association; (2) Christian Church members; and (3) Chinese senior housing residents in Chinatown. This frame is less complete than one provided by the area-sampling technique but, given the scattered Chinese population and the requirement that the respondents chosen be 60 years of age or over and well enough physically and mentally to be interviewed, the present method has the advantage of being relatively cost-effective.

The respondents were contacted by telephone and an at-home interview was arranged. The original sample consisted of 102 subjects but 2 of them were excluded because they were under 60. The sample was comprised of 61 females and 39 males: 72% were from Hong Kong, 19% from China, 5% from Vietnam, 2% from Malaysia, 1% from Singapore and 1% from the Philippines. The age of the sample ranged from 60 to 90 years old

and the mean age was 70.97. All of the respondents were retired, had independent living arrangements (i.e., they were not institutionalized), and were interviewed face-to-face in their homes. Moreover, all of the respondents read and signed an informed consent statement prepared both in English and in Chinese (see Appendix A). The length of the interviews ranged from 60 to 90 minutes.

Measures

A set of items was selected from several studies and, with some modifications, these were used to measure the extent of the respondent's emotional and instrumental support (Lin et al., 1986; Revicki & Mitchell, 1986; Strogatz, 1983; Duke OARS, 1975; Brink et al., 1982; Lawton & Brody, 1969; Wood et al., 1969; and Wu, 1974).

Emotional Support is based on the subjective experience of the respondent regarding perceptions of empathy, love, care, and trust. Six items from the Tri-city Area Health Survey (Lin et al., 1986) were used to assess both the respondent's subjective perception of emotional support, and characteristics of the support providers (such as gender, age, and availability). Data from their longitudinal study indicate the instrument is high in reliability (ranging from .89 to .93) and relatively stable over time (Lin et al., 1986).

Another instrument, Health Care Utilization in the Rural Elderly (Revicki & Mitchell, 1986) was used to measure the types and intensity of support received by individuals from a close friend or relative. This study adds six items to the scale thereby including other emotional aspects regarding the respondent's feeling about his or her confidant. (For instance, "How often does this person make you feel that he/she

loves you?", "Does this person encourage you to express your beliefs and feelings?")

Instrumental Support is helping behavior that provides direct assistance to the person. An item from the OARS Multidimensional Functional Assessment Questionnaire (Duke OARS, 1975) and another from a measure developed by Strogatz (1983) were used to assess the availability of instrumental support in response to specific circumstances (i.e., help when sick or disable, or borrowing money). This study also included items regarding tangible help such as shopping, household maintenance, and transportation.

Several additional measures of other dimensions of social support were included. Social resource questions from the OARS Multidimensional Functional Assessment Questionnaire (Duke OARS, 1975) were included to assess the type and extent of social interactions, the availability of a confidant and the availability, duration, and sources of help. The present study adds six items to assess the respondent's ability to make new friends (i.e., "Have you made any new friends here in Calgary in the past 6 months?") and his or her physical mobility to visit friends or relatives (i.e., "Is it hard for you to visit your relatives and friends?").

Reciprocity reflects the degree of embeddedness of an individual in a reciprocal network of shared obligations and imparts a sense of belonging. Research indicates that individuals who provide support to others often benefit themselves from the help-giving role (Goulder, 1960; Greenberg, 1980; Gottlieb, 1983; Antonucci, 1985b). Antonucci (1985) argued that maintaining reciprocity in social interaction is particularly important for older adults. Agreeing with Antonucci (1985b),

the author believes this aspect of social relations should be examined empirically. Four items have been developed to assess helping behaviors provided by the Chinese elderly to their family members, friends or relatives (e.g., "Is there anyone who needs you to help them?").

An index was constructed using items from the measure developed by Lin et al. (1986), to assess network characteristics such as frequency of interaction, the number of network members, the nature (e.g., husband, friend etc.), and the quality of the relationships (How freely the respondent can talk to the confidant). The respondents were asked to answer the questions designed to assess the various aspects of their relationships with each different person mentioned.

Formal group participation was measured by asking the respondent to list as many as three different organizations and indicate the frequency of his or her attendance. For each organization, the individual was required to answer the question: "Do you feel that the organization helps you with your problems".

Measures of general health status included in the interview were derived from the physical and mental health sections of the OARS questionnaire (Duke OARS, 1975). The mental health section includes measures of perceived mental health and the presence or absence of some common somatic, cognitive, and affective symptoms. The self-assessment of mental health includes a current global rating and a comparison based upon a subjective assessment of five years earlier. The physical health section includes questions concerning the number of sick days, current illnesses, the extent of interference with the individual's activities, and a global self-assessment of health (Duke OARS, 1975).

Depression was measured with the Geriatric Depression Scale (G.D.S.) developed by Brink et al., (1982). The instrument is designed to detect depression in aged subjects and is sensitive to their specific complaints.

The Self-Esteem Scale developed by Rosenberg (1965) was used to measure the self-acceptance aspect of self-esteem. The scale has been used successfully with elderly population (Breytspraak & George, 1979).

The brief Activities of Daily living scale (Lawton & Brody, 1969) was used to measure the capacity to perform various ordinary instrumental and physical tasks regarding independent living.

The Life Satisfaction Index (Wood et al., 1969) was used to measure the general perception of satisfaction with life in the present compared with the past. Wood et al. (1969) report that the shortened index is an improvement over the original instrument in measuring life satisfaction.

A measure developed by Wu (1974) was modified to assess the Chinese elderly's attitudes and opinions concerning traditional values (i.e., filial piety) and their daily activities and means of transportation.

In order to more accurately specify the relations among social support and well-being in the Chinese Elderly, this study includes a number of demographic factors such as age, gender, marital status, education, economic factors, and work situation.

Procedure

Before initiating the study, the questionnaire was translated from English to Chinese by the author. In translating the questionnaire, all items were translated literally. Popular Chinese sayings whenever applicable were not used to avoid social desirability. A pilot test was done on 8 elderly aged 60 and older. The purpose of the pilot test was

twofold: to identify questions and responses that were unclear or awkward, and to establish the timing, wordings, and subjects' reactions toward the questionnaire. In testing the instrument, some questions found to be awkward were reworded. Other changes were required regarding ordering of the social network questions. Specifically, it was efficient to ask the respondents a network question and have them respond as it pertained to each person on the list, before going on to the next questions. Asking all network questions for each separate network member proved to be very cumbersome. The responses from the pilot test proved to be positive and encouraging.

Each interview began with the introduction of the researcher followed by an explanation of the study. The respondents were informed that a number of older persons were being interviewed in different settings, such as individual's home or activity centre, in order to understand more about the general health status, well-being, and life satisfaction of the Chinese elderly (see Appendix B). This was followed by the collection of demographic data such as gender, age, marital status, and education. The rest of the questionnaire consisting of general health (mental and physical health status), social support, self-esteem, depression, opinions on traditional values, activities of daily living, life satisfaction, work situation,and economic status were administered.

During the interview, care was taken to assure that subjects' right to privacy and anonymity were protected. Subjects were informed both verbally and in writing that the information they provided would be treated as group data only, and that they would not be personally identified in any of the reported results. Interview protocols were assigned

code numbers for identification purposes. Completed interviews and the identification code list were stored in separate files.

In addition to the procedures adopted to ensure the subjects' anonymity and privacy, care was taken to inform respondents verbally and in writing that they could decline to participate in the study or withdraw from the study at any time. These written and spoken assurances were provided at the time subjects were initially informed about the study, and before each interview began. All of the respondents were willing to participate in the study.

Because of the length of the interview (approximately one hour), care was taken by the interviewer to be sensitive to signs of fatigue or discomfort on the part of the respondents, and to assure respondents that they could take a rest break, or decline to answer any questions if they chose.

CHAPTER 4

RESULTS

This chapter is concerned with the analysis of data and discussion of various findings. In order to have a clearer picture of this ethnic sample, a closer examination of the demographic characteristics of the respondents is presented.

Demographic Characteristics of the Sample

Of the 100 respondents interviewed, 61 were female and 39 male. This approximately reflects the universal pattern of an unbalanced gender ratio among the aged. The marital status indicated that 63 were married, 36 widowed and one divorced. Table 1 shows marital status by gender.

Table 1

Gender and Marital Status of Respondents (n=100)

Marital Status	Female	Male	Percent
Married	30	33	63
Widowed	31	5	36
Divorced	0	1	1
Total	61	39	100

Of the 61 female respondents, nearly half were widows. One respondent, now age 90, was widowed at age 28 and never remarried. This reflects the traditional Chinese cultural belief that it is a "disgrace" for women to remarry. During the Sung Dynasty (960-1276), the scholars imposed a secluded life on women and made the remarrying of widows a

moral crime. In the Ming Dynasty (1368-1643), the doctrine of chaste widowhood from under age thirty to the age of fifty was officially honored and families of widows were exempt from labor service. They lent honor, not only to their own families but to their whole village or clan (Lin, 1935).

All respondents were born before the World War II. At that time, formal education was restricted to the upper middle class.

Table 2

Years in School (n=100)

Number of years	Percentage
0-8	81
9-11	0
10-12	13
12+	1
University/College	5

Table 2 shows that of the 100 respondents, 81 have less than 8 years of education. Many of the respondents can read or write very little Chinese. The number of people who have the ability to communicate in English is even less (see Table 3).

Table 3

How Well Do You Use the Chinese and the English Languages? (n=100)

	Chinese			
	Well	Fair	Little	None
Read	6	21	63	10
Write	6	20	58	16
Speak	100	0	0	0
Understand	100	0	0	0

	English			
	Well	Fair	Little	None
Read	3	1	4	92
Write	2	1	3	94
Speak	2	1	9	88
Understand	2	1	13	84

Regarding immigration to Canada, 86 of them responded that their children were here, one said because of spouse, four replied retirement, one was a refugee, and eight gave no reason.

For their living arrangements, 20 lived with their children, 33 lived with their spouses, 24 lived alone, and 23 lived with their spouses and children. About one-third of the widows and widowers in this sample lived with their children. Half of the elderly in the sample lived in the senior housing residences located in Chinatown while the other half lived in other parts of the city.

Table 4

Number of Friends and Close Friends (n=100)

	Male			Female	
Number of Friends	Married	Widowed	Divorced	Married	Widowed
None	2	1	0	1	6
1-2	2	0	0	5	1
3-5	7	1	0	5	3
6-10	6	0	0	9	6
11-15	2	0	0	1	1
16+	14	3	1	9	14
Not answered	0	0	0	0	0
	33	5	1	30	31

	Male			Female	
Number of Close Friends	Married	Widowed	Divorced	Married	Widowed
None	11	0	0	13	9
1-2	6	1	0	7	8
3-5	7	2	0	7	4
6-10	7	2	0	2	6
11-15	0	0	0	0	1
16+	2	0	1	1	2
Not answered	0	0	0	0	1
	33	5	1	30	31

Most respondents in this sample (90 out of 100) reported that they have friends. As can be seen in Table 4, in this sample one-third of the respondents indicated that they have no close friend. It is worth noting that married men are more likely to report that they have more friends than married women.

The respondents who reported having one to five close friends tended to have more contacts with their close friends within the 12-month period than the respondents who reported having six or more close friends (see Table 5).

Table 5

Number of Close Friends Contacted Within the Last 12 months (n=100)

Number of close friends contacted within the last 12 months	Male			Female	
	Married	Widowed	Divorced	Married	Widowed
None	18	2	0	15	13
1-2	5	0	0	7	8
3-5	5	2	0	6	3
6-10	4	1	0	1	4
11-15	1	0	0	0	0
16+	0	0	1	1	2
Not answered	0	0	0	0	1
	33	5	1	30	31

The numbers of sons and daughters the respondents have are displayed in Table 6.

Table 6

Number of Sons and Daughters (n=100)

	Male			Female	
Number of sons	Married	Widowed	Divorced	Married	Widowed
None	11	0	0	13	9
1-2	6	1	0	7	8
3-5	7	2	0	7	4
6-10	7	2	0	2	6
11-15	0	0	0	0	1
16+	2	0	1	1	2
Not answered	0	0	0	0	1
	33	5	1	30	31

	Male			Female	
Number of daughters	Married	Widowed	Divorced	Married	Widowed
None	10	3	0	8	10
1-2	11	2	0	14	12
3-5	10	0	1	7	7
6-10	1	0	0	1	1
11-15	0	0	0	0	0
16+	0	0	0	0	0
Not answered	1	0	0	0	1
	33	5	1	30	31

It is interesting to note that there are only one or two children who have had contact with their aged parents within the last twelve

Table 7

Number of Sons/Daughters Contacted Within the Last 12 months (n=100)

Number of sons contacted within the last 12 months	Male			Female	
	Married	Widowed	Divorced	Married	Widowed
None	19	2	1	17	20
1-2	10	2	0	9	8
3-5	4	0	0	4	2
6-10	0	0	0	0	0
11-15	0	0	0	0	0
16+	0	0	0	0	0
Not answered	0	1	0	0	1
	33	5	1	30	31

Number of daughters contacted within the last 12 months	Male			Female	
	Married	Widowed	Divorced	Married	Widowed
None	19	4	1	16	17
1-2	4	0	0	11	10
3-5	8	0	0	2	3
6-10	1	0	0	0	0
11-15	0	0	0	0	0
16+	0	0	0	0	0
Not answered	1	1	0	1	1
	33	5	1	30	31

months. A larger number of children does not necessary lead to more contact with those children (see Table 7).

Most of the respondents (65 percent) rated their mental or emotional health at the present time as fair, 25 percent reported their mental health as good, 8 percent as excellent and 2 percent as poor. However, when asked whether their mental or emotional health is now "better", "about the same" or "worse" than it was five years ago, 54 percent stated "the same", 25 percent replied "better" and 21 percent answered "worse than 5 years ago".

Most of the respondents were in good physical health. When asked "During the past six months how many days were you so sick that you were unable to carry on your usual activities?" 96 percent of them said zero. 80 of the sample, reported no physical problem or illness at the present time that seriously affected their health. They also stated they have good eyesight and hearing. It should be noted that those who reported good health did not mean that they were free from physical symptoms, but that they functioned adequately in daily living. The two leading causes of their discomfort are arthritis/rheumatism (46%) and high blood pressure (47%). However, the elderly seemed to be able to take care of their health by having regularly physical examinations by a family doctor.

Transportation is not a serious problem for the Chinese elderly in Calgary. Although only 10 respondents have drivers' licenses and 7 own cars, more than half (56%) of the respondents take the bus frequently. The Chinese elderly in Calgary regard buses as the preferred mode of transportation. They know only one or two bus routes, usually from their homes to Chinatown to visit or shop or from Chinatown to their sons and daughters' homes.

Lack of recreation or leisure activities was obvious in this sample. In order to understand how the respondents spent their leisure time, the following question was asked: "What is your main source of pleasure?" Table 8 summarized the sources of pleasure of the respondents.

Table 8

Sources of Pleasure of the Respondents (n=100)

Activities	Total
Nothing	39
Watch Television	32
Knitting	2
Talking with friends	2
Housework	3
Playing Ma-Chong	6
Reading	5
Walking	4
Music listening	1
Not answered	6
Total number of Respondents =	100

Of the 100 respondents, 39 reported that nothing gives them pleasure. Thirty-two percent of the sample reported watching television as their main source of pleasure. The television programs were essentially in the Cantonese dialect. Most of the programs are soap operas and video tapes produced by Hong Kong television companies. In recent years, a

Chinese television company opened in Calgary, providing the elderly with the opportunity to hear news about Hong Kong and Canada in a language that they understand. However, many Chinese elderly consider the connection fee and the monthly payment for the Chinese television services too high ($34.00 per month plus $50.00 installation fee) and therefore Chinese television is not very popular. Other past-times consisted of knitting, talking with friends, housework, playing Ma-Chong, reading, walking, and music listening.

Regarding participation in formal groups, 78 percent of the respondent belonged to formal organizations. Within this subgroup, 26 individuals reported affiliation with more than one organization. The breakdown of the group memberships are presented in Table 9.

Table 9

Formal Group Participation (n=100)

	Formal Group(s) Participations		
Name of formal group	1	2	3
CCECA*	42	23	3
Christian Churches	10	18	2
Buddhist Temple	0	1	0
Chinese Music Society	0	1	0
Surname Associations	0	2	3
Hometown Associations	0	1	1

*Calgary Chinese Elderly Citizen Association

As noted from Table 9, only nine individuals (out of 78) participated in the traditional Chinese organizations such as surname associations, hometown associations, the Buddhist temple or the Chinese Music Society. The majority of the respondents (68) belonged to a services oriented organization similar to the Calgary Kerby Centre. The remaining 30 individuals reported affiliation with Christian churches.

With regard to income, 76 percent of the sample considered their financial situation as "fairly good", 3 percent viewed their situations as "very good", 17 percent responded that their financial situation was "poor", 4 percent did not indicate their financial situation to the interviewer.

Principle sources of income for the sample varied from government assistance (42 percent), child/family support (31 percent), employment/business earnings (11 percent), rental income (2 percent), retirement/pension from job (10 percent), and 4 percent did not reveal their sources of income.

It is noteworthy that of the 100 respondents, 82 are Canadian citizens, 15 are permanent residents, and only 3 have neither of these status. Although the majority are citizens or permanent residents of Canada, only 53 individuals have resided in Canada for 10 years or more. That is to say only these 53 individuals are eligible for government assistance such as old age security, guaranteed income supplement, and other assistance payments. Of these 53 individuals, 42 receive some forms of government assistance. Of the remaining 11 respondents who are eligible but did not receive government assistance, one stated his/her income was from employment/business earnings, one reported his income was a pension from the Chinese government, five stated their income came

from child/family support, and the remaining four did not reveal their financial situations.

Results Relating to Factor Analysis

The following section presents the result of a factor analysis suggesting the following structure of social support and its correlations with related variables. In addition, results of the respondents' attitudes on cultural values and customs and the helping behaviors are of interest and discussed. The results of the factor analysis are presented in Table 10.

Table 10

Factor Analysis of Social Support Items After Oblique Rotation

Item	Factor I	II	III	IV	V
Count on support from close friends	.63				
Count on support from neighbors	.62				
Count on support from professionals*	.59				
Number of close friends	.53				
Someone you can share most private feelings	.50				
Know people to visit in their house	.49				
Number of neighbors	.49				
Tell things about yourself	.49				
Opportunity to talk about feelings	.48				
Know neighbors that visit each other	.48				
Someone you can share when you are happy	.45				

Item (cont.)	Factor I	II	III	IV	V
Someone who would help when you are sick	.44				
Transportation assistance	.42				
Need you to help	.42				
Someone lives in or near who knows you well	.40				
Count on support from spouse		.75			
Count on support from daughter		.60			
Number of daughter		.49			
Makes you feel that he/she cares		.42			
Makes you feel that he/she loves you		.42			
Makes you feel that he/she respects you		.40			
Number of relatives			.68		
Count on support from relatives			.53		
See family members as often as want to				.57	
See relatives and friends as often as want to				.47	
Telephone contacts with family members					.51

*Professional = Co-workers, numbers of same clubs or groups, and professional (M.D., Psychologists, social workers, priest, etc.)

A five factor solution appeared to be the most reasonable with respect to the results of the scree test, the Eigen value rule, and factor parsimony criterion. Oblique rotation was also performed. The Pearson Product-moment correlations were computed among the five derived social support factors (see Table 11).

The generation of four and six factor solutions resulted in no appreciable gain in factor parsimony. Based on the pattern of factor loadings and the content of individual items, the five factors were interpreted as (I) perceived emotional and instrumental support from friends and neighbors, (II) perceived emotional support from family members, (III) instrumental support from relatives, (IV) satisfaction of the social relations, and (V) frequency of contacts. It should be noted that the labeling of these factors is somewhat arbitrary and by no means definitive. That is to say, the labels do not necessarily represent all of the items within each factor. For instance, the eleventh item ("Tell things about yourself") is more likely to describe the intensity of the relationship than just the support perceived by the elderly. For the most part, however, they appear to convey the essence of the items comprising the factor. It is clear that "count on support from relatives when ill" is instrumental support from relatives.

The first factor perceived emotional and instrumental support from friends and neighbors, consists of 15 items. This factor appears to represent the emotional attributions of social support. Representative items include "someone you can share with when you are happy" and "someone you can share your most private feelings". There is also evidence of instrumental aspects of social support presented in this factor, such as items describing assistance like "someone who would help when you are sick", and someone providing transportation. The subject's perceived ability to obtain emotional support is reflected in this factor. The strongest loading "count on support from close friends" (0.63) reflects the subject's perceived ability to obtain emotional support from friends.

The perceived availability of emotional support from family members is clearly defined by factor two. The factor consists of six items. Two of the strongest loadings (0.75) and (0.60) represent the respondent's perceived ability to obtain emotional support from his/her spouse and daughter. The content of the item loading of this factor includes whether or not the elderly individual feels that there is someone who cares, loves, and respects him or her.

The third factor includes two items. Both items are related to the respondent's relatives, the numbers of relatives the elderly individual has, and the instrumental support he or she can count on the relative when the elder respondent is ill.

The satisfaction of the social relations dimension are clearly defined by factor four. The two items included in this factor are "see family members as often as want to" (0.57) and "see relatives and friends as often as want to" (0.47).

The final factor, frequency of contacts, is represented by only one item. The item relates to the reported frequency of telephone contacts between the elderly individual and family members. This factor is a distinct dimension that is related but not subsumed under the perceived support from family members factor.

Table 11

Pearson Product-Moment Correlations Among the Social Support Factors

	Factor 2	Factor 3	Factor 4	Factor 5
Factor 1	0.43	0.28	0.18	0.36
Factor 2		0.02	0.07	0.34
Factor 3			0.07	-0.01
Factor 4				-0.06

The mean and standard deviations for the five factors were examined (see Table 12).

Table 12

Mean, Standard Deviations, and Reliability of the Social Support Factors

Factor	Mean	S.D.	Internal Consistency Reliability
1	39.18	8.50	0.75
2	11.79	3.47	0.77
3	4.66	1.42	0.54
4	2.55	2.50	0.58
5	1.51	1.04	0.56

The Cronbach Alpha model was used to calculate the internal consistency reliability coefficients for the five factors. The reliability coefficients are 0.75 for perceived support from friends and neighbors, 0.77 for perceived support from family members, 0.54 for instrumental

support from relatives, 0.58 for satisfaction of the social relations, and 0.56 for frequency of contacts. The magnitude of these coefficients suggests that the items in each of the five subdimensions constitute measures that are relatively homogeneous.

Results Relating to Selected Variables

The Pearson Product-moment Correlations between social support factors and a number of other select variables were computed. As can be seen in Table 13.

Table 13

Pearson Product-moment Correlations Between the Social Support Factors and Selected Variables

	Factor				
Selected Variables	I	II	III	IV	V
GENDER	0.06	0.19	-0.12	-0.03	0.05
MARITAL STATUS	-0.00	0.24	-0.11	0.09	0.03
EDUCATION	0.17	0.25	0.10	0.05	0.14
FAMILY RELATIONSHIP	0.14	0.24	0.10	0.01	0.22
PHYSICAL HEALTH	0.35	0.18	0.05	0.11	0.07
DEPRESSION	0.53	0.49	-0.18	0.26	0.27
INSADL	0.19	0.15	-0.03	-0.17	-0.03
TRANSPORTATION	-0.02	-0.22	0.21	0.04	-0.18
FORMAL GROUP PARTICIPATION	0.24	0.20	-0.17	-0.04	0.16
LIFE SATISFACTION	0.43	0.49	-0.07	0.21	0.34
ECONOMIC FACTORS	0.53	0.48	0.21	0.07	0.49

The correlation coefficients for the five social support factors with depression ranged from -0.18 to 0.53. Individuals with perceived support from family, friends, and neighbors are more likely to report less depression. Individuals who are more satisfied with their social relations and have frequent social contacts over the telephone are also reported to be less depressed. Interestingly, there is a weak but negative correlation between depression and instrumental support from relatives. The negative correlation suggests that the more relatives one has, the more depressed the individual will become.

Of the five factors, factor one, two, and five were associated with the economic factors. Respondents who are financially stable are more likely to perceive they have support from their family members, friends, and neighbors. They are also more likely to report more frequent contacts with family members over the telephone.

Perceptions of life satisfaction are positively correlated with all factors except the instrumental support from relatives factor. Individual with perceived support from family members, friends, and neighbors, are more likely to report they have a greater level of life satisfaction. These individuals are also more likely to report they have frequent contact with their family members over the telephone and have satisfied social relationships.

Participation in formal groups is positively correlated with perceived support from family members, friends, and neighbors but negatively correlated with instrumental support from relatives. The elderly who perceived they have support from their family members, friends, and neighbors are more likely to be participated in the formal groups

activities. The respondents who have more instrumental help from relatives, however, are less likely to participate in the formal groups.

Transportation assistance is positively correlated with instrumental support from relatives but correlated negatively with perceived support from family members. The data seems to suggest that individuals who have more instrumental aid from relatives are more likely to receive transportation assistance. Respondents who perceived they have emotional support from family members are less likely to receive transportation assistance. A negative correlation was found between transportation assistance and frequency of contacts. Individuals who have less transportation assistance are more likely to have frequent contact with their family members over the telephone. It seems to suggest that the elderly who did not have transportation assistance tended to use the telephone more to communicate with their family members.

The correlations were computed between family relationships and factor two and five. Respondents' perceptions of available emotional support from their family members and greater telephone contacts with them are more likely to report better family relationships. A positive correlation was found between education and perceived support from family members. Gender was also found to be correlated with perceived support from family members. Women are found to be the major support providers. Physical health was found to be correlated with support from family members, friends, and neighbors, but not with other factors. Elderly individuals with perceived support from family members, friends, and neighbors reported fewer physical problems.

Instrumental daily living activities was positively correlated with perceived emotional and instrumental support from friends and neighbors

but negatively correlated with satisfaction of the social relations. The data suggested that the elderly who perceived they have emotional and instrument support from friends and neighbors are more likely to receiving support of chores in daily living activities, such as preparing a meal, doing housework, taking own medicine, etc. It also suggested the elderly who live independently, without instrumental assistance in daily activities, are more likely to report they do not have a satisfied social relationship.

Results Relating to Cultural Values

Attitudes towards filial piety and filial responsibility were examined. The respondents were asked, "What do you think about filial piety?" They were asked to select one from the following three answers that more likely to express their belief.

A. The most important Chinese virtue that should be preserved.

B. Important, but depends on one's relationship with parents.

C. Does not apply in western culture.

Table 14 shows the attitudes of the respondents towards filial piety. Most (81 percent) of the respondents considered filial piety as the most important Chinese virtue to be preserved; nine agreed that filial piety is important but it depends on relationship with parents; eight noted that filial obligation does not apply in western culture; and the remaining two individuals did not respond to this question.

Table 14

Attitudes Towards Filial Piety (n=100)

Attitudes Towards Filial Piety	Responds
A	81
B	9
C	8
Not answered	2
Total	100

The traditional Chinese family tends to be an extended family, thus the attitudes towards living arrangements were studied. The respondents were asked "Do you think aged parents should live with their sons and daughters?" Table 15 show that 55 people think that the aged parents should live with their children while 40 of them think aged parents and adult children should live separately.

Table 15

Attitudes Towards Living Arrangements (n=100)

Living Arrangements	Responds
Living together	55
Living separately	40
Not answered	5
Total	100

In regard to reasons for their selection of living arrangements, the respondents who supported living together believe that such an arrangement is the "Chinese tradition" and an appropriate way for children to "pay them back". Other reasons such as "parents need care and companionship" and "parents should live with their children in order to provide guidance and help for their children and grandchildren". The aged who supported separate living (40 percent) used such phrases as "generation gap", "difference in life styles", "intergenerational conflicts", "problems with in-laws", and "it does not apply in western culture".

Attitudes towards financial support of parents were also studied. The respondents were asked "Do you think sons and daughters should contribute to the support of their parents to the extent of their ability?" The majority (87 percent) of elderly supported the idea of financial support to parents. Eleven did not support this idea (see Table 16).

Table 16

Attitudes Towards Financial Support of Parents (n=100)

Should Children Support Parents?	Responds
Yes	87
No	11
Not answered	2
Total	100

Almost all respondents who agreed that children should financially support their aged parents considered it is the responsibility of the children because the parent had reared them. Six indicated that it was the Chinese tradition and should be followed. Only one stated that it was for the love of parents. Among the 11 respondents who did not agree that children should financially support their aged parents four indicated that they have government support (i.e., pensions or old age security); two stated that the children have their own burdens; two suggested that no one will do it in Canada; one said that the children do not want to support the parents; two considered it the children's money for use by the children.

When asked "Life in Canada is different from China/Hong Kong, what areas that you think are most difficult for you?", 68 percent of the respondents regarded the language barrier as the major difficulty faced in the new land. Differences in customs and habits, and transportation, are considered to be two equally difficult barriers experienced by the Chinese elderly when they live in Canada. Eight percent of people answered lack of friends is the most difficult barrier they experienced (see Table 17).

Table 17

Obstacles Experienced by Chinese Elderly (n=100)

Most difficult barrier	Responds
Language barrier	68
Customs & Habits	11
Transportation	10
Lack of friends	8
Others	2
Not answered	1
Total	100

In regard to the question, "How would you describe the attitude toward the elderly in China in the past?" 73 percent of the respondents used the word "Respect" to describe the attitude toward the elderly in China in the past. To the question, "Do you think the attitude towards the elderly in the Canada is different from the attitude in China?" 82 percent replied "yes". Of the 82 percent, 43 percent noted lack of respect; 19 percent thought there is a lack of concern; 18 percent described the difference as "children are more important than the elderly parents". 14 percent reported indifference and the remaining 6 percent answered "don't know".

When asked "Is there anyone who would need the respondents' help?", 24 percent responded affirmatively and 71 percent indicated no one needed them to help. However, when asked is there anyone in the respondent's family who would need help, the responses jumped to 48 per-

cent. In another question, "Have you helped any of your family members or friends when they were sick?", 68 percent indicated that they have provided assistance. 58 percent of the respondents indicated they would help their children now and then such as baby sitting their grandchildren, housework, fixing lunch or supper for their children.

CHAPTER 5

DISCUSSION AND CONCLUSIONS

Discussion

This research is the first attempt to identify the underlying factor structure within a group of social support measures in a Chinese elderly sample in Calgary. The study provides evidence that social support is a multidimensional construct consisting of both subjective and objective measures of emotional and instrumental factors. Five dimensions of social support were derived in this study representing: (I) perceived emotional and instrumental support from friends and neighbors; (II) perceived emotional support from family members; (III) instrumental support from relatives; (IV) satisfaction of the social relations; (V) frequency of contacts. The five dimensions exhibit different relationships with depression, economic factors, life satisfaction, formal group participation, and physical health measures. Each of the dimensions of social support have unique qualities as demonstrated by their different statistical relationships with other variables. Each should be considered independently in ethnic - gerontological research.

Evidence supporting the multidimensional nature of social support exists in the theoretical and empirical health literature (Caplan, 1976; House, 1981; Blazer, 1982; Procidano & Heller, 1983). The exact configuration of social dimensions determined depend on the content of the social support measures included in different studies. There is some support for the social support factors derived in the present study. The factors in which the respondents believe they are loved or cared for by different resources in times of need represents a dimension similar to Procidano and Heller's (1983) "perceived support" factor. Availability

of social resources for instrumental support is similar to Caplan (1976) and House's (1981) "social support" factor. A social contacts factor was found by a number of investigators (Blazer, 1982; Donald & Ware, 1984).

The five dimensions of social support were correlated with a number of variables to assess whether they are differentially related to other constructs. Contrary to expectations, social support was not strongly related to physical health status, marital status, and life satisfaction. It was found that the elderly who perceived they had support from family members, friends, and neighbors tended to be in good physical health. Physical health status was not related to the remaining three factors.

Unlike Kahn and Antonucci's (1984) finding, the married men in this study had more friends than married women. This may be a result of the patriarchal socializational patterns in Chinese society. The elderly who are married reported a higher level of emotional support from spouses and daughters. It is similar to Belle's (1982) finding that relationships with women may be more supportive than relationships with men. However, this may suggest a change in family behavioral patterns with the father-son relationships the most important one of all for the Chinese. Life satisfaction was statistically related with the perceived support from friends, neighbors, and family members, satisfaction of the social relations and social contact, but not with instrumental support from relatives. The instrumental support from relatives factor was positively correlated with transportation, and economic factors but negatively correlated to depression and formal group participation.

The results of the correlations of instrumental support from relatives factor with other variables is an interesting one. It reflects

some changes in the sociocultural patterns of the Chinese family. Culturally, the Chinese family is an extension of a kinship or clan. The linkage of relatives is considered to be very important. The finding, however, indicated that the more relatives the elderly have, the more depressed they will become. As mentioned in chapter 4 this study assumes the outcome of social support to be neutral. The evident suggests that not all interpersonal encounters or their effects are positive. Others can be sources of conflict or distress. They can strew obstacles in one's path instead of helping one overcome them, or well-intended efforts can backfire if they do not fit one's situation. Thus, some social encounters may be more of a burden than a support to the elderly (Wellman, 1981; Fischer & Phillips, 1982).

Formal group participation also reflects some changes in the sociocultural patterns of Chinese community activities. The traditional Chinese social groups are surnames or hometown associations. Yet the majority of the respondents participated in the western style elderly associations and Christian churches. However, the more instrumental help the elderly can get from their relatives, the less they participate in formal group activities. The findings suggest that Chinese elderly will turn to their relatives rather than to the service-oriented organizations for instrumental aid. As for churchgoers, they reported church membership and religious activities relieve their intense feelings of loneliness and emptiness during old age in a foreign land. They did not usually turn to their church for instrumental support but to their friends or neighbors for emotional and instrumental support. It seems that while there were some changes in the sociocultural pattern, there were still some Chinese cultural patterns that survived.

The positive correlation between formal group participation and the perceived emotional and instrumental support from friends and neighbors leads one to speculate that the members in the formal groups may also be in the same social circle as friends and neighbors. It is possible that the elderly who have relatives did not need to participate in the service-oriented organization while the elderly who did not have relatives tended to participate in the formal group in order to make more friends and get aid from group members. It may be speculated that the respondents who lived in the senior housings in Chinatown may join their neighbors as formal group members.

Depression was correlated with all five factors. Individuals with more emotional and instrumental support from friends, neighbors, and family members tended to report less depression. The level of satisfaction of the social relations tended to affect psychological well-being. The elderly who are satisfied with their social relations tended to report less psychological distress. The frequency of social contact over the telephone affected the emotional life of the elderly. That is, the more phone contacts the less depressed they became.

The purpose of the study was not to find out causal relationships or test hypotheses. It cannot be ascertained from this research that elderly people with perceived support from family members, friends, and neighbors have fewer mental and physical health problems due to the emotional and instrumental support provided. An alternative interpretation is that those who have fewer mental and physical health problems are more likely to be the recipients of, or have access to more emotional and instrumental support.

As noted, depression is related differentially to each of the five social support factors while physical health is related to emotional support from family members and emotional and instrumental support from friends and neighbors. The same applies to the finding that higher perceived level of emotional support from family members, a higher level of satisfaction in social relationships, a higher frequency of contacts with a family member and a higher emotional and instrumental support from friends and neighbors is associated with a higher level of life satisfaction. Elderly people who perceived they have emotional support from family members may have a higher frequency of contacts with them and a more satisfied social relationship as a result of higher levels of life satisfaction. What emerges is the differential relationship of the four dimensions of social support with life satisfaction.

The results show that women are the major support providers. The Chinese family is a patriarchal one where female seclusion is common. It is interesting to note that the emotional support from women may be an important influence on the health and well-being of the elderly.

There is indeed a different view of aging between the western world and China. Aging in North America leads to decrease in social status (position, rank, and prestige) and the loss of social roles (expected behaviors of a person in the position occupied which give meaning to both the community and to the person) (Wu, 1974).

The opposite was true in China. Social status rose with age for rich and poor, educated and illiterate. Age meant being respected, loved, and cared for. However, there is a consensus that Chinese attitudes towards the elderly in North America has changed. In general, all agreed there was a lack of respect and concern towards elderly.

Although most of the respondents attributed the change of attitudes of the younger generation toward elderly to the influence of the western culture and North American social environment, the traditional values and life styles of these elderly also seemed to be influenced by the western culture and social environment. Culturally, children, especially sons, are expected to listen to and provide for their parents. The findings in this study, however, indicated that the respondents turn to their spouses or daughters for emotional support, not for instrumental assistance. It seems the support pattern shifts from primary to secondary resources. The elderly turn to friends and neighbors for emotional and instrumental support.

Several factors have influenced the change of behavior reported by these respondents. One is the different life styles between parents and children. All of the respondents in this sample grew up in China. As children, they lived with their family and extended family. They learned and obeyed the principle of "filial piety". As they became old, they expected their children to treat them the same way as they treated their parents. This is evidence that the overwhelming majority of the respondents considered filial piety the most important Chinese virtue to be preserved. One of the essential practices of filial piety is paying back the parents because they reared the children. That is also the reason most respondents agreed that children should financially support their parents.

There is a discrepancy between the ideal and practice. Less than one-third of the respondents were receiving financial support from children or family. The remaining two-third of the respondents' children did not "pay back" their parents as the elderly expected.

Regarding the filial piety principle, the elderly seemed to hold tight to their belief. They supported filial piety as the most important Chinese virtue and favored the idea that children should care for their aged parents financially. As far as daily practice, such as living arrangements, they became more realistic. A little more than half people (55) favored living together with their children while 40 of them supported separate living arrangements. The respondents who favored living together indicated this is the way children can repay them, and children and grandchildren need guidance and help. Those who supported independent living related it to the generation gap, differences in life styles, and problems with in-laws. The actual living arrangements, however, also different from what the elderly idealized. The assumption that the majority of elderly were living with their sons and daughters was false. More than half of the elderly lived independently, with only 20 lived with children alone and 23 lived with their spouses and children.

Independent living was a preferred living arrangement for the elderly in this sample. With the aid of government subsidy and low-income senior housing, many elderly were able to live independently. Those who still lived with their sons and daughters did so for financial reasons. Some people lived with their children because they did not qualify for the government assistance and other did so to ease their children's financial burdens. Since two-income families are very common among the young Canadian Chinese families, the elderly work as the baby-sitter for their grandchildren and help around the house.

This is not what the elderly expected when they first came to Canada. Culturally, the children should take good care of the aged par-

ents and obey them to the fullest extent. However, all the elderly were aware of their position in the children's home. They were not the respected, lovable and highly honored grandpa and grandma found in China, but instead were financial burdens, baby-sitters, or homemakers. Because of the language barrier, they may even depend on their children for daily living such as shopping, transportation, or translation on the telephone. The reversal of roles from respective and authority figures to dependent and house helper in their children's home causes the elderly to turn to their friends and neighbors for emotional and instrumental support.

Another reason for the change of behavior in the elderly is the language barrier. In China, one of the greatest joys in old age is to having grandchildren around. In North America most elderly are deprived of this pleasure because they do not live with the grandchildren and a language problem exists. Most of the elderly respondents reported that they cannot communicate with their grandchildren. Language is a basic tool for socialization. As newcomers in a foreign land, most respondents consider inability to speak or understand English their most serious problem. To them, the ability to comprehend and make use of the English language is not only a specific functional prerequisite in western society but also indispensable in order to live as decent and respectable human beings. Indeed, it is beyond what is adequate for biological and psychological survival. The fact that they described themselves as "imprisoned", and as "deaf, dumb and blind", reflects their feelings of "unfitness" and being "crippled" or "handicapped" by language problems.

The overwhelming majority of the respondents did not speak, read or understand English. They could not read labels, street signs, English

newspapers, or names of the stores where they did their shopping. They could not carry on a simple conversation with their Canadian neighbors, people in the stores, or ask for information from a bus driver. Many of them are afraid to go out alone and afraid they would not find their way home. Most of the younger Canadian Chinese are two-income families or they are very involved with working or raising their own family. There is little time and energy left for their aged parents. Tangible help, such as translating information the elderly need for daily living, is in the hands of friends or neighbors.

Utilization of formal assistance from government can also affect the elderly's dependency on their children. Both in China and in Hong Kong, children have to financially support their parents if parents have no other source of income or savings. The lowest cost of supporting parents is to live together. This practice causes a lot of intergeneration conflicts and other problems. In Canada, however, the government provides the financial assistance many elderly need to live independently. This may lessen many of the social, physical, psychological, and financial problems.

As mentioned before, if the elderly individual is financially dependent on his/her children the elderly would live with those children. In many circumstances, the respondent would be the baby-sitter or housekeeper of the children. Most of the elderly do not drive and do not own a car. Even if they can ride a bus they cannot leave the home because they have to care for the grandchildren. If they want to go anywhere, they have to wait until their sons or daughters come home from work. Therefore, the elderly usually do not go out unless absolutely necessary, for example a visit to the doctor. They are isolated from friends.

Government assistance allows the elderly to have greater freedom and live an independent life.

Government financial assistance provides alternatives for both the elderly and their children. In the past, it would have been considered immoral or irresponsible not to take care of one's parents. Now taking care of the aged is seen as the government's responsibility or the responsibility of the social/health services rather than of the adult children. If children continue to financially support or live with the elderly who are eligible for the government assistance, full assistance cannot be claimed. The reasoning is that if the benefit is available to the parents, they should take advantage of it. That does not imply children will not care for their parents when they are not living together. The opposite may be true, as living separately may lessen many familial conflicts and financial hardships. The parent-child relationship may actually improve.

Elderly living separately from their children have the greatest opportunity to develop a boarder social network. Most of the elderly chose to live in senior housing in Chinatown where they can have friends and neighbors of similar backgrounds and similar ages and who understand each other. Because the senior housings are located in the heart of Chinatown, it is also convenient for the elderly to take advantage of amenities such as shopping, the doctor's office, socializing, etc. Due to the reduced mobility of older people, the tendency is many inner-city elderly "must rely on the local area and its inhabitants to support their needs, while most of today's society reach far from home to meet the needs of everyday life" (Carp, 1976; p.249). Because of proximity,

neighbors represent a significant component of the support network for the elderly.

The financial independence and living arrangement draws the elderly geographically closer to friends and neighbors and away from children. This may account for the shift in instrumental support from family members to friends and neighbors. Another reason accounting for the elderly who seek support from friends and neighbors instead of family member is geographical proximity. In this study, more than half of the respondents live independently in the Chinese senior housing located in Chinatown area. Even if the respondents have a weekly or biweekly visit from a child, such visit do not replace their need for intimacy and interaction on a day-to-day basis.

Calgary is not a large city and the Chinese community seems to be a close-knit society. Everyone seems to know one another, especially the elderly in Chinatown. It is not surprising that most of the respondents (90 out of 100) indicated that they have friends, but only one-third of the respondents reported they have close friends. Evidence suggests the respondents who have one to five close friends have more contact with their close friends than the respondents who reported that they have more than six close friends in a 12-month period. Due to the relative immobility of the elderly, one can speculate that close friends must live in the same city as the respondents. Thus, they may be the significant support providers to these elderly simply because of availability.

The data from this study supports Wood and Robertson's (1978) contention that friends are more important in the life of urban Chinese elderly than family members. As the data suggested, city living with its

high density and accessible transportation, encourages extensive interaction between the elderly and those living around them. This does not seem to detract, however, from the important and central role of the family as support provider. Cantor (1979b) suggested a hierarchy of support providers that seems to exist among the elderly, including family, friends, and neighbors. The results tend to support Shanas's (1979 a,b) substitution model where the spouse is the primary support provider but children assume primary responsibility to care for the parent when a spouse is not available. If children are unavailable, friends, neighbors or relatives will step in to provide support as needed.

Older people need relationships with others who appreciate them and share their needs and interests. These roles can be filled only by contemporaries. Not only do friends have the advantage of being contemporaries who have interests and experiences in common, they are also equals. As Blau (1973) points out "friendship rests on mutual choice and mutual need and involves a voluntary exchange of sociability between equals, it sustains a person's sense of usefulness and self-esteem more effectively than filial relationships." (p. 67)

To provide support to someone is seen as reinforcing a mutually supportive relationship and therefore serves as evidence of the individual's continued good health, good company, and usefulness. The data from the study indicates that the majority (71 percent) of the respondents do not provide help to others because no one needs the respondents to help. Since most of the respondents were in good physical health, the answers reflected a sense of worthlessness in these individuals. The inability to communicate in English is the major factor contributed to the problem. Language is a major obstacle in the

day-to-day living for the non-English speaking immigrants. The elderly see themselves as inadequate and worthless and cannot provide any help to others.

Although the respondents indicated that no one needs them to help, they do provide tangible help to their children. Respondents were asked "Do you help your children now and then (e.g., baby-sitting grandchildren, housework, fixing lunch or supper, etc.) ?" 48 percent reported they had provided help to their children. As in a special situations, such as illness, more respondents (68 percent) indicated that they had helped their family members or friends when they were sick. This reflects a mutually supportive relationship among family members and friends as the respondents also indicated that the family members or friends will help them when they were become ill. However, the elderly did not perceive themselves as capable individuals and could not provide support to others. On the contrary, they thought they were worthless and useless and no one needs them to help. Although the self-esteem scale was not associated with any of the derived factors, the elderly in this sample did not have a positive self-image.

Leisure activity was a problem for elderly persons in this sample. Thirty-nine percent of the sample reported nothing would give them pleasure. Thirty-two reported interest in watching Chinese video tapes. These activities reflected their loneliness. In the interviews, many respondents said their children or grandchildren would take them to a Chinese tea house (one of the favorite past-time activities for the elderly and children in China) on the weekend. However, they did not list this activity as their main source of pleasure, because it does not hap-

pen as often as the elderly describe or it is no longer a favorite past time activity.

Limitations of the Study

There are several limitations in this study. Some sampling decisions influenced the final composition of the sample, including the fact that all individuals in the household who were 60 years of age and over were interviewed. Several respondents who were interviewed nominated their spouses, friends, neighbors, or relatives for interviews. Thus, this particular sample is likely to be biased in the direction of increasing numbers of confidants, and the finding might have been different because more confidants or closest network members were included.

Furthermore, Chinese from different parts of China have different customs and speak different dialects. The elderly included in this study came predominantly from Hong Kong and the majority of them are Cantonese speaking. The sample is homogenous and the sample size of 100 is not big enough to be representative in the city of Calgary.

It was noted that certain areas caused respondents anxiety. Respondents were reluctant to disclose the specifics of their financial situation. A round monthly income figure (e.g., $200 or $400) was usually given but reluctantly. In most cases, instead of an amount, "just enough" or "enough to meet the expenses" was the response. It was impossible to establish the respondents' exact socioeconomic status.

The relationship with adult children was a sensitive area, especially for those respondents who lived with their children. To the question "How would you describe your relationship with your sons and daughters who live here?" The overwhelming responses were "good". The

present writer speculated that this may be a socially desired response as most of the respondents considered the filial responsibility the most important Chinese virtue. They did not want to label their children as non-filial sons or daughters. Hence the methodological limitations and special characteristics of the study sample contribute to its general nonrepresentativeness. This is a point to be recognized when considering the generalizability of these results.

From a methodological perspective, social support represents a very heterogeneous concept that includes distinct but related dimensions (Donald & Ware, 1984). The aggregation of these different dimensions into a global measure of social support is likely to lead to misleading inferences regarding the associations between social support and other health variables. There may be a substantial loss of information when a number of weakly related variables are combined into a single indicator. Important relationships may be missed completely when variables having opposite relationships with other variables are combined into a summary index (Donald & Ware, 1984).

Implications for Future Research

Even given the limitations of the study, there is sufficient evidence to suggest that filial piety is an eroding value in the Chinese Canadian communities. Although the elderly hold tightly to their belief, there is a gap between ideal and practice. The study has shown that at least part of the filial responsibilities are gradually shifted from the primary support providers (i.e., family members) to the secondary support providers (i.e., friends, neighbors, and relatives) and government. As the Chinese family structure evolves from the extended family to the nuclear family, the importance of the familial versus the societal role

shifts. Today it is the government which provides basic services for older people in such crucial areas as income maintenance, health, and transportation. The family and significant others still retain considerable importance, particularly in meeting the psychological aspect of human needs such as caring, loving, and be confidants to older individuals.

Behavioral scientists are still in the process of developing measures for the generic concept of social support, including social relationships, their network structure, and the specific supportive functions or content of relationships. This approach is descriptive, and is intended to answer questions concerning who uses support, what behaviors are considered supportive, and when supportive transactions are most likely. For example, it is likely that there are important sex, age, social class, and ethnic groups differences in support usage which up until now have been largely ignored.

The current study was intended to be descriptive, exploratory in nature and an attempt to understand the social support factor patterns in a Chinese elderly population. There is evidence in this study that social support is a multi-dimensional concept including distinct but related categories of perceived emotional and instrumental support from friends and neighbors, perceived emotional support from family members, instrumental support from relatives, satisfaction of the social relations and frequency of social contacts. The variables (e.g., depression, life satisfaction, economic factors, physical health, marital status, etc.) are linked to outcome measures in distinct ways.

It is noted that the Chinese elderly in this sample relied on informal (e.g., family members, friends, and neighbors etc.) and formal

(voluntary services organizations or the government) resources for emotional and instrumental support. Their abilities to perceive support, either emotionally or instrumentally, seem to affect the physical health status and mental well-beings of these elderly. These results support the evidence that social support is best regarded as "personal experience, rather than a set of objective circumstance or even a set of interactional process" (Turner, Frankel & Levin, 1983, p.74). The decision to focus exclusively on the perception of support has profound implications for how research questions are formulated. The questions formulated in this study involves only the individual's perception of support. The exclusive focus on perceptions, however, has resulted in the individual's being studies in isolation from family, neighborhood, and other important interactional contexts. An exclusively cognitive approach leads to little knowledge about the interpersonal dynamics taking place in close relationships or about supportive provisions being mobilized and used in the copping process (Gottlieb, 1984).

Further research is needed to learn more about: how people find, build, maintain, and end relations; and how they are constrained by their personal characteristics, cultural background, patterns of social interaction, and the pool of people available.

Another aspects worth further examination is the reciprocal nature of social support. Indigenous support involves reciprocal interactions in which participants both give and receive support. In the current study the majority of the respondents (71 percent) indicated that no one needed them to help. If social support is a reciprocal process, providing support may be as important as receiving it. Being a support provider is psychologically enhancing, and the loss of close relation-

ships means no longer being able to care for others (Heller & Mansbach, 1984). This aspect of supportive relationships should receive greater attention.

The negative aspects of social interactions should also be addressed in future studies. The current study indicated that there is a negative correlation between the number of relatives and depression. Some studies indicates that negative social outcomes are more consistently correlated with well-being than are positive outcomes (Rook, 1984; Shinn, Lehmann & Wong, 1984). Thus, it is important that both negative and positive exchanges are studied.

There is a clear need for improved measures. As mentioned before, there are several sensitive areas that may cause anxiety in the respondents and the choice of words in the questionnaire should be culturally conscious. Other measures of mental health should be systematically explored in this population. For instance, self-esteem is found to be significantly correlated with social support in other populations (Lin et al., 1986) but not in this study. The instrument used for assessing self-esteem may not accurately reflect the esteem status in this sample. Further refinement of the instrument is likely to improve the understanding of the statistical relationships between social support and other theoretically related variables.

Further research is also needed to assess the generalizability of the current findings to a larger Chinese sample. A sound understanding of the operation of social support will require careful attention to the method as well as a commitment to the development of a cumulative body of research.

Conclusions

In conclusion, the results of this study clearly suggest that social support is a multidimensional construct. Studies that recognize the multidimensional attributes of social support provide significant conceptual and methodological refinement and are likely to be useful in stimulating future research (Harel & Deimling, 1984). There are clear direct relationships between the different social support factors and sex, marital status, depression, life satisfaction, physical health status, formal group participation, family relations, transportation, education, instrumental activities of daily living (INSADL), and economic factors in this Chinese elderly sample. More precise delineation and operationalization of different social support dimensions will assist in the development and testing of theoretically valid hypotheses about the relationships between social support and well-being in the Chinese elderly.

The current study suggests that the demographic profile of the Chinese family is changing both in structure, size and composition. Contrary to common belief Chinese elderly are well care for by their families. The informal and formal support systems share the role of support providers for the elderly. Due to the changing society and family structure, the nature of family obligation norms, as well as diminution of family members available for inclusion among one's primary relations, raises important support questions. The strength and intensity of family support for these elderly may be in some jeopardy (Lipman, 1979). Consequently, it becomes critical that information and insights into the role of the family in the support networks of the aged, can be obtained and understanding of the dynamics of the formal and informal support in-

terface. The examination of other informal support networks such as friends, neighbors, relatives, and the formal support network is important as it may provide valuable information about the change in cultural familial pattern of the Chinese elderly in Canada.

REFERENCES

Abbey, A. (1985). Effects of different sources of social support and social conflict on emotional well-being. Basic and Applied Social Psychology, 6(2), 111-129.

Antonucci, T.C. (1985a). Social support: Theoretical advances, recent findings and pressing issues. In I.G. Sarason and B.R. Sarason (Eds.), Social Support: Theory, Research, and Applications, (pp. 21-38). Dordrecht, the Netherland: Martines Nijhoff.

Antonucci, T.C. (1985b). Personal characteristics, social support, and social behavior. In R.H. Binstock and E. Shanas (Eds.), Handbook of Aging and the Social Sciences, (pp. 94-128). New York: Van Nostrand Reinhold Company.

Antonucci, T.C., and Akiyama, H. (1987b). Social network in adult life and a preliminary examination of the convoy model. Journal of Gerontology, 42, 519-527.

Arling, G. (1976). The elderly widow and her family, neighbors, and friends. Journal of Marriage and the Family, 38, 757-768.

Babchuk, N. (1978-79). Aging and primary relations. International Journal of Aging and Human Development, 9(2), 137-151.

Barney, J. (1977). The prerogative of choice in long term care. Gerontologist, 17, 309-314.

Barrera, M., Jr. (1981). Social support in the adjustment of pregnant adolescents: Assessment issues. In B.N. Gottlieb (Ed.), Social Networks and Social Support, (pp. 69-96). Beverly Hills, CA: Sage.

Barrera, M., Jr., Sandler, I.N., and Ramsay, T.B. (1981). Preliminary development of a scale of social support: Studies on college students. American Journal of Community Psychology, 9, 435-457.

Beels, C.C. (1981). Social support and schizophrenia. Schizophrenia Bulletin, 4(1), 59-72.

Belle, D. (1982). The stress of caring: Women as providers of social support. In L. Goldberger and S. Breznitz (Eds.), Handbook of Stress: Theoretical and Clinical Aspects, (pp. 495-504). New York: Free Press.

Berkman, L.F. (1984). Assessing the physical health effects of social networks and social support. In L. Breslow, J.E. Fielding, and L.B. Lave (Eds.), Annual Review of Public Health, 5, (pp. 413-432). Palto Alto, CA: Annual Reviews.

Berkman, L.F., and Syme, S.L. (1979). Social networks, host resistance, and mortality: A nine-year follow-up study of Alameda County residents. American Journal of Epidemiology, 109(2), 186-204.

Berkman, L.F., and Breslow, L. (1983). Health and Ways of Living: The Alameda County Study. New York: Oxford University Press, 1983.

Billings, A.C., and Moos, R.H. (1982). Stressful life events and symptoms: A longitudinal model. Health Psychology, 1, 99-107.

Blau, Z.S. (1961). Structural constraints on friendships in old age. American Sociological Review, 26(6), 429-439.

Blau, Z.S. (1973). Old Age in a Changing Society. New Viewpoints, New York.

Blazer, D.G. (1982). Social support and mortality in an elderly community population. American Journal of Epidemiology, 115(5), 684-694.

Bowlby, R. (1969). Attachment and loss: Volume 1, Attachment. London: Hogarth Press.

Branch, L. (1980). Functional abilities of the elderly: An update on the Massachusetts Health Care panel study. In S.G. Haynes and M. Feinleib (Eds.), Second Conference on the Epidemiology of Aging, (pp. 737-768). Washington, DC: U.S. Department of Health and Human Services, National Institutes of Health Publication No. 80-969.

Brandt, P.A., and Weinert, C. (1981). The PRQ - a social support measure. Nursing Research, 30, 277-280.

Breytspraak, L., and George, L. (1979). Measurement of self-concept and self-esteem in older people: State of the art. Experimental Aging Research, 5, 137-148.

Brink, T.L., Yesavage, J.A., Lum, O., Heersema, P.H., Adey, M., Rose, T.L. (1982). Screening tests for geriatric depression. Clinical Gerontologist, 1(1), 37-43.

Broadhead, W.E., Kaplan, B.H., James, S.A., Wagner, E.H., Schoenbach, V.J., Grimson, R., Heyden, S., Tibblin, G., and Gehlbach, S. (1983). The epidemiologic evidence for a relationship between social support and health. American Journal of Epidemiology, 117(5), 521-537.

Brody, E.M. (1978). The aging of the family. Annal of the American Academy of Political and Social Science, 438, 13-27.

Brody, E.M. (1980). Women's changing roles, and care of the aged family. Aging: Agenda for the Eighties. New York: Academic Press.

Brown, G.W., Bhrolchain, M.N., Harris, T. (1975). Social class and psychiatric disturbance among women in an urban population. Sociology, 9, 225-254.

Campbell, A. (1980). The Sense of Well-being in America. New York: McGraw Hill.

Cantor, M.H. (1975a). Life space and the social support system of the inner city elderly of New York. The Gerontologist, 15(1), 23-27.

Cantor, M.H. (1979b). The informal support system of New York's inner city elderly: Is ethnicity a factor? In D.E. Gelfand and A.J. Kutzik (Eds.), Ethnicity and Aging, (p. 153). New York: Springer.

Cantor, M.H. (1983). Social care for the aged in the United States: Issues and challenges. Social Work with Groups, 5(2), 13-20.

Caplan, G. (1974). Support systems. In G. Caplan (Ed.), Support Systems and Community Mental Health. New York: Basic Books.

Caplan, R.D. (1979). Social support, person-environment fit, and coping. In L.A. Ferman and J.P. Gordus (Eds.), Mental Health and the Economy, (pp. 89-138). Michigan: W.E. Upjohn Institute for Employment Research.

Caplan, G. (1981). Mastery of stress: Psychosocial Aspects. The American Journal of Psychiatry, 138(4), 413-420.

Caplan, G., and Kililea, M. (Eds.) (1976). Support Systems and Mutual Help: Multidisciplinary Explorations. New York: Grune and Stratton.

Carp, F.M. (1976). Housing and living environments of older people. In R.H. Binstock and E. Shanas (Eds.), Handbook of Aging and the Social Sciences, (pp. 244-271). New York: Van Nostrand Reinhold Company.

Cassel, J. (1976). The contribution of the social environment to host resistance. American Journal of Epidemiology, 104(2), 107-123.

Chan, K.B. (1983). Coping with aging and managing self-identity: The social world of the elderly Chinese woman. Canadian Ethnic Studies, 15, 36-50.

Chang, B.L., Chang, A.F., and Shen, Y.A. (1984). Attitudes toward aging in the United States and Taiwan. Journal of Comparative Family Studies, 15(1), 109-130

Cheng, E. (1978). The Elder Chinese. Center on Aging, San Diego State University.

Chester, M., and Barbarin, O.A. (1984). Difficulties of providing help in a crisis: The role of friends with parents of children with cancer. Journal of Social Issues, 40(4), 113-134.

Chow, N.W. (1983). The Chinese family and support of the elderly in Hong Kong. The Gerontologist, 23(6), 584-588.

Cicirelli, V.G. (1977). Relationship of sibling to elderly person's feelings and concerns. Journal of Gerontology, 32(3), 317-322.

Circirelli, V.G. (1985). The role of siblings as family caregivers. In W.J. Sauer & R.T. Coward (Eds.), Social Support Networks and the care of the Elderly: Theory, Research, and Practice, (pp. 93-107). New York: Springer.

Cobb, S. (1976). Social support as a moderator of life stress. Psychosomatic Medicine, 38, 300-314.

Cobb, S. (1979). Social support and health through the life course. In M.W. Riley (Ed.), Aging from Birth to Death. Boulder, CO: Westview Press.

Coe, R.M., Wolinsky, F.D., Miller, D.K., and Prendergast, J.M. (1985). Elderly persons without family support networks and use of health services: A follow-up report on social network relationships. Research on Aging, 7(4), 617-622.

Cohen, J., and Brody, J. (1981). The epidemiologic importance of psychosocial factors in longevity. American Journal of Epidemiology, 114, 451-461.

Cohen, C.I., Teresi, J., and Holmes, D. (1985). Social networks, stress, and physical health: A longitudinal study of an inner-city elderly population. Journal of Gerontology, 40(4), 478-486.

Cohen, C.I., Teresi, J., and Holmes, D. (1986). Assessment of stress-buffering effects of social networks on psychological symptoms in an inner-city elderly population. American Journal of Community Psychology, 14(1), 75-91.

Cohen, S., and Hoberman, H.M. (1983). Positive events and social supports as buffers of life change stress. Journal of Applied Social Psychology, 13(2), 99-125.

Cohen, S., Mermelstein, R., Kamarch, T., and Hoberman, H.M. (1985). Measuring the functional components of social support. In I. Sarason (Ed.), Social Support: Theory, Research and Applications. The Hague, Netherlands: Martines Nijhoff.

Con, H., Con, R.J., Johnson, G., Wickberg, E., Willmot, W.E. (1982). From China to Canada: A History of the Chinese Communities in Canada. Toronto, Ontario: McClelland and Stewart Ltd.

Conger, J., Sawery, W., and Turrel, E. (1958). The role of social experience in the production of gastric ulcers in hooded rats placed in a conflict situation. Journal of Abnormal Psychology, 57, 216.

Conner, K., Powers, E., and Bultena, G. (1979). Social interaction and life satisfaction: An empirical assessment of late-life patterns. Journal of Gerontology, 34, 116-121.

Connidis, I.A., and Davies, L. (1990). Confidants and companions in later life: The place of family and friends. Journal of Gerontology, 45(4), 141-149.

Coyne, J.C., and DeLongis, A. (1986). Going beyond social support: The role of social relationships in adaptation. Journal of Consulting and Clinical Psychology, 54, 310-357.

Cronenwet, L. (1983). Relationships among Social Network Structure, Perceived Social Support, and Psychological Outcomes of Pregnancy. Unpublished doctoral dissertation, University of Michigan, Ann Arbor.

Cutrona, C., Russel, D., and Rose, J. (1986). Social support and adaptation to stress by the elderly. Journal of Psychology and Aging, 1(1), 47-54

Dean, A., and Lin, N. (1977). The stress-buffering role of social support: Problems and prospects for systematic investigation. The Journal of Nervous and Mental Disease, 165(6), 403-417.

Dean, A., Lin, N., Tausig, M., and Ensel, W.M. (1980). Relating Types of Support to Depression in the Life Course. Paper presented at the annual meeting of the American Sociological Association, New York.

Depner, C., and Ingersoll, B. (1983). Conjugal social support: Patterns in later life. Unpublished doctoral dissertation.

DiMatteo, M.R., and Hays, R. (1981). Social support and seniors' illness. In B.N. Gottlieb (Ed.), Social Networks and Social Support. Beverly Hills, CA: Sage.

Doi, L.T. (1981). The Anatomy of Dependence. New York: Kodanaka International Ltd.

Donald, C.A., and Ware, Jr., J.E. (1982). The Quantification of Social Contacts and Resources. Santa Monica, CA: Rand Corporation.

Donald, C.A., and Ware, Jr., J.E. (1984). The measurement of social support. Research in Community and Mental Health, 4, 325-370.

Duke OARS, (1975). Multidimensional Functional Assessment: The OARS Methodology. Durham, NC: Center for the Study of Aging and Human Development, Duke University.

Durkheim, E. (1951). E. Suicide. Glencoe, IL: Free Press.

Eaton, W.W. (1978). Life events, social supports, and psychiatric symptoms: A re-analysis of the New Haven Data. Journal of Health and Social Behavior, 19, 230-234.

Ernster, V.L., Sacks, S.T., Selvin, S., and Petrakis, N.L. (1979). Cancer incidence by marital status: U.S. Third National Cancer Survey. Journal of National Cancer Institute, 63, 567-585.

Fillenbaum, G.G. (1979). Social context and self-assessments of health among the elderly. Journal of Health and Social Behavior, 20(1), 45-51.

Fiore, J., Becker, J., and Coppel, D.B. (1983). Social network interactions: A buffer or a stress? American Journal of Community Psychology, 11, 423-440.

Fischer, C.S. (1982a). To Dwell Among Friends, Personal Networks in Town and City. Chicago, IL: University of Chicago Press.

Fischer, C.S., and Phillips, S.L. (1982). Who is alone? Social characteristics of people. In L.A. Peplau and D. Perlman (Eds.), Loneliness, (pp. 21-39). New York: Wiley.

Fischer, C.S., Jackson, R.M., Stueve, C.A., Gerson, K., Jones, L.M., and Baldassre, M. (1977). Networks and Places: Social Relations in the Urban Setting. New York: Free Press.

Funch, D.P., and Marshall, J. (1983). The role of stress, social support and anger in survival from breast cancer. Journal of Psychosomatic Research, 27(1), 77-83.

Gallo, F. (1983). The effects of social support networks on the health of the elderly. Social Work in Health Care, 8(2), 65-74

Gallo, F. (1984). Social support networks and the health of elderly person. Social Work Research & Abstracts, 14, 13-19.

Glasser, P.H., and Glasser, L.N. (1962). Role reversal and conflict between aged parents and their children. Marriage and Family Living, 2, 46-51.

Glenn, N. and McLanahan, S. (1981). The effects of offspring on the psychological well-being of older adults. Journal of Marriage and the Family, 43, 409-421.

Gore, S. (1978). The effect of social support in moderating the health consequences of unemployment. Journal of Health and Social Behavior, 19, 157-165.

Gottlieb, B.H. (1978). The development and application of a classification scheme of informal helping behaviors. Canadian Journal of Behavioral Science, 10, 105-115.

Gottlieb, B.H. (1981). (Ed.), Social networks and social support. Beverly Hills, CA: Sage.

Gottlieb, B.H. (1983). Social support as a focus for integrative research in psychology. American Psychologist, 38(3), 278-287.

Gottlieb, B.H. (1984). Social Support and the Study of Personal Relationships. Paper presented at the Second International Conference on Personal Relationships, Madison, WI.

Gouldner, A.W. (1960). The norm of reciprocity: A preliminary statement. American Sociological Review, 25, 161-178.

Gove, W.R., Hughs, M., and Style, C.B. (1983). Does marriage have positive effects on the psychological well-being of the individual? Journal of Health and Social Behavior, 24(2), 122-131.

Granovetter, M. (1982). The strength of weak ties. American Journal of Sociology, 78, 1360-1380.

Greenberg, M.S. (1980). A theory of indebtedness. In K.J. Gergen, M.S. Greenberg, and R.H. Willis (Eds.), Social Exchange: Advances in Theory and Research, (pp. 3-26). New York: V.H. Winston and Sons.

Griffith, J. (1985). Social support providers: Who are they? Where are they met? And the relationship of network characteristics to psychological distress. Basic and Applied Social Psychology, 6(1), 41-60.

Hammer, M. (1981). Social networks and the long term patient. In S. Budson and M. Barofsky (Eds.), The Chronic Psychiatric Patient in the Community: Principles of treatment. New York: Spectrum Press.

Hanson, S.H., and Sauer, W.G. (1985). Children and their elderly parents. In W.J. Sauer and R.T. Coward (Eds.), Social Support Networks and the Care of the Elderly: Theory, Research, and Practice, (pp. 41-66). New York: Springer.

Harel, Z., and Deimling, G. (1984). Social resources and mental health: An empirical refinement. Journal of Gerontology, 39(6), 747-752.

Heller, K. (1979). The effects of social support: Prevention and treatment implications. In A.P. Goldstein and F.H. Kanfer (Eds.), Maximizing treatment gains: Transfer enhancement in psychotherapy (pp. 353-382). New York: Academic Press.

Heller, K., and Mansbach, W.E. (1984). The multifaceted nature of social support in a community sample of elderly women. Journal of Social issues, 40(4), 99-112.

Heller, K., and Swindle, R.W. (1983). Social networks, perceived social support, and coping with stress. In R.D. Felner, L.A. Jason, J.N. Moritsugu, and S.S. Farber (Eds.), Preventive Psychology: Theory, Research and Practice, (pp. 87-103).

Henderson, S. (1977). The social network, support and neurosis. British Journal of Psychiatry, 131, 172-181.

Henderson, S., Duncan-Jones, P., Byrne, D.G., and Scott, R. (1980). Measuring social relationships: The interview schedule for social interaction. Psychological Medicine, 10, 723-734.

Henderson, S., Byrne, D.G., and Duncan-Jones, P. (1982). Neurosis and the Social Environment. Sydney, Australia: Academic Press.

Henry, J., Meehan, J., and Stephens, P. (1967). The use of psychosocial stimuli to induce prolonged hypertension in mice. Psychosomatic Medicine, 29, 408.

Hess, B.B. (1979). Sex roles, friendship and the life course. Research on Aging, 1(4), 494-515.

Hickey, T. (1980). Health and Aging. Belmont, CA: Wadsworth.

Hirsch, B.J. (1979). Psychological dimensions of social networks: A multimethod analysis. American Journal of Community Psychology, 7, 263-278.

Hirsch, B.J. (1980). Natural support systems and coping with major life changes. American Journal of Community Psychology, 8, 159-172.

Hirsch, B.J. (1981). Social networks and the coping process: Creating personal communities. In B.H. Gottlieb (Ed.), Social Networks and Social Support. Beverly Hills, CA: Sage.

Holahan, C.J., and Moos, R.H. (1980b). Development and Validation of Qualitative Indices of Social Support. Unpublished manuscript. Stanford University School of Medicine. Social Ecology Laboratory. Stanford, CA.

Holahan, C.J., and Moos, R.H. (1982). Social support and adjustment: Predictive benefits of social climate indices. American Journal of Community Psychology, 10(4), 403-413.

House, J.S. (1981). Work stress and social support. Reading, MA: Addison-Wesley.

House, J.S., and Wells, J.A. (1978). Occupational stress, social support, and health. In A. McLean, G. Black, and M. Colligan (Eds.), Reducing Occupational Stress: Proceedings of a Conference. U.S. Department of Health, Education and Welfare, HEW(NIOSH) Publication No. 78-140.

House, J.S., and Kahn, R.L. (1985). Measures and concepts of social support. In S. Cohen and S.L. Syme (Eds.), Social Support and Health, (pp. 347-364). New York: Academic Press.

House, J.S., Robbins, C., and Metzner, H.L. (1982). The association of social relationships and activities with mortality: Prospective evidence from the Tecumseh Community Health Study. American Journal of Epidemiology. 116, 123-140.

Hoyt, D.R., Kaiser, M.A., Peters, G.R., and Babchuk, N. (1980). Life satisfaction and activity theory: A multidimensional approach. Journal of Gerontology, 35(6), 935-941.

Hsu, L.K. (1970). Americans and Chinese. Garden City, NY: Doubleday and Company Inc.

Johnson, C.L. (1983). Dyadic family relations and social support. The Gerontologist, 23(4), 377-383.

Joseph, J. (1980). Social Affiliation, Risk Factor Status, and Coronary Heart Disease: A Cross-Sectional Study of Japanese American Men. Unpublished doctoral dissertation, University of California, Berkeley.

Kahn, R.L. (1979). Aging and social support. In M.W. Riley (Ed.), Aging from Birth to Death. Boulder, CO: Westview Press.

Kahn, R.L., and Antonucci, T.C. (1978). Social support networks among new teachers. Technical proposal to The National Institute of Education.

Kahn, R.L., and Antonucci, T.C. (1979). Supports of the elderly: Family, friends, professionals, research study at the Survey Research Center. The University of Michigan, Ann Arbor.

Kahn, R.L., and Antonucci, T.C. (1980). Convoys over the life course. Attachment, roles and social support. In P.B. Baltes and O.G. Brim (Eds.), Life-Span Development and Behavior, 3, (pp. 254-286). New York: Academic Press.

Kahn, R.L., and Antonucci, T.C. (1984). Social Supports of the Elderly: Family/Friends/Professionals. Final report to the National Institute on Aging, Grant No. AG01632-01.

Kaplan, B. (1975). An epilogue toward further research on family and health. In B. Kaplan and J. Cassel (Eds.), Family and Health: An Epidemiological Approach, (pp. 89-106). Chapel Hill, NC: Institute for Research in Social Science, University of North Carolina.

Kaplan, B., Cassel, J., and Gore, S. (1977). Social support and health. Medical Care, 5(Suppl. 15), 47-58.

Kart, C. (1981). Experiencing symptoms: Attribution and misattribution of illness among the aged. In M.R. Haug (Ed.), Elderly Patients and Their Doctors. New York: Springer Publishing Co.

Kiesler, C.A. (1985). Policy implications of research on social support and health. In S. Cohen and S.L. Syme (Eds.), Social Support and Health, (pp. 347-364). New York: Academic Press.

Krause, N., Liang, J., and Yatomi, N. (1989). Satisfaction with social support and depressive symptoms: A panel analysis. Psychology and Aging, 4(1), 88-97.

Kuo, W.H., and Tsai, Y.M. (1986). Social networking, hardiness and immigrant's mental health. Journal of Health and Social Behavior, 27, 133-149.

Lawton, M.P. (1971). The functional assessment of elderly people. Journal of American Geriatric Society, 19, 465-481.

Lawton, M.P. (1980a). Environment and Aging. Monterey, CA: Brooks-Cole.

Lawton, M.P. (1980b). Environment change: The older person as initiator and responder. In N. Datan and N. Lohmann (Eds.), Transitions of Aging. New York: Academic Press.

Lawton, M.P. and Brody, E. (1969). Assessment of older people: Self-maintaining and instrumental activities of daily living. The Gerontologist, 9, 179-186.

Lee, G.R., and Ihinger-Tallman, N. (1980). Sibling interaction and moral: The effects of family relations on older people. Research on Aging, 2(3), 367-391.

Liang, J., Dvorkin, L., Kahana, E., and Mazian, F. (1980). Social interaction and morale: An examination. Journal of Gerontology, 35, 746-757.

Lin, Y. (1935). My Country and My People. New York: The John Day Co.

Lin, N., Dean, A., and Ensel, W.M. (1986). (Eds.), Social support, Life events, and Depression, Orlando, FL: Academic Press.

Lin, N., Dean, A., and Ensel, W.M. (1981b). Social support scales: A methodological note. Schizophrenia Bulletin, 7(1), 73-90.

Lin, N., Ensel, W.M., Simeone, R.S., and Kuo, W. (1979). Social support, stressful life events, and illness: A model and an empirical test. Journal of Health and Social Behavior, 20(6), 108-119.

Lipman, A. (1979). The impact of demographic changes on the family. In H. Orimo, K. Shimada, M. Iriki, and D. Maeda (Eds.), Recent Advances in Gerontology. Amsterdam: Exerpta Medica.

Longino, C.F., Jr., and Lipman, A. (1981). Married and spouseless men and women in planned retirement communities: Support network differentials. Journal of Marriage and the Family, 43(2), 169-177.

Lopata, H.Z. (1975). Support systems of elderly urbanites: Chicago of the 1970's. The Gerontologist, 15(1), 35-41.

Lopata, H.Z. (1978). Contributions of extended families to the support systems of metropolitan area widows: Limitations of the Modified kin Network. Journal of Marriage and the Family, 5, 355-364.

Lopata, H.Z. (1979). Women as Widows: Support Systems. New York: Elsevier-North Holland.

Lowenthal, M.F., and Haven, C. (1968). Interaction and adaptation: Intimacy as a critical variable. American Sociological Review, 33, 20-30.

Lowenthal, M.F., and Robinson, B. (1976). Social networks and isolation. In R.H. Binstock & E. Shanas (Eds.), Handbook of aging and the social sciences, (pp. 432-456). New York: Van Nostrand Reinhold.

Maddox, G.L., and Dellinger, D.C. (1978). Assessment of functional status in a program evaluation and resource allocation model. Annals of the American Academy of Political and Social Science, 438, 59-70.

Maddox, G.L., and Douglas, E.B. (1973). Self-assessment of health: A longitudinal study of elderly subjects. Journal of Health and Social Behavior, 14, 87-93.

Marmot, M., and Syme, S.L. (1976). Acculturation and coronary heart disease in Japanese-Americans. American Journal of Epidemiology, 104, 225-246.

Marmot, M., Syme, S.L., and Kagan, A. (1975). Epidemiologic studies of coronary heart disease and stroke in Japanese men living in Japan, Hawaii and California: Prevalence of coronary and hypertensive heart disease and associated risk factors. American Journal of Epidemiology, 102, 514-525.

Marsella, A.J., and Snyder, K.K. (1981). Stress, social supports and schizophrenic disorders: Toward an interactional model. Schizophrenia Bulletin, 7, 152-163.

McQueen, D.V., and Celentano, D.D. (1982). Social factors in the etiology of multiple outcomes: The case of blood pressure and alcohol consumption patterns. Social Science and Medicine, 16, 397-418.

Minkler, M. (1981). Research on the health effects of retirement: An uncertain legacy. Journal of Health and Social Behavior, 22, 117-130.

Mitchell, J.C. (Ed.), (1969). Social Networks and Urban Situations. Manchester: Manchester University Press.

Moos, R.H. (1974). Evaluating Treatment Environments. New York: Wiley-Interscience.

Mueller, D. (1980). Social networks: A promising direction for research on the relationships of the social environment to psychiatric disorder. Social Science and Medicine, 14, 147-161.

Myers, J.K., Lindenthal, J.J., and Pepper, M.P. (1975). Life events, social integration, and psychiatric symptomatology. Journal of Health and Social Behavior, 16, 421-429.

Nuckolls, K.B., Cassel, J., and Kaplan, B.H. (1972). Psychosocial assets, life crisis and the prognosis of pregnancy. American Journal of Epidemiology, 95, 431-441.

Palmore, E., (1976). Total chance of institutionalization among the aged. The Gerontologist, 18, 475-481.

Parks, S.H., and Pilisuk, M. (1981). Social ties and health status in an elderly population. Paper presented at the Annual Meetings of the American Psychological Association, Los Angeles.

Paykel, E.S., Emms, E.M., Fletcher, J., and Rassaby, E.S. (1980). Life events and social support in puerperal depression. British Journal of Psychiatry, 136, 339-346.

Pearlin, L.I., Lieberman, M.A., Menaghan, E.G., and Mullan, J.T. (1981). The stress process. Journal of Health and Social Behavior, 22, 337-356.

Pilisuk, M., and Froland, C. (1978). Kinship, social networks, social support and health. Social Science and Medicine, 12, 273-280.

Pinneau, S.R. (1975). Effects of Social Support on Psychological and Physiological stress. Unpublished doctoral dissertation. University of Michigan, Ann Arbor, 1975.

Procidano, M.E., and Heller, K. (1983). Measures of perceived social support from friends and from family: Three validation studies. American Journal of Community Psychology, 11, 1-24.

Quam, J.K. (1983). Older Women and informal supports: Impact on Prevention. Prevention in Human Services, 3(1), 119-133.

Rathbone, E.E., Hooyman, N., and Fortune, A.E. (1985). Social support for the frail elderly. In W. Sauer and R. Coward (Eds.), Social Support Networks and the Care of the Elderly: Theory, Research, and Practice, (pp. 234-248). New York: Springer.

Revicki, D.A., and Mitchell, J. (1986). Social support factor structure in the elderly. Research on Aging, 8(2), 232-248.

Rook, K.S. (1984). The negative side of social interaction: Impact on psychological well-being. Journal of Personality and Social Psychology, 46, 1097-1108.

Rosenberg, M. (1965). Society and the Adolescent Self-Image. Princeton, NJ: Princeton University Press.

Rubin, Z. (1973). Liking and Loving: An Invitation to Social Psychology. New York: Holt, Rinehart & Winston.

Sandler, I.M., and Barrera, M., Jr. (1984). Toward a multimethod approach to assessing the effects of social support. American Journal of Community Psychology, 12, 37-52.

Sarason, I.G., Levine, H.M., Basham, R.B., and Sarason, B.R. (1983). Assessing social support: The social support questionnaire. Journal of Personality and Social Psychology, 44(1), 127-139.

Satariano, W., and Syme, S.L. (1981). Life changes and disease in elderly populations. In J.L. McGaugh and S.B. Kiesler (Eds.), Aging: Biology and Behavior, (pp. 311-324). New York: Academic Press.

Scott, J.P., and Roberto, K.A. (1985). Use of informal and formal support networks by rural elderly poor. The Gerontologist, 25(6), 624-630.

Seelbach, W.C. (1977). Gender differences in expectations for filial responsibility. Journal of Gerontology, 17(5), 421-425.

Shanas, E. (1977). the national survey of the aged. Final Report. AoA Grant #90-A-369. Chicago: University of Illinois at Chicago Circle.

Shanas, E. (1979a). Social myth as hypothesis: The case of the family relations of old people. The Gerontologist, 19, 3-9.

Shanas, E. (1979b). The family as a social support system in old age. The Gerontologist, 19, 169-174.

Shanas, E., and Maddox, G.L. (1976). Aging health and the organization of health resources. In R.H. Binstock and E. Shanas (Eds.), Handbook of Aging and the Social Sciences, (pp. 592-618). New York: Van Nostrand Reinhold Company.

Shanas, E., and Maddox, G.L. (1985). Health, health resources, and the utilization of care. In R.H. Binstock and E. Shanas (Eds.), Handbook of Aging and the Social Sciences, (pp. 696-726). New York: Van Nostrand Reinhold Company.

Shanas, E., Townsend, P., Wedderburn, D., Friis, H., Milhoj, P., and Stehouwer, J. (1968). Old People in Three Industrial Societies. New York: Atherton Press. (Reprinted Arno Press, 1980).

Sherwood, S., and Bernstein, E. (1986). Informal care for vulnerable elderly: Suggestions for church involvement. Journal of Religion and Aging, 2, 55-67.

Shinn, M., Lehmann, S., and Wong, N.W. (1984). Social interaction and social support. Journal of Social Issues, 40(4), 55-76.

Shumaker, S.A., and Jackson, J.S. (1979). The aversive effects of nonreciprocal benefits. Social Psychology Quarterly, 42, 148-158.

Shumaker, S.A., and Brownell, A. (1984). Toward a theory of social support. Journal of Social Issues, 40(4), 55-76.

Sih, K.T. and Translated by Makra, M.L. (1961). The Hsiao Ching. New York: St. John's University Press.

Sokolovsky, J. (1985). Ethnicity, culture and aging: Do differences really make a difference? Journal of Applied Gerontology, 4(1), 6-17.

Statistics Canada (1981). Census of Canada.

Steinitz, L.Y. (1982). The local church as support for the elderly. Journal of Gerontological Social Work, 4(2), 43-53.

Strogatz, D. (1983). Social and psychological correlates of blood pressure. Unpublished doctoral dissertation, University of North Carolina, Chapel Hill, NC.

Sullivan, D.A. (1986). Informal support systems in a planned retirement community. Research on Aging, 8(2), 249-267.

Syme, S.L. (1982). Is Social Isolation a Risk Factor for Coronary Heart Disease? Paper presented at the 9th Science Writers Forum of the American Heart Association, Charleston, SC.

Thoits, P.A. (1982). Conceptual, methodological, and theoretical problems in studying social support as a buffer against life stress. Journal of Health and Social Behavior, 23, 145-159.

Thoits, P.A. (1984). Explaining distributions of psychological vulnerability: Lack of social support in the face of life stress. Social Forces, 63(2), 453-481.

Tolsdorf, C.C. (1976). Social networks, support and coping: An exploratory study. Family Proc., 15, 407-417.

Treas, J. (1977). Family support systems for the aged: Some social and demographic considerations. The Gerontologist, 17(6), 486-491.

Troll, L., and Smith, J. (1976). Attachment through the life span: Some questions about dyadic relationships in later life. Human Development, 19, 156-171.

Tu, E.J., Liang, J., and Li, S. (1989). Mortality decline and Chinese family structure: Implications for old age support. Journal of Gerontology, 44(4), 157-168.

Tung, M. (1984). Life values, psychotherapy, and East-West integration. Psychiatry, 47, 285-392.

Turner, R.J. (1981). Social support as a contingency in psychological well-being. Journal of Health and Social Behavior, 22, 357-367.

Turner, R.J., and Noh, S. (1983). Class and psychological vulnerability among women: The significance of social support and personal control. Journal of Health and Social Behavior, 24, 2-15.

Turner, R.J., Frankel, B.G., and Levin, D.M. (1983). Social support: Conceptualization, measurement, and implications for mental health. In Greeley (Ed.), Research in Community and Mental Health, 3, (pp. 67-111). Greenwich, CT: JAI Press.

Walster, E., Walster, G.W., and Berscheid, E. (1978). Equity: Theory and Research. Boston: Allyn & Bacon.

Wan, T.T.H. (1976). Effects of social epidemiological factors on the severity of disability for white and non-white disabled. Social Biology, 22, 235-249.

Wan, T.T.H. (1979). Impacts of major life changes on gerontological health: A longitudinal study. Presented at the annual meeting of the American Public Health Association, November 4-7, New York.

Wan, T.T.H. (1982). Stressful Life Events, Social-Support Networks, and Gerontological Health. Massachusetts: Lexington Books.

Wan, T.T.H. (1985). Well-Being for the Elderly: Primary Preventive Strategies. Massachusetts: Lexington Books.

Wan, T.T.H., and Weisser, W.G. (1981). Social support networks, patient status, and institutional. Research on Aging, 3(2), 240-256.

Wan, T.T.H., Weisser, W.G., and Livieratos, B. (1980). Geriatric day care and homemaker services: An experiment study. Journal of Gerontology, 35(2), 256-274.

Ward, R.A. (1985). Informal networks and well-being in later life: A research agenda. The Gerontologist.

Ward, R.A., Sherman, S.R., LaGory, M. (1984). Subject network assessments and subjective well-being. Journal of Gerontology, 39(1), 93-101.

Weeks, J.R., and Cuellar, J.B. (1983). Isolation of older persons: The influence of immigration and length of residence. Research on Aging, 5(3), 369-388.

Wellman, B. (1979). The community question. American Journal of Sociology, 84, 1201-1231.

Wellman, B. (1981). Applying network analysis to the study of support. In B.H. Gottlieb (Ed.), Social Networks and Social Support, (pp. 171-200), Sage Studies in Community Mental Health 4. Beverly Hills and London: Sage.

Wilcox, B.L. (1981b). Social support, life stress, and psychological adjustment: A test of the buffering hypothesis. American Journal of Community Psychology, 9(4), 371-386.

William, T.F., and William, M. (1982). Assessment of the elderly for long term care. Journal of American Geriatric Society, 30, 71-75.

William, A.W., Ware, J.E., Jr., and Donald, C.A. (1981). A model of mental health, life events, and social supports applicable to general populations. Journal of Health and Social Behavior, 22(4), 324-336.

Wong, B. (1985). Family, kinship, and ethnic identity of the Chinese in New York city, with comparative remarks on the Chinese in Lima, Peru and Manila, Philippines. Journal of Comparative Family Studies, 16(2), 231-254.

Wood, V., and Robertson, J.F. (1978). Friendship and kinship interaction: Differential effect on the morale of the elderly. Journal of Marriage and the Family, 5, 367-375.

Wood, V., Wylie, M., and Sheafor, B. (1969). An analysis of a short self-report measure of life satisfaction: Correlation with rater judgement. Journal of Gerontology, 24, 465-469.

Wortman, C.B., and Dunkel-Schetter, C. (1987). Conceptual and methodological issues in the study of social support. In A. Baum, and J.E. Singer (Eds.), Handbook of Psychology and Health, 5, (pp. 63-107). New Jersey: Lawrence Erlbaum Associates, Publishers.

Wu, F.Y. (1974). Mandarin-speaking aged Chinese in the Los Angeles area: Needs and services. Unpublished doctoral dissertation, University of Southern California, CA.

Yu, L. (1984). Acculturation and stress within Chinese American families. Journal of Comparative Family Studies, 15(1), 77-94.

A P P E N D I X

Appendix A

CONSENT FORM

I _____ agree to participate in the study of general health, well-being, and life satisfaction in the Chinese Elderly population.

I understand that all data collected will be confidential and that I can receive a summary of the project after the study is completed. If I wish to receive a copy of the summarized results of the study, I can obtain it by contacting Angel Li (220-7503) or Dr. W. Zwirner (220-5666). Also, I am free to change my mind and withdraw my consent at any time.

Signed _____

Date _____

Appendix B

INFORMATION SHEET

I am a masters student at the University of Calgary, in the Department of Educational Psychology. Gerontology (study of aging) is the area of my research interest. One of the major concerns in gerontological research is to identify the social and health consequences which may affect the well-being of elderly. A number of studies have been conducted on the Caucasian elderly, however, there is a lack of research and services for the elderly Chinese. Thus, I am completing a study on elderly Chinese looking at the general health, and life satisfaction which may effect on their continued well-being. A number of older persons living in different living situations throughout Calgary are being interviewed for the study. It is hoped that on the basis of my findings that I can provide information for the policy-makers and other helping professionals in order to develop services for them.

Your assistance in answering questions pertaining to the study will be greatly appreciated. All data obtained will be used only for the immediate purpose of the research project. The information collected in the interviews will be kept confidential and, in the analysis of data, all information will be number coded to ensure the confidentially of the participants (that is, names of participant will not appear on files or labels). Only the interviewer will see the completed instruments and data. If you wish to see the results of the study, you may contact Angel Li or Dr. W. Zwirner after the project is over. You may withdraw from the study at any time, if you change your mind.

If you have any questions about the study, or the nature of your participation, please feel free to contact Angel Li (220-7503) or Dr. W. Zwirner (220-5666).