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A STUDY OF LIFE EVENTS AND PSYCHOLOGICAL
WELL-BEING AMONG OLDER PERSONS IN HONG KONG: THE
ROLE OF SELF-ESTEEM, COPING AND LOCUS OF CONTROL

by

SHE Kwok Hung Billy

A thesis
submitted in partial fulfillment
of the requirements for the Degree of
Master of Philosophy

Lingnan University

2004

ABSTRACT

A Study of Life Events and Psychological Well-Being among Older Persons in Hong Kong: The Role of Self-Esteem, Coping and Locus of Control

By

SHE Kwok Hung Billy

Master of Philosophy

The present study investigates to what extent the life events, which includes self-perceived health, self-esteem, internal locus of control and coping effectiveness as indicators, could explain the occurrence of positive affect and depression amongst these elderly persons. The relationships between life events, self-esteem-level, internal locus of control, coping effectiveness, and psychological well-being among older persons (aged 60 or above) in Hong Kong are examined. Eight pilot study cases have been carried out in order to test for the validity of the research instrument. One hundred and three elderly respondents were successfully interviewed face-to-face from three main estates in Tseung Kwan O district, a new-town area in Eastern New Territories in Hong Kong: Po Lam Estate¹ (N = 46), Tsui Lam Estate (N = 36), and King Lam Estate (N = 21).

In exploring the life events of respondents over the half year past, a checklist (23 life items) was used. These items covered most of the events which are commonly found in an elderly cohort. In exploring the psychological well-being of the respondents, concepts were operationalized into 14 questions (9 items for positive affect and 5 items for depression), which were devised by Lawton (1987), to cover two constructs (i.e. positive affect and depression). The reliability for positive affect reached 0.91 (alpha), for depression reached 0.90 (alpha). Self-esteem levels of the respondents were measured by using the Rosenberg's Self-Esteem Scale (alpha = 0.84). Locus of control (9 items) was measured by an instrument devised by Siu (1998) and the reliability was 0.87 (alpha). Respondents' coping effectiveness was assessed by an instrument (13 items) which was originally developed by Moos, Cronkite, Billings and Finney (1996) and modified by the researcher for the present study. The instrument covered four constructs (i.e. problem focus, avoidance, positive appraisal and emotional discharge) and their reliabilities ranged from 0.39 to

¹ Ying Ming Court is included in this area.

0.47 (alpha).

The results of the study show that the average life events score of the respondents was 84.66 with the standard deviation 55.50, which means that generally they are at low stress level due to the occurrence of life events. Age-associated change in subjective health was very small in the study. Respondents showed a positive sense of personal worth and have medium level of internal locus of control. They tended to use more positive coping strategies to solve their problem, but the use of those coping strategies was not frequent. With regards to coping effectiveness, the study shows that there are gender differences. Female respondents thought that being more objective to problems did not help to solve them, whereas male respondents tended to think that emotion-focused coping strategies did not help to solve problems. Moreover, respondents showed both low level of positive affect and depression.

No significant correlation has been found between life events and positive affect, but there is significant correlation between life events and depression. The study supports previous researches that show self-perceived health, self-esteem, and internality are significantly correlated with psychological well-being. However, only few coping strategies USE/HELP and coping effectiveness are partially correlated with psychological well-being.

There are some intervening effects of self-esteem and internal locus of control found in the relationship between life events and psychological well-being. However, no intervening effect of coping strategies USE has been found in such a relationship, and only avoidance coping effectiveness showed a intervening (moderating) effect on the relationship between life events and positive affect. No intervening effect was found in the life events-psychological well-being model. However, some coping USE and effectiveness showed intervening (mediating) effects in the self-esteem-psychological well-being model and internality-psychological well-being model. Further studies are necessary to enforce the roles of the main variables in the proposed framework.

I declare that this thesis 《A study of life events and psychological well-being among older persons in Hong Kong: the role of self-esteem, coping and locus of control》 is an original work based primarily on my own research, and I warrant that all citations of previous research, published or unpublished, have been duly acknowledged.

SIGNED

SHE Kwok Hung Billy

2004

CERTIFICATE OF APPROVAL OF THESIS

A STUDY OF LIFE EVENTS AND PSYCHOLOGICAL
WELL-BEING AMONG OLDER PERSONS IN HONG KONG: THE
ROLE OF SELF-ESTEEM, COPING AND LOCUS OF CONTROL

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< CHAPTER 1 >

INTRODUCTION

One of the most important societal changes in the 20th century has been the ageing of the human population. The number of older adults is increasing not only in absolute numbers but also in proportion to the total population. The implications of a human population that is both growing and ageing are numerous and worrying. In many developed societies, served by social security systems, a fundamental assumption has been that young people will substantially outnumber the elderly and will provide, directly or indirectly, for the welfare of those who are past their productive working years. However, in a world where the elderly are becoming more numerous than the young, the bedrock assumptions of social security are in serious trouble.

Two major forces drive the shift in age distribution. First, birth rates are declining in most parts of the world, but especially in the industrialized nations. For example, according to the statistics from the Census and Statistics Department (HKSAR), in Hong Kong, the number of births decreased from 63,300 in 1996 to 46,200 in 2003; the crude birth rate per 1000 population decreased from 9.9 in 1996 to 6.8 in 2003. Second, life expectancy at birth is increasing almost everywhere. According to the Hong Kong statistics from the Census and Statistics Department (HKSAR), the life expectancy at birth has increased from 76.7 years for males and 82.7 years for females in 1996 to 78.6 years for males and 84.3 for females in 2003.

Paradoxically, although total global population is expected to climb dramatically to more than 9 billion people in the year 2050, population will actually decrease in

many major nations during this period. Among those with negative population growth will be Russia, Japan, and most of the nations of Central and Western Europe (see Figure 1). Population growth will also be lowered almost to replacement level (2.1 children per family, or “zero population growth”) in the United States, Canada, Australia, New Zealand, France, Thailand, North and South Korea, and China (see Figure 2). In all of these countries, by the year 2050, the number of people over the age of 60 will likely outnumber those aged 14 or less by a margin of two to one.

Figure 1. Average Annual Period Population Growth Rate, 2000 – 2050

Source: The U.S. Census Bureau – <http://www.census.gov/ipc/www/idbsum.html>

Figure 2. Total Fertility Rate, 2000

Source: The U.S. Census Bureau – <http://www.census.gov/ipc/www/idbsum.html>

In 2003, adults in Hong Kong over the age of 65 numbered about 795,500 (representing approximately 11.7% of the total population), and the number will increase to 2,263,707 or 27.0% of the whole population in 2033. Care for the older adults has been one of the key policy objectives of the Hong Kong Special Administrative Region Government. The success of Hong Kong today is attributed

to the hard work of the elderly in the past years. They, therefore, deserve our respect and we have the responsibility to look after them. However, in what is widely perceived to be a youth-oriented and productive-minded society, older people feel that they have become devalued. The wisdom and experience gained through years of living is of diminishing importance to the younger generations (Osgood, 1985) as they push on to fulfill their own life goals and seek their own form of wisdom. Cultural attitudes may reflect the idea that the seniors are not contributing members of our society.

Fortunately, many policy-makers and scholars are devoting great efforts to let the public realize that older people are not totally non-contributing members, and ageing can be successful rather than failure. They have started to investigate “complex” relationships between factors that contribute to successful ageing. The notion of “successful ageing” that emerged from the MacArthur Foundation’s search for a “new gerontology” (Rowe & Kahn, 1998) continues to significantly affect gerontological thinking, researches, and practice. At its core is the defining distinction between primary and secondary ageing and recognition of the dangers of falsely assuming that behavioral changes – most often, losses – in later life are due to the former, more intractable sources as opposed to the latter, potentially remediable and preventable factors. Those who age successfully have “an ability to maintain low risk of disease and disease-related disability, high mental and physical functioning and active engagement with life” (Rowe & Kahn, 1998).

Issues related to older people is multi-disciplinary. Some of the studies aiming to investigate negative perceptions of old age depict it as a period of multiple losses (e.g. Baltes, 1995; Berkman & Gurland, 1998; Bosse, Aldwin, Levenson, Spiro, &

Mroczek, 1993), while in some of the others, overtly positive descriptions can be found (e.g. George, 2001; Rocio, 2001; Teresa, 2002). A pervasive concern in social gerontology has been to understand successful ageing, including why older persons differ from one another in subjective well-being. The types of life events and losses experienced by older people are often noted as potential sources of decreased well-being (e.g. Chen, Luo, & Lin, 1993; Dean & Ensel, 1983; Kendler, Karkowski, & Prescott, 1999; Kessler, 1997; Norris & Murrell, 1984; O'Hara, Kohout, Wallace, 1985; Lou & Chi, 2001). It is obvious that the poorer the well-being of an elderly person, the more the side effects or risks that he or she may suffer. Suicide is one of the major concerns among the public and professionals because it is well known that suicide is one of the major consequences of poor mental health. According to the statistics from the Samaritan Befrienders Hong Kong, in 2002, there were 241 suicides in the group of aged 60 or above. This was 24.0% of the total suicides. The suicide rate was 23.4 per 100,000, which was 3.6 less than the year 2001. However, even though the rate dropped from 28.5 in 1998 to 23.4 in 2002, it was still over 1.5 times of the rest of all suicides as a whole. Moreover, suicide rate among the older population in Hong Kong is at a high level (Tse & Kwan, 2002) particularly compare with other countries (Chi, Yip, & Yu, 1997). Interestingly, older adults have the lowest rates of attempted suicide but show the highest rates of completed suicide compared to all other age groups (McIntosh, 1995). Therefore, the extent of suicide is likely underestimated in the ageing population. A number of demographic and psychosocial risk factors for completed suicide have been identified in the older adult population. Gender is one of the strongest predictors of suicide among older individuals (McIntosh, 1995). The loss or absence of a marital partner (e.g., widowed, separated, or divorced),

living alone, social isolation, economic hardships, and poor or deteriorating health (McIntosh, Santos, Hubbard, & Overholser, 1994) have been found to increase the risk of suicide in this population. Depression may be a factor in as many as 50 – 70% of all completed suicides among older adults as well (Conwell, Caine, & Olson, 1990). There is a strong positive relationship between depression and suicide (McIntosh, 1995). Unfortunately, for many older persons, the signs and symptoms of each may remain unnoticed and untreated (Florio, Hendryx, Jensen, Rockwood, Raschko, & Dyck, 1997; Tse & Kwan, 2002).

The link between life events or more chronic situations and physical and mental health is well established (Jemmott, & Locke, 1984; Kessler, Price, & Wortman, 1985). The magnitude of the effect, however, is fairly modest (Cohen, & Edwards, 1989; Holahan, & Moos, 1994). These discouraging results have been led investigators to argue that models that merely examine the direct effects of stress on well-being are inadequate, and that the role played by social psychological resources in the stress process must be taken into consideration.

OBJECTIVES OF THE STUDY

There are several objectives of the study. First, the study aims at investigating the relationships between life events and psychological well-being among older persons (60 years old or above) in Hong Kong, while controlling for age, gender, subjective economic status, and general health status. Second, the study attempts to examine the moderating and mediating effects of self-esteem, coping USE and effectiveness, locus of control, and self perceived health on the relationships between life events and psychological well-being. Finally, the study also aims at investigating if there is age, gender, or some other demographic differences in the experience of life events, self-esteem, coping strategies USE and effectiveness, locus of control, and psychological well-being among respondents.

< CHAPTER 2 >

LITERATURE REVIEW

As the study focused on the relationship between life events and psychological well-being (particularly in terms of positive affect and depression) amongst the Chinese elderly, the review will first look at the life events as a key concept in relation to what they are, how they disrupt one's established behavior patterns, then their possible relationships with psychological well-being. The review will also look at the other key factors of the present study (i.e. Self-esteem, coping strategies, locus of control, positive affect and depression). The primary purpose is to provide a supportive argument that all the key variables, or their components, are closely related to each other amongst the elderly people.

LIFE EVENTS

Life events are identifiable, discrete changes in life patterns that create stress and can lead to negative health outcomes (i.e., illness onset or the exacerbation of preexisting illness). Although both common sense and scientific theory have long posited a link between stress and illness, life-events research traces its roots to the pioneering biomedical research of Holmes and Rahe (1967) and the classic sociological study of mental illness known as the Mid-Town Manhattan Study (Langner & Michael, 1963). Subsequently, literally thousands of studies examined the impact of life events on physical and mental health, the measurement of life events, the role of life events in the larger stress and coping paradigm, and the factors that mediate and moderate the effects of life events on health outcome. Why was the concept of life events so

compelling? Numerous other variables, after all, are equally powerful predictors of physical and mental illness. Primarily, life events offered a potential social risk factor compatible with epidemiological theories of illness onset, theories that emphasize the role of environmental agents on the health of human organisms. Although there is virtual consensus that the social environment plays a powerful role in health and illness, isolating relevant parameters of the social environment and documenting their effects has been a difficult challenge. Life events are especially attractive because they represent a social risk factor rivaling physical risk factors in terms of being objective, potentially quantifiable, and occurring prior to illness onset.

Interest in life events did not originate in ageing research, but many gerontologists have been interested in the possible relevance of life events for understanding illness in later life. The life-events perspective also is compatible with the crisis orientation that has pervaded much ageing research – an orientation that focuses on the social, psychological, economic, and physical losses that are common in later life and that may have negative consequences for health. Many of those losses (e.g., widowhood, economic problems) can be viewed as life events. Research has demonstrated that older adults actually experience fewer life events than do young adults. Interest in the impact of life events continues, however, largely because of evidence that resources for coping with stress typically decrease in late life. Thus, older adults may be more vulnerable than younger adults to the adaptive challenges posed by life events.

Initially, research emphasized only one parameter of life events: the degree to which they disrupt established behavior patterns. Early research explicitly stated that subjective perceptions of stress are unimportant; it is the degree of change that

calibrates the stressfulness of life events. Thus, for example, both events that are perceived as positive and those perceived as negative were believed to be stressful because both types disrupted usual behavior. Investigators using a more interactionist perspective demonstrated convincingly and rather early, however, that change per se is not the “active ingredient” in the link between life events and illness. Rather, perceptions of stress are crucial for understanding the effects of life events on health. Consequently, measures of life events now are routinely restricted to events that are perceived as negative or stressful by the individuals who experience them. The importance of experiential measures of life events is further documented by evidence that there is no life event that is uniformly described as positive or negative – stress is indeed in the eye of the beholder. More sophisticated versions of the life events framework (e.g., Brim & Ryff, 1980; Chou & Chi, 2001; Chou & Chi, 2000; Dohrenwend, Krasnoff, Askensay, & Dohrenwend, 1978; Donald, 2003; Hultsch & Plemons, 1979) emphasize the factors that mediate the influence of life events on adult development – physical health, intelligence, personality, family supports, income, and so forth. Some individuals may perceive a life event as highly stressful whereas others perceive the same event as a challenge.

Bernice Neugarten and Nancy Datan (1973) suggested that understanding the nature of adult personality developments depends on an analysis of the socio-historical and personal circumstances within which adult life occurs. They also suggested that chronological age has little bearing on adult personality. Neugarten also has deep-seated doubts about an increasing number of popular books that emphasize predictable, age-related life crises. People who read such books worry about their midlife crises, apologize if they do not seem to be coping with them properly, and appear dismayed if they are not having them.

Life events have been a major focus of psychiatric epidemiology (Kessler, 1997; Gould, Greenberg, Velting, & Shaffer, 2003; Paykel, 1994). Researchers have consistently found the positive and negative dimensions of psychological well-being to correlate with different types of variables. In general, negative affect appears to be related to neuroticism, self-reported stress, health complaints, and the frequency of unpleasant events, whereas positive affect has been found to correlate with extraversion, sociability, and the frequency of pleasant events (Kessler, 1997; Park, Armeli, & Tennen, 2004; Watson, Clark, & Tellegen, 1988; Wood, Heimpel, & Michela, 2003). One implication of these findings is that the etiologies of positive and negative affect may be quite different. Several researchers have suggested a situational etiology for positive affect and a more stable dispositional etiology for negative affect (Emmons & Diener, 1985; Lawton, Kleban, & Dean, 1993). If this is so, it seems reasonable to expect that desirable life events might be stronger predictors of change in positive affect over time than undesirable events for negative affect. This point has important implications for the literature on life events in the elderly. Although the life events literature of the past two decades with adults and older adults has demonstrated modest relationships between psychological well-being (Avison & Turner, 1988; Kessler, Price, & Wortman, 1985). The inconclusiveness has been especially true for positive life events (Krause, 1988). Part of the inconsistency may be due to a tendency for researchers to focus on negative outcomes such as depression, anxiety, and physical illness rather than looking at positive and negative affect independently.

SELF-ESTEEM

Initially, two major questions guided research on self-esteem in later life: (a) Do older people exhibit lower levels of self-esteem than middle-aged and younger adults? (b) Is the transition to old age characterized by a decline in self-esteem? Though related, answers to these questions require different kinds of data. The first question concerns age or cohort differences, and can be addressed using cross-sectional data. The second question concerns age changes and requires longitudinal data collected during a significant portion of adulthood. It should be noted that numerous authors initially hypothesized that self-esteem would decline in late life as a result of age-related losses (Van Baarsen, 2002) and negative stereotypes about old age (Kuypers & Bengtson, 1973). Evidence, however, has not supported those expectations (Bengtson, Reedy, & Gordon, 1985). Most studies indicate that self-esteem does not decline significantly in later life – and, indeed, several studies report higher levels of self-esteem among older adults than among their younger peers. Other studies have examined correlates of self-esteem within the older population. These studies suggest that individual differences in self-esteem among older adults are associated with many of the factors that predict self-esteem among younger adults: personal achievement (e.g., education, income), successful relationships with family and friends, and participation in meaningful social activities. In addition, health emerges as a correlate of self-esteem that is unique to older adults. As expected, better health is associated with higher self-esteem.

More researches focus on self-esteem in two relatively new areas. First, self-esteem has emerged as an important mediating variable in research designed to understand the mechanisms by which social factors affect physical and mental health. For

example, Krause (1987) has shown that self-esteem mediates the effects of stress and social support on depressive symptoms; Pearlin, Lieberman, Menaghan, and Mullan (1981) found that self-esteem mediates the effects of social class and life stress on depression. This line of research clearly documents the value of a positive sense of self for well-being and suggests that it is one of the major mechanisms by which social advantages translate into better health.

Second, a line of research has emerged focused on possible selves, which are defined as individuals' views of their selves in the future. There is a clear and direct link between possible selves and self-esteem. Just as self-esteem is based on a comparison of what one is (the actual self) to what one wants to be like (the ideal self), possible selves are future-oriented visions of what one might be. Investigators studying possible selves have found that concept especially useful for better understanding the role of self-motivations and self-imposed regulations on behavior (e.g., Hooker, 1992; Markus & Nurius, 1986). Research on self-esteem as observed in the context of possible selves also is important because it reminds us that people, including older people, not only respond to the demands of their environments but also are self-directed initiators of their own lives.

In a review of the role of psychological factors in depression, Barnett and Gotlib (1988) concluded that the lack of a well-anchored sense of self-worth creates vulnerability for depression. In other words, aversive events may precipitate depressive symptoms, especially among individuals with fragile or vulnerable self-esteem, precisely those qualities that are thought to be associated with unstable self-esteem. Data consistent with this assertion have been obtained. For example, Robert and Monroe (1992) reported that among initially non-depressed individuals,

failure on a college examination predicted increases in depression only among individuals with unstable self-esteem. Other researchers, Butler, Hokanson, and Flynn (1994) examined the relationships among self-esteem stability, stressful life events, and depression. According to Butler and his colleagues, self-esteem is unstable, and everyday events predict changes in day-to-day self-esteem. In addition, they also reported that as major life stressors increased, unstable self-esteem predicted greater depression among individuals with low self-esteem.

COPING

Coping refers to those things people do to avoid being harmed by stressful experiences (Pearlin & Schooler, 1978). These can include direct action taken to resolve the problem as well as thoughts or actions intended to control the impact, either in the way the problem is perceived or the emotional response to the stressor (Park, Armeli, & Tennen, 2004). Most of the previous studies of the relationship between age and coping have been cross-sectional and, therefore, represent age differences, not necessarily developmental changes. Age differences have been found not only in the number of strategies employed but also in the types of strategies used. Older people use fewer active, problem-focused, help-seeking strategies to deal with their problems, and employ more passive, emotion-focused, and intrapersonal coping (Chiriboga, 1992; Martin, Poon, Clayton, Lee, Fulks, and Johnson, 1992; Meeks, Carstensen, Tamsky, Wright, & Pellegrini, 1989). The assumption that some coping strategies (active or problem-focused) are inherently more efficacious, whereas others (emotion-focused or intrapersonal) are more pathological could lead one to infer that the coping strategies used by the elderly are

inferior. However, research looking at the outcome of coping attempts suggests that the strategies used by the elderly are at least as effective, if not more effective, than those used by younger persons (Meeks, Carstensen, Tamsky, Wright, & Pellegrini, 1989). Folkman, Lazarus, Pimley, and Novacek (1987) challenge the notion that coping in the elderly is regressive. They caution that coping patterns are adaptive if they fit the problems with which the person is coping. Costa and McCrae (1989) reported that after controlling for type of stressor, there were few age differences in coping.

The point to be emphasized is that those mechanisms that may be effective in solving problems faced by younger people may not work on the less alterable problems faced by the older people. Some of the problems with which older people cope tend to be less changeable and, therefore, less responsive to problem-focused coping. For example, chronic illnesses and “irreversible losses” (Pearlin & Mullan, 1992), such as loss of a lifelong companion or adult child, may not be candidates for active problem-solving. Murrell, Norris, and Grote (1988) stated that not all change is stressful for older people since some of the things which are perceived to be stressful or that are found to be stressful to younger people may not have the same meaning in the lives of older people.

It is expected that physical, mental, and social resources affect the way in which the individual copes with stressful life events, as demonstrated in the Duke Longitudinal Study of Ageing (Palmore, 1981). One would further assume that education, cognitive capacities, life experiences, knowledge, social abilities, social networks, motivation, energy, biological capacity, health, gender, economic resources, and living conditions in old age would make a difference in coping strategies (Ruth &

Kenyon, 1996). Mediating factors that further influence the coping strategies would be differentiation and personality-linked factors such as values, goals, self-concept, and self-esteem (Markus & Herzog, 1991; Park, Armeli, & Tennen, 2004).

Although coping behavior has recognized as one of the most important factors that moderate relationships between stress and strain, the accumulating research results have been rather disappointing. While the rate of coping in the explanation of responses to stress has often been demonstrated, its effect has rarely been found to be large (Aldwin & Revenson, 1987). Felton, Revenson, and Himrichsen (1984) concluded that, in the case of chronic illness, the effects of individual coping efforts on emotional distress are rather modest.

Methodologically, most of the research in this field has involved self-reported measures in which subjects were requested to report on the extent to which they used each of the coping behaviours. Coping strategies, therefore, have been studied as neutral entities detached from their meaning to the person (Bar-tal & Spitzer, 1994). As a response to this state of affairs, two major empirical approaches emerged. The first attempted to discover situational, social resources and personality factors that may clarify the buffering and attenuating effects of coping on the stress-strain relationship (Epstein & Meier, 1989; Mattlin, Wethington, & Kessler, 1990; Van Baarsen, 2002). The second tried to develop better instruments for assessing the coping strategies (Endler & Parker, 1990; McCrae, 1984). In contrast to these two approaches, Bar-Tal and Spitzer (1994) argued that the modest effects of coping that have so far been found may be attributed to the utilization of coping use scales. Their contention was that a distinction between the use of strategies and the users' perception of their helpfulness is critical when studying the role of coping as a

moderator of stress-strain relationship. A composite of the two dimensions, the coping use and the coping effectiveness, may constitute a better and more useful concept. When individuals perceive their efforts to be effective, they may conclude that they have greater control over the situation than they thought initially, resulting in the reduction of their psychological distress. Alternatively, when subjects evaluate their actual coping efforts as ineffective, they may conclude that they underestimated both the threat constituted by the situation and their difficulty in coping with it, resulting in no change, or even in a rise in distress levels.

Gender differences in use of coping strategies have been reported in a number of studies. In general, findings suggest that females appear to favour social support, emotion-focused, and avoidant coping strategies relative to males (Billings & Moos, 1981; Deisinger, Cassisi, & Whitaker, 2003; Pearlin & Schooler, 1978; Ptacek, Smith, & Zanas, 1992; Stein & Nyamathi, 1999), whereas, males appear to favour stress release through other activities and tend to more often turn to drugs or alcohol relative to females (e.g., Bird & Harris, 1990; Stein & Nyamathi, 1999). Although researches suggest gender differences in coping, they may be that gender-role orientation and related personality dimensions, rather than gender itself, account for gender differences in coping. Gender differences in coping may reflect socialization differences in which males are expected to be more independent, instrumental, and ambitious, whereas females are expected to be emotional, supportive, and dependent, as reflected in traditional gender-role orientations (Ptacek, Smith, & Dodge, 1994). Findings indicate that gender-role orientation, that is, masculinity and femininity, predict types of coping strategies used (Hobfoll, Dunahoo, Ben-Porath, & Monnier, 1994; Nezu & Nezu, 1987; Ptacek, Smith, & Dodge, 1994). For example, one study found that neither gender nor feminine gender role predicted

coping strategies, whereas, masculine gender role did. Both males and females who were high on masculinity engaged in more active-behavioural coping and less avoidant coping than individuals low on masculinity (Nezu & Nezu, 1987). Another study did not find that gender-role orientation completely accounted for gender differences in coping (Hashim, 2003). Gender predicted use of support-seeking and emotion-focused strategies, with females using those strategies more often. Masculinity predicted additional variance in emotion-focused coping, over and above gender, with higher masculinity related to less use of emotion-focused coping. Femininity was related to greater use of problem-focused coping over and above gender (Ptacek, Smith, & Dodge, 1994). Thus, although gender-role orientation may partially account for gender differences in coping, other variables may be important mediators of this relationship.

LOCUS OF CONTROL

Control is the extent to which one can bring about or influence outcomes in one's life. The locus of control refers to the source of this control. The sources are usually characterized as internal or external. Rotter (1966) developed an instrument to assess the internal-external locus of control construct. However, there has been some concern about this bipolar dichotomy because not all internal sources are within one's control (e.g., genetic influences) and not all outside forces are outside one's control (e.g., influences over other people). Internal sources of control include one's ability, personality characteristics, behaviours, and efforts. External control refers to random factors such as chance, luck, or fate, as well as to more ordered or predictable occurrences such as the influences of powerful other people.

During the 1980s, locus of control (Spector, 1982 & 1986) was found to be related to stressors and strains, specifically the job related ones (Siu, 1998). As Spector (1994) defined that locus of control is “a personality variable that concerns people’s generalized expectancies that they can or cannot control reinforcements in their lives. People who hold expectancies that they control reinforcements are considered to be internals, and people who hold expectancies that outside forces or luck controls reinforcements are considered to be externals.” The construct of locus of control, like coping, is also important to studies of ageing (Siu, 1998). As Siu (1998) stated that “the concept of control relating to stress in later life was summarized in details by Rodin (1986). It has been found that perceptions of control in general lead to greater endurance of aversive stimuli (Kanfer & Seider, 1973); greater feelings of control lead to greater satisfaction (Liem, 1975) and performance (Glass & Singer, 1972).”

The literature is abound with evidence to show that people with strong sense of personal control (or internality) over their lives fare better with respect to physical, psychological, and social well-being than those who lack a sense of control (or externality) over life. In addition, it appears that locus of control is associated with the way persons perceive themselves and believe others perceive them. Burns (1979) found that individuals with high self-esteem and positive feelings of competence had an internal locus of control, whereas those who felt insecure, unlucky, or inadequate, reported an external locus of control. Some other researchers provided a convincing theoretical rationale in which individuals with diminished feelings of personal control tend to believe that they are at the mercy of the social environment and that it is futile to attempt to overcome stressful experiences. They are, therefore, less likely to efficiently utilize the resources that

are available to them during difficult times, and as a result, stressful situations tend to get worse. (Mirowsky & Ross, 1989; Waters & Moore, 2002)

A pervasive theme in comparative research on locus of control is the contrast between a familial and collectivist commitment, on the one hand, and individual self-reliance and autonomy on the other. Asian culture is more collectivist than Western cultures (Al-Zahrani & Kaplowitz, 1993; Liang & Bogat, 1994). An Asian collectivist orientation may reduce the sense of control. Hui and Triandis (1986) argued that Western cultures encourage individuals to pursue personal goals and to devote a great deal of attention to the development of the individual, while Asian cultures value loyalty to the extended family and encourage individuals to subordinate personal wishes to the overall goals of the family and the traditional community.

POSITIVE AFFECT AND DEPRESSION

A large number of studies have shown that there are clear associations between neuroticism and measures of negative affect and between extraversion and measures of positive affect (e.g., Charles, Reynolds, & Gatz, 2001; Costa & McCrae, 1980; Cox, ENNS, Walker, Kjernisted, & Pidlubny, 2001; Watson & Clark, 1984, 1992). For example, Costa and McCrae (1980) found that neuroticism predicted negative affect in everyday life, whereas extraversion predicted positive affect, and that these relations held over periods as long as ten years. As predicted, although these two personality dimensions were minimally related to one another, each was associated with happiness: neuroticism negatively and extraversion positively. On the basis of these relations, they and others have proposed that neuroticism and extraversion

represent temperamental personality dimensions that predispose individuals to negative and positive affect, respectively. However, as Larsen and Ketelaar (1991) observed, correlations between personality and affect in everyday life do not provide a rigorous test of the temperamental view. This is because different personalities may generate different environments, and observed relations between personality and affect may be the result of these instrumentally generated circumstances rather than differences in predispositions to negative or positive affect per se (Caspi, Bem, & Elder, 1989; McCrae & Costa, 1991). In addition, Lawton, Kleban, and diCarlo (1984) found that negative affect was increased by poor health and poor self-esteem, whereas positive affect was greater for people who interacted more with friends and participated more in activities; perceived environmental quality was associated with positive affect. Moreover, Lawton and Moss (1987) found that relationships characterized as affording status were associated with low negative affect but were unrelated to positive affect; those affording solidarity were associated with high positive affect but not with negative affect. In another study of caregivers by Lawton, Moss, Kleban, Glicksman, and Rovine (1991), positive affect was greater for those who reported more satisfactions from this role, whereas those reporting a greater sense of care-giving as a burden were higher in depression. Although there were occasional instances of cross-valence relationships, the general conclusion was clear: Positive, diverting, environmentally engaging experiences heighten positive affect but do not ameliorate negative affect; negative, internal experiences, such as poor health and negative personal relationships that reflect on the self, contribute to negative affect but are less likely to impair positive affect.

Depression is among the most common complaints of older adults and the leading cause of suicide in late life (Carter, 1993; Chan, 1995; Tse & Kwan, 2002). The

impact of depression is impressive, especially since individuals who were chronically ill and disabled. Brown and Harris (1989) stated that vulnerability factors interact with stressful life events and lead to depression. This interaction may occur in at least two ways. Vulnerable individuals may expose themselves to life circumstances and generate stressful events that promote depression. Therefore, vulnerability to depression is mediated by stressful life events. Moreover, vulnerable individuals may be more prone to develop depression when exposed to stressful life events than persons with lower vulnerability, so that vulnerability enhances the impact of stressful life events in contributing to depression. As stated by Alexopoulos (2001), neuroticism and long-term difficulties were shown to increase the impact of even mild stressful life events in promoting depression. Moreover, neuroticism and long-term difficulties increase the risk for depression in elderly persons even in the absence of stressful life events. The effect of neuroticism is stronger in individuals with prior history of depression. These observations are relevant both to major depression and to mild subsyndromal cases.

< CHAPTER 3 >

THEORETICAL FRAMEWORK

From the previous chapter, it was pointed out that the psychological well-being (positive affect and depression) of an individual is influenced by life events, physiological factors (e.g. health status), sociological factors (e.g. interpersonal network), vulnerabilities and resources (e.g. coping strategies), acting interactively rather than independently. These factors constitute a high influencing power to the stress tension of an individual; and as a result, affect one's psychological well-being. A stress-control-psychological process framework adapted from Gatz (Figure 3), which is similar to the rationale of the present study, is chosen to constitute the research framework's structure of the present study (Figure 4).

THEORETICAL FRAMEWORK

The theoretical framework of the present study is based on a framework adapted from Gatz (1992). Gatz provided a framework for considering the different interacting elements that affect the relationship between stress and well being (see Figure 3). For Gatz, as for Aldwin (1994), stress refers to that quality of experience, produced through a person-environment transaction that, through either over-arousal or under-arousal, results in psychological or physiological distress.

Figure 3. Stress, control, and psychological processes

Source: Michael A. Smyer and Sara H. Qualls (1999). "Aging and Mental Health". Blackwell Publishers Ltd., UK, p.87.

The concept of stressful life events shifts the attention to the social, historical, and physical context that surrounds older adults. Baltes and his colleagues (1980) suggested that three types of influences shape the individual's life course: age-graded, history-graded, and non-normative events. Age-graded influences are associated with a specific chronological age; for example, accessing to social security benefits are linked to older adults. History-graded influences are linked to the particular historical period in which the individual has lived (e.g. the Great Leap Forward). Non-normative events are influences that occur at any time in the life-span but are not part of the "expected" life pattern (e.g. winning the Mark-six lottery).

The concept of strain encompasses both physiological and emotional reactions (Aldwin, 1994). The links between stress and immune system functioning have received a great deal of research and clinical attention (e.g. Stone & Porter, 1995). Herbert and Cohen (1993) have reviewed the literature and highlighted several important themes: first, both objective stressful events and subjective reports of stress are related to immune changes; second, objective events have a greater impact than subjective reports; and third, the nature of the events (e.g. interpersonal stress vs. non-social events) affects the type of immune response. Lazarus (1990) highlighted another type of chronic strain: daily hassles which he equated with chronic role strain. Some have argued that everyday stress or hassles have a larger impact on health and well being than life events that occur relatively infrequently (Lazarus & Folkman, 1984).

The third element, vulnerabilities and resources, of Gatz's scheme reminds us of the interaction between the person and the environment. The basic assumption is that the person's perception of the stressor affects his/her coping response. Lazarus and his colleagues have highlighted two basic approaches to coping that are linked to the perception of stress: problem-focused coping and emotion-focused coping (Folkman, Lazarus, Gruen, & DeLongis, 1986; Folkman, Lazarus, Pimley, & Novacek, 1987). Problem-focused coping seeks to alter the distress person-environment interaction. Emotion-focused coping seeks to regulate distressing emotions. The type of coping that is used in response to a particular stress is a function of the individual's perceptions, the specific types of stress, and the context for coping.

A central element of perception is the individual's sense of control over the event. Zautra, Reich and Newsom (1995) have focused on the links among older adults'

sense of control, loss of autonomy, and mental health. They found that it is important to assess the individual's sense of control that derives from experience with the possibility of shaping the events of life – both positive and negative.

RESEARCH FRAMEWORK OF THE PRESENT STUDY

The framework of the present study is depicted in Figure 4. It composed of four kinds of variables: *independent variable* (life events), *intervening variables* (self-esteem, coping strategies USE/HELP and effectiveness, and internal locus of control), *dependent variables* (positive affect and depression), and *controlling variables* (age, gender, self-perceived health, and subjective financial status).

It is assumed that there are relationships between the *independent variable* (i.e. Life events) and the *dependent variables* (i.e. Positive affect and Depression) while the *intervening variables* (i.e. Self-esteem, Coping strategies and effectiveness, and Internal Locus of Control) will have moderational effects on those relationships. In addition, it is also assumed that mediational effects can be found within the *independent, intervening and dependent variables*. In the framework, age, gender, self-perceived health, and subjective financial status are also taken into account and they are served as *Controlling variables*.

Figure 4. Framework of the present study

< CHAPTER 4 >

CONCEPTUALIZATIONS

LIFE EVENTS

Life events refer to internal or external stimuli that cause some changes in our daily lives. As noted by Hooyman and Kiyak (1999), life events may be positive or negative, gains or losses, discrete or continuous. Examples of internally created events include changes in eating or sleeping habits and the effects of a chronic disease such as arthritis or diabetes. Externally initiated events might include starting a new job, losing one's job, or retirement. McAndrew, Akande, Turner, and Sharma (1998) conceptualized life events as daily experiences that change someone's lifestyle that can range from minor adjustments in daily routine to a major reconstruction of self identity. The degree of psychological well-being caused by a particular event is thought to be a direct function of the amount of life change that occurs in response to that event.

SELF-PERCEIVED HEALTH

According to the World Health Organization, health is multidimensional, reflecting dimensions of physical, mental, and social well being. Self-perceived health represents an individual's perception and evaluation of his/her overall health (Liang, 1986). Subjective health ratings have been a central feature of gerontological research because 1) they are associated with objective health and functional status (e.g. Menec & Chipperfield, 1997); 2) they are related to functional decline and

mortality, even after controlling for objective health and disability (e.g. Idler & Kasl, 1995); and 3) they are related to the use of health services (e.g. Strain, 1993).

SELF-ESTEEM

Coopersmith (1967, pp.4 – 5) conceptualized self-esteem as “the evaluation that an individual makes and customarily maintains with regard to himself; it expresses an attitude of approval or disapproval and indicates the extent to which the individual believes himself or herself to be capable, significant, successful and worthy. In short, self-esteem is a personal judgment of worthiness that is expressed in the individual hold.” In other words, self-esteem is a global measure of self-concept that captures individuals’ personal judgment about their own self-worth (Simmons, & Rosenberg, 1975). High levels of self-esteem are characteristic of people who have more personal control over their outcomes and are less subject to the whims of others, whereas low levels of self-esteem are characteristic of people who show an artificially positive self-attitude to the world (Phares, 1976).

COPING STRATEGIES

Coping has been conceptualized as a “constantly changing cognitive and behavioral effort to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (Lazarus, & Folkman, 1984, p.21). Coping strategies, therefore, involve efforts to alter the cause of the stress and efforts to regulate emotional responses to the stressors. When investigating an individual’s coping strategies, two measuring dimensions should be considered. The first one is

the coping strategies used by the individual, and the second is the perception of coping effectiveness of the individual (Bar-Tal, & Spitzer, 1994). When individuals perceive their efforts to be effective, they may conclude that they have greater control over the situation than they thought initially, resulting in the reduction of their psychological distress. Alternatively, when individuals evaluate their actual coping efforts as ineffective, they may conclude that they underestimated both the threat constituted by the situation and their difficulty in coping with it, resulting in no change, or even in a rise in distress levels.

LOCUS OF CONTROL

Rotter (1966) defined locus of control as a person's perception of his/her control over the world in which he/she lives. He elaborated by stating that people who feel they are masters of their own fate, and hence assume personal responsibility for what happens to them, are identified as having an internal orientation, while people who feel little or no responsibility for what happens to them are said to have an external orientation. A person who has external locus of control characteristic tends to perceive positive or negative events as unrelated to one's own behavior and is therefore beyond personal control. On the contrary, a person who has internal locus of control characteristic tends to believe that he/she can master, control, and effectively alter the environment, and can determine outcomes in his/her lives (Mirowsky, & Ross, 1989). It is believed that people with strong sense of internal locus of control over their lives fare better with respect to physical, psychological, and social well-being than those who lack a sense of control over life.

PSYCHOLOGICAL WELL BEING

Psychological well-being is seen as the generalized mental health outcome of the complex of intrapersonal factors that compose people's everyday lives (Lawton, Winter, Kleban, & Ruckdeschel, 1999). In most of the literature, psychological well-being is divided into two independent factors labeled positive affect and negative affect (Lawton, Kleban, Dean, Rajagopal, & Parmelee, 1992; Watson, Clark, & Carey, 1988; Watson, & Tellegen, 1985). Positive affect and negative affect represent the affective or emotional components of subjective well-being (Argyle, 1987; Myers, & Diener, 1995). Although the terms positive affect and negative affect could be taken to indicate that two affect factors are opposites, research has indicated that positive affect and negative affect consistently emerge as two dominant and relatively independent dimensions of affect.

In the present study, one's happiness, energy, and positive activation are used to represent positive affect, whereas depression is used to represent negative affect. Although negative affect composed of several factors, such as anxiety and shyness (Lawton, Kleban, & Dean, 1993), only depression will be selected for the study because it is a much more important and prevalent symptom in the older population than are the other negative affects (Lawton, Winter, Kleban, & Ruckdeschel, 1999).

OLDER PERSONS

There is no universal standard age to define a person as elderly. A chronological definition of elderly is commonly used, but contested. In Western countries, the age of 65 is generally accepted as the commencement of old age and this is the retiring

age for most of the working population. In Hong Kong, different standards are used to identify groups of people who might be called elderly. The official retirement age of public sector employees is 55 to 60. In the White Paper: *Social Welfare into 1990's & Beyond*, stated that a person aged 60 or above is usually regarded as an elderly. In many research projects, the age of 60 is generally adopted. Further, aged 60 is generally regarded as the minimum age to be eligible for most of the welfare services in Hong Kong. In this study older persons would refer to men and women aged 60 and above.

< CHAPTER 5 >

HYPOTHESES

As stated in the previous chapter, the study aims at examining the relationships between the main variables, (namely life events, psychological well being, self-esteem, coping, and locus of control) especially the roles of self-esteem, coping, and locus of control in the “life events-psychological well being” model. Besides, the study also aims at investigating if there is any age, gender, or some other demographic difference in the experience of life events among respondents. Having reviewed relevant concepts and theoretical framework, several hypotheses have been set to guide the whole analyses systematically.

The hypotheses are divided into three scopes: 1) demographic differences, 2) relationships between main variables, and 3) moderating and mediating effects of the variables. Independent-samples T test and correlation analysis are employed for testing hypotheses in the Scope 1. Correlation analysis and regression analysis are employed for testing hypotheses in the Scope 2. Multiple regression analyses are employed for testing hypotheses in the Scope 3.

Scope 1 – demographic differences

H1: Males' self-esteem level is higher than females'.

H2: Males' locus of control is more internal than females'.

H3: Males have higher level of positive affect than females.

H4: Males are less depressed than females.

Scope 2 – Relationships between main variables

H5a: Life events are positively correlated with positive affect.

H5b: Life events are negatively correlated with depression.

H6a: The worse an individual's self-perceived health, the less frequent the signs of positive affect.

H6b: The worse an individual's self-perceived health, the more frequent the symptoms of depression.

H7a: The lower an individual's self-esteem, the less frequent the signs of positive affect.

H7b: The lower an individual's self-esteem, the more frequent the symptoms of depression.

H8a: The more an individual internalize the locus of control, the more frequent the signs of positive affect.

H8b: The more an individual internalize the locus of control, the less frequent the symptoms of depression.

H9a: Problem-focused coping strategies (i.e. problem-focused coping and positive appraisal coping) are positively correlated with positive affect.

H9b: Emotion-focused coping strategies (i.e. avoidance coping and emotional discharge coping) are negatively correlated with positive affect.

H10a: Problem-focused coping strategies (i.e. problem-focused coping and positive appraisal coping) are negatively correlated with depression.

H10b: Emotion-focused coping strategies (i.e. avoidance coping and emotional discharge coping) are positively correlated with depression.

H11: The better an individual evaluates the helpfulness of problem-focused coping strategies (i.e. problem-focused coping and positive appraisal coping), the more frequent the signs of positive affect.

H12: The better an individual evaluates the helpfulness of problem-focused coping strategies (i.e. problem-focused coping and positive appraisal coping), the less frequent the symptoms of depression.

H13a: The more effective the coping strategies, the more frequent the signs of positive affect.

H13b: The more effective the coping strategies, the less frequent the symptoms of depression

.

Scope 3 – Moderating and mediating effects of the variables

H14a: Self-esteem serves as a moderator on the relationship between life events and positive affect.

H14b: Self-esteem serves as a moderator on the relationship between life events and depression.

H15a: Internality (internal locus of control) serves as a moderator on the relationship between life events and positive affect.

H15b: Internality (internal locus of control) serves as a moderator on the relationship between life events and depression.

H16a: There are significant moderating effects of coping on the relationship between life events and positive affect.

H16b: There are significant moderating effects of coping on the relationship between life events and depression.

H17a: There are significant moderating effects of coping effectiveness on the relationship between life events and positive affect.

H17b: There are significant moderating effects of coping effectiveness on the relationship between life events and depression.

H18a: There are significant mediating effects of coping on the relationship between life events and positive affect.

H18b: There are significant mediating effects of coping on the relationship between life events and depression.

H19a: There are significant mediating effects of coping effectiveness on the relationship between life events and positive affect.

H19b: There are significant mediating effects of coping effectiveness on the relationship between life events and depression.

< CHAPTER 6 >

SAMPLING

SAMPLING FRAME

The samples in the study were drawn from Tseung Kwan O district. Tseung Kwan O is one of the most fast developing districts among the other districts in Hong Kong. According to the statistics from a research report conducted by the Sai Kung District Council and Hong Kong University in 2000, over 40% of the respondents in Tseung Kwan O are suffering from emotional problems or stress. This result has aroused public concerns and this is one of the main reasons for the investigator to conduct the present study in this district. In addition, since many ageing hostel, ageing centers and public housing for seniors are built in the district, the overall ageing population in the district has been increased rapidly. Another reason for drawing samples in this district is because the investigator is more familiar with the environment of the district and it may help to find samples in an effective and efficient way. In addition, since the investigator (also took the role as the interviewer) lives in the district and time for traveling to the interviewing places was minimized.

According to the 2000 District Council statistics, the population of Tseung Kwan O district was 258,995. 212,858 lived in public housing, housing of Home Ownership Scheme, and housing of Private Participation Scheme; 1,866 in villages; and 44,271 in private housing. However, there is no official statistics on the exact number of elderly in the area (who are aged 60 or above).

Cluster sampling method was employed in the study. Cluster sampling method provides the list of all elements required for the final sampling units, which need not

be available in the beginning. Since there is no exact number of older persons to be found in Tseung Kwan O district, cluster sampling would be ideal to help to generate a sample frame.

Tseung Kwan O is divided into two regions geographically: Northern Division and Southern Division. The Northern Division has been chosen for the primary cluster because it is more developed than the Southern Division, and therefore it may be less problematic to access the ages population. Within the primary cluster (Northern Division of Tseung Kwan O District), there are altogether 3 public housing estates, 3 Home Ownership Scheme's estates (HOS), and 4 private housing estates. The population for each of them is as followed:

Northern Division

<i>Nature of estate</i>	<i>Name of estate</i>	<i>Population</i>
Public housing estates:	Po Lam	19,800
	Tsui Lam	20,032
	King Lam	19,476
HOS:	King Ming Court	3,519
	Ying Ming Court	6,394
	Yan Ming Court	6,113
Private housing estate:	Well On Garden	5,120
	Finery Park	1,925
	East Point City	6,116
	Metro City Phase I	6,100

		94,595

Source: Population statistics (from Sai Kung District Council)

Within the primary cluster, 4 secondary clusters has been chosen to draw the sampling unit. They are Po Lam Estate, Tsui Lam Estate, King Lam Estate, and Ying Ming Court. The main reason for choosing these 4 places was that they have the highest population among the rest of the Division. Since the distribution of the population in each of the estates in Northern Division varies, it is better to choose crowded areas for drawing samples in order to increase the effectiveness and efficiency of the interviews. The population of the secondary clusters accounted for about 69.5% (65,702 residents) of the whole Division. According to an estimation of the ageing population within the secondary clusters by a district councilor and a Chief-in-charge of an ageing centre, about 12% of the population in the clusters are elderly persons who are aged 60 or above. In short, about 7,800 elderly persons live in the secondary clusters.

Because of time and resources limitation, only 121 face-to-face interviews were done in Tseung Kwan O district (from the mid-January 2001 to late-April 2001). 103 of them were valid cases, with 18 invalid cases (those invalid cases were due to the withdrawal of respondents during the interviews so those questionnaires were incompleted), which the average successful rate of interviews is 85%. Data of the invalid cases has not been input to the computer for further statistical analysis. The age distribution of the respondents ranges from 60 to 80 years old. The elderly persons who are, mainly, gathering in gardens were invited individually to be interviewed by the interviewer. The purpose of the study was made known to each interviewee. The interviews were conducted in the evenings during weekdays, and whole day during weekends.

< CHAPTER 7 >

DATA COLLECTION AND RESEARCH INSTRUMENT

DATA COLLECTION

Face-to-face interview was employed to collect the data. Each subject was invited to answer the same set of research questions. All subjects were interviewed individually, and all the questions were read to them by the interviewer. This process allows for the inclusion of persons with severe visual impairment, significant physical handicap, or illiteracy. It also ensures uniformity in the data collection procedure. In addition, to avoid any possible inter-raters effect, that is, in judgment more than one person, the whole process was conducted by one interviewer. Data collection was processed from the mid-January 2001 to late-April 2001.

Pilot Study

A small scale of pilot study has been done before the main study went on. Eight face-to-face interviews have been done within the sampling cluster. The aims of the pilot study were to ensure the questions used in the questionnaire were clear enough for the respondents to answer, to get an idea how long did the face-to-face interview last, and the physical or emotional responses of the respondents when the questions in the questionnaire were asked. The procedures during the 8 interviews were running very smooth and the wordings of the questions were clear to them. The questions used have not given them any pressure or embarrassment. Therefore, there was no change has been made on the questionnaire for the main study.

However, the “flow” during the interview should be well managed in order to shorten the time spent on such interview or to avoid irrelevant, endless conversation.

RESEARCH INSTRUMENT

A standardized structural questionnaire was devised with close-ended questions. The questionnaire comprises of seven sections (totally 64 items). Section 1 is used to collect the personal data of the respondents. Section 2 asks the respondents to evaluate their own health status and state what kind(s) of illnesses they are suffering from. In Section 3, a life events checklist is provided to the respondents. The respondents are asked to state which life event(s) has/have happened to them in the last six months. Self-esteem of the respondents is tested in Section 4, and locus of control in Section 5. In Section 6, respondents are asked to state how frequent they use the coping strategies listed in the questionnaire and to evaluate the helpfulness of each strategy. Finally, in Section 7, respondents’ psychological well being (positive affect and depression) is examined. The questionnaire was constructed in English and was translated into Chinese by the investigator. Then, a back-translation was carried out by a bilingual person who had not read the original English version. Unclear and incorrect translations were discussed to establish the accurate meaning of the item and to provide better equivalence between the item and its related dimension. More detail descriptions of each section are presented in the following paragraphs.

Section 1 – Personal Information

The first section had eleven questions, centered on the basic information about the elderly. It included questions on the age, sex, marital status, number of children, education level, religious belief, residential type, whom they are living with, employment status, main source of income, and subjective economic status.

Section 2 – Health Status

The health status of respondents was measured by a subscale of the Short-form Health Survey: Medical Outcomes Study (MOS) and a checklist of illnesses which are generally found in ageing population. The subscale of the Short-form Health Survey: Medical Outcomes Study is used to measure respondents' subjective health status (self-perceived health) and the checklist of illnesses is used to measure their objective health.

Originally, the MOS is composed of twenty items that represent six health concepts: physical functioning, role functioning, social functioning, mental health, health perception, and pain. The subscale of health perception, which composes of five questions, is chosen for measuring respondents' self-perceived health in this study. The first question measures the overall perception of health of the respondents (ranged from "poor" to "excellent"), and the rest of the four questions measure the health status of the respondents in details. Researchers indicate that the elderly are accurate in their assessment of their own physical health (e.g. Benyamini, Idler, Leventhal, & Leventhal, 2000). A 5-point scale ranged from "definitely true" to "definitely false" is used.

In order to access the respondents' objective health status, one more question is

added. The respondents were asked to choose which illnesses they are suffering from a list of common illnesses of elderly. These illnesses include rheumatism, hypertension, fracture, gastric ailment, diabetes mellitus, chronic bronchitis, coronary artery diseases, hypothyroidism, hyperthyroidism, incontinence (urination / faeces), stroke, cancer, kidney ailment, chronic hepatitis, and osteoporosis.

Section 3 – Life Events

The Social Readjustment Rating Scale (SRRS) was conceptualized by Holmes and Rahe in 1967 as a tool to measure the required social readjustment or “stressfulness” associated with various life events. Forty-three life events were chosen for inclusion on the SRRS by Holmes and Rahe. In this study, 22 life events have been selected out of the 43 because some of the life events rarely occur in the ageing cohort (such as “Pregnancy”) and some of them have lower “influencing power” to the elderly people (such as “Christmas”). Besides, one more “new” life event was added. The added item deals with the working status of the respondents’ children. Since the unemployment rate is so high in Hong Kong, many people (especially the breadwinners of families) are worrying about their working status. The dependents in a family may also be influenced by the atmosphere.

Respondents are asked to state which life events happened on them in the last six months. Different weighted values called life change units (LCUs), which were also devised by Holmes and Rahe, are assigned to different life events that respondents experienced and the individual score is summarized. The total score for a certain respondent shows the degree of influence of the life events on him/her. The 23 life events included death of spouse, divorced, marital separation, death of close family members/siblings, injury/illness, son/daughter unemployed, retirement,

injury/illness of family members, gain of new family members, change in financial status, death of good friends, increase frequency of couple quarrel, son/daughter leaving home/emigration, poor relation with in-laws, spouse starts a new job/stop working, change in living condition, change in personal habits, change in residence, change in leisure activities, change in social activities, change in sleeping habit, change in frequency of family gathering, and change in eating habit.

Section 4 – Self-esteem

The Rosenberg's Self-esteem Scale is implemented in this study. Ten items are constructed in order to measure the level of self-esteem among respondents. Half of the items are positive statements while the other half is negative statements.

<u>Positive statements</u>	<u>Negative statements</u>
Q1. I feel that I have a number of good qualities.	Q2. I wish I could have more respect for myself.
Q3. I feel that I'm a person of worth, at least on an equal basis with others.	Q4. I feel I do not have much to be proud of.
Q5. I take a positive attitude towards myself.	Q6. I certainly feel useless at times.
Q8. I am able to do things as well as most other people.	Q7. All in all, I am inclined to feel that I am a failure.
Q10. On the whole, I am satisfied with myself.	Q9. At times I think I am no good at all.

According to the Rosenberg's Self-esteem Scale, a 4-point scale is used in measuring the level of self-esteem. Each question has a positive or negative meaning. For instance, if the respondent strongly agreed with a positive statement, he/she will get 4 marks; if the respondent strongly disagreed with this positive statement, he/she will only get 1 mark, and vice versa. A total score is obtained after the respondents have finished answering all the ten questions.

	Scores for positive statements	Scores for negative statement
Strongly agree	4	1
Agree	3	2
Disagree	2	3
Strongly disagree	1	4

If the respondents agree with the positive statements and disagree with the negative statements, their level of self-esteem will be higher. Self-esteem can be divided into high level, medium level, and low level. 28 – 40 marks of the total score represent high level of self-esteem; 14 – 27 marks represent medium level of self-esteem; 0 – 13 marks represent low level of self-esteem.

Section 5 – Locus of Control

The instrument used to measure locus of control is devised by Dr. Siu Oi-Ling (1998). The instrument is originally composed of eight items (Chinese idioms), where four items refer to the degree of respondents' internality and the other four refer to the degree of externality. Responses are made on 4-point scale ranging from "strongly

disagree” to “strongly agree”. The four statements (idioms) representing externality are recoded and all the scores are summed up to obtain a total score representing the respondents’ locus of control. Lower score means more internal locus of control. One more question which asked the respondents to state who controls their life or things that happen on them is added. There are three options for them to choose: 1) “I, myself”, 2) “God/fate”, and 3) “Don’t know”. This question is used to collect the general perception on locus of control of the respondents themselves.

Section 6 – Coping USE and HELP

Subjects’ coping strategies are assessed by a modified version of a questionnaire originally developed by Moos, Cronkite, Billings, and Finney (1986). This instrument initially used for measuring coping strategies of adults who are in hospitalization. The wordings used in the questionnaire have been changed slightly in order to fit the present study’s purpose. The changes included the word “doctor” has been changed to “professional person”; and the words “physical problem” have been replaced by “problem”. This modified version composed 13 items representing 4 categories: 1) problem-focused (6 items), 2) avoidance (2 items), 3) positive appraisal (2 items), and 4) emotional discharge (3 items). In each category, subjects were asked to answer two questions. The first question refers to the extent to which the coping strategy was used by the respondents (i.e. coping USE), and the second question refers to the extent to which the strategy was or might be helpful in reducing stress (i.e. coping HELP). There are 4 options for each question. For the coping USE, the 4 options are 1) “Use it every time”, 2) “Use it a lot”, 3) “Use it rarely”, and 4) “Never use it”; for the coping HELP, the 4 options are 1) “Very effective”, 2) “Effective”, 3) “No effect”, and 4) “Counter-effect”.

The answers of the coping USE and the coping HELP are used to calculate the coping effectiveness indices. The calculation of the coping effectiveness indices related to all coping strategies was done in three steps. In the first step, the z-scores of USE and HELP for each coping behavior were calculated. In the second step, the absolute difference score between the z-scores of the USE and HELP of every item in the four scales was calculated. Finally, the coping effectiveness index of each strategy was constructed by averaging all items belonging to the four scales. In this way, larger figures represent lower correspondence scores between USE and HELP. Therefore, larger scores represent less successful consequences of coping.

Section 7 – Psychological Well Being

Psychological well being (positive affect and depression) is measured by a 14-item instrument which is modified by the investigator of the study. The original instrument for measuring psychological well being, involves 20 items, was developed by Lawton in the 80s. The original copy of the instrument was sent by Lawton to the investigator and has given the rights to use the instrument for the present study.

Of the 14 items, nine are used to express positive feelings and five are used to express depressive feelings. The respondents were asked to state how frequent the they have experienced these feelings during the past month. Responses are made on 4-point scale ranging from “very frequent” to “never”.

STATISTICAL ANALYSES

After all questionnaires excluding the invalid cases and incomplete cases are collected, they are coded and edited. The verified data are analyzed using the Statistical Package for Social Sciences Ver.10 (SPSS v.10). The frequency count (e.g. for tabulating the basic profile of respondents), t-test (e.g. to test for gender differences), correlation (e.g. to test for the correlation between self-esteem and depression), and simple regression (e.g. to test for the causal relationships between key variables in order to see whether further statistical analysis should be done or not; to carry out mediating effect analysis).

The intervening variables are further analyzed using statistical analyzing methods for moderation and mediation. The stress-buffering effect (i.e. the moderating effect) of each of the coping USE and effectiveness, self-esteem and locus of control variables was tested using hierarchical multiple-regression analysis with interaction effects in predicting psychological well-being. The predictor variables in the models were (1) controlling variables, (2) life events and moderating variables, and (3) life events x moderating variables product terms.

For mediational analysis, initially it is hypothesized that coping USE and effectiveness variables mediate the relation between life events and psychological well-being. However, these results cannot be found because not all criteria of mediation have been met. Self-esteem and locus of control have used to replace the initial predicting variable (i.e. Life events). The mediating effect was estimated in path models in which there was a direct effect of self-esteem or locus of control on coping USE and effectiveness (path *a*), a direct effect of coping USE and effectiveness on psychological well-being (path *b*), and a direct effect of self-esteem

or locus of control on psychological well-being (path *c*). The product of path *a* and path *b*, or *ab*, is the mediated effect (Mackinnon & Dwyer, 1993).

A test of significance of the mediated effect is calculated using the stand error (SE) of the mediated effect, where $SE(ab)^2 = SE(a)^2 \times (b)^2 + SE(b)^2 \times (a)^2$ (Mackinnon & Dwyer, 1993). An approximate Z-score for this mediated effect is found by dividing the mediated effect *ab* by its standard error [SE(*ab*)]. AN approximate Z-score above 1.96 is considered to be significant.

ETHICAL ISSUES

It is always a matter of concern for studies involving human being that confidentiality of the respondents' data should be ensured at all cost. This is not too difficult technically in this study, as no name is required to be recorded and other personal particular is held only with professionals involved in the study. Written records are destroyed as soon as the data is entered into the computer for analysis. From then on only authorized persons would have access to this stored information.

< CHAPTER 8 >

RESULTS OF THE STUDY

In the study, 103 respondents were successfully interviewed face-to-face in Tseung Kwan O district. Information about respondents was gathered around seven themes: 1) basic demographic data of respondents were obtained; 2) the health status of respondents was measured by a subscale of the Short-form Health Survey: Medical Outcome Study (MOS) and a checklist of illnesses; 3) a modified Social Readjustment Rating Scale was used to collect how frequent of the listed life events happened on them in the past 6 months; 4) Rosenberg's Self-esteem Scale was used for assessing respondents' self-esteem level; 5) the theme focused on the locus of control of the respondents, so a locus of control scale which is devised by Dr. O.L. Siu was used for assessment; 6) it focused on respondents' coping behaviors and their coping strategies were assessed by a modified version of a questionnaire originally developed by Moos, Cronkite, Billings and Finney; and finally 7) psychological well-being (positive affect and depression) was measured by an instrument which was developed by Prof. Powell Lawton and modified by the investigator of the present study before it was used for the main study.

BASIC PROFILE OF RESPONDENTS

Source, gender and age distribution of respondents

The respondents were sampled from three main estates in Tseung Kwan O. They

are Po Lam Estate¹ (n=46; 44.66%), Tsui Lam Estate (n=36; 34.95%), and King Lam Estate (n=21; 20.39%). Within the sample, 52 respondents (50.49%) are male and 51 respondents (49.51%) are female. With regards to the age distribution, the respondents are between 60 to 80 years old (mean=65.61; S.D.=4.84). The age group breakdown is as follows: 60 – 64 years old = 50 (48.54%), 65 – 69 years old = 29 (28.16%), and 70 – 79 years old = 19 (18.45%). Only five respondents (4.85%) are 75 years old or above. (see Appendix I)

Marital status and number of children of respondents

83 respondents (80.58%) reported that they are married. Only 13 respondents (12.62%) are single, while only 6 (5.83%) are widowed and one (0.97%) is divorced. Although most of the respondents are married, some of them have no child. Of the 103 respondents, 21 (20.39%) reported that they have no children. Twenty-two respondents (21.36%) have only sons, while 17 respondents (16.50%) have only daughters. More than 40 percent of the respondents (n=43; 41.75%) reported that they have both son(s) and daughter(s). (see Appendix I)

Education level of respondents

Nearly 70 percent of the respondents (n=72; 69.90%) were illiterate. Less than one-fourth of the whole sample (n=24; 23.30%) has received formal education (primary or lower secondary level). Male respondents generally have better education than the female counterparts. Nearly 30% of the male respondents (n=15; 28.85%) have received primary or lower secondary schooling while only 17.65% of the female respondents (n=9) have received the same schooling level. Around 70%

¹ The number of respondents in Ying Ming Court, which is one of the four sampling clusters, is gathered with the number of respondents in Po Lam Estate and formed one data. It is because, geographically, Po Lam Estate and Ying Ming Court are in one region.

of the male (n=36; 69.23%) and female respondents (n=36; 70.59%) have no schooling. Younger respondents tend to have better education level than the older counterparts. Thirty percent of the respondents (n=15) in the 60-64 age group received formal schooling (primary or lower secondary level), while around 28% of the others (n=8; 27.59%) in the 65-69 age group and less than 5% (n=1; 4.17%) in the 70+ age group have received formal schooling. (see Appendix I)

Residential type and household composition of respondents

All the respondents fell into four categories of residential type: public housing, private housing, nursing home, and aged hostel. Ninety-one respondents (88.35%) are living in public housing estates. Another 6 respondents (5.83%) are living in private housing estate and 5 of the other (4.85%) are living in aged hostel. Only one respondent (0.97%) is living in nursing home. With regards to the household composition, nearly seventy percent of the respondents are living with both their spouse and children (n=71; 68.93%), and only 11 respondents (10.68%) are living alone. Another 11 respondents (10.68%) are living with their spouse only and 6 of the other (5.83%) are living with their children only. (see Appendix I)

Employment status and main source of income of respondents

Seventy-one respondents (68.93%) are retired, while nearly 20% (n=19; 18.45%) are still working, either in a full-time, part-time or temporary job. Thirteen respondents (12.62%) are still searching for jobs. Since most of the respondents are retired, 69 respondents (66.99%) reported that their main source of income comes from their children and 14 respondents (13.59%) reported that their major financial support comes from the government (e.g. CSSA). 14 respondents (13.59%) reported that they depend on their own salaries for financial support; while 6 (5.83%) depend on

their own savings. Of the 103 respondents, 25 (24.27%) reported to have financial difficulties in daily living. Sixty-seven respondents (65.05%) have enough money and only 11 respondents (10.68%) consider that they have more than enough. (see Appendix I)

Summary

The present section has described the demographic and socio-economic information of the respondents. Nearly half of the respondents are under age 65, and it is expected that they work to support themselves since they are not fell into the normal retirement-age (65+) group. However, due to the present Hong Kong economic recession, most of them are forced to retire or unemployed. These respondents have to depend on external sources such as from their children and from the government for financial support. However, most of these respondents reported that financial support from these external resources was barely enough. Since the onset of current economic recession, and the government is suffering from a huge financial deficit, financial dependency of the elderly not only exerts pressure to their children and the government; but negatively affect elders' psychological well-being as well. Besides the financial support, psychological support seems to be one of the most important components in healthy aging. Psychological support from close relatives and friends can help to make the elderly lead a better life. As most of the respondents are living with at least one close relative such as spouse or child, their psychological well being is expected to be better than those who are living alone.

LIFE EVENTS AND LIFE EVENTS SCORES OF RESPONDENTS

Life events happened on respondents

Table 1 shows that more than seventy percent of the respondents have had injury or illnesses in the past six months (n=78; 75.73%). The second most frequent life event that happened to respondents was “Change in living condition” but there is only less than half compare with the item “Injury/Illnesses” (n=30; 29.13%). The most stressful life event, “Death of spouse”, happened to 3 respondents (2.91%) in the past six months. Nearly 20 percent of the respondents reported that their financial status has changed for the worse (n=18; 17.48%).

Table 1. Life Events Happened on Respondents

Life events	N *	%	Corresponding Score
Injuries / Illnesses	78	75.73	53
Change in living condition	30	29.13	25
Injury / Illnesses of family members	22	21.36	44
Change in financial status	18	17.48	38
Retirement	11	10.68	45
Change in personal habits	11	10.68	24
Death of close family members / siblings	7	6.80	63
Son / Daughter unemployed	7	6.80	47
Spouse starts a new job / stops working	7	6.80	26
Change in leisure activities	5	4.85	19
Death of spouse	3	2.91	100
Gain of new family members	2	1.94	39

* Due to multiple answers, frequencies are noted instead of head counts.

Life events scores of respondents

Table 2 reveals that 66.02% of the respondents (n=68) have scores under 100, which means they have very low stress level². 31.07% of the respondents (n=32) have scores between 100 to 199, which mean they have typical stress level³. Only 3 respondents (2.91%) have moderately high stress level⁴; while no one has very high stress level⁵.

Table 2. Life Events Scores of Respondents

Score ^a	N	%
Under 100	68	66.02
100 – 199	32	31.07
200 – 299	3	2.91
300 or above	0	0.00
Total	103	100.00

Mean = 84.66 S.D. = 55.50

^a Under 100 = Very low stress level; 100-199 = Typical stress level;
200-299 = Moderately high stress level; 300 or above = Very high stress level

Source: Iowa State University Public Homepage Server
(<http://www.public.iastate.edu/~ce503/chaptwo.ppt>)

Summary

The present section has described the life events that have happened to respondents and also their corresponding scores. Male respondents have a lower average of

² A score below 100 indicates a slight chance of developing a major illness in the next two years as a result of stress.

³ A score between 100 to 199 indicates a 30% chance of developing a major illness in the next two years as a result of stress.

⁴ A score between 200 to 299 indicates a 50% chance of developing a major illness in the next two years as a result of stress.

⁵ A score 300 or more indicates a 80% chance of developing a major illness in the next two years as a result of stress.

number of life events (1.83 life events) than female respondents (2.08 life events). One possible explanation for this trend is that there is a gender-specific recall bias which could be theoretically significant. It may imply that females are more likely than males to recall life events, because such events have a more significant impact on their lives. This result confirms previous research indicating greater vulnerability of females than males to life event stress (Kessler, Price, & Wortman, 1985; Krause, 1986). They are also consistent with earlier studies attributing this gender difference to females' greater involvement in and, consequently, awareness of life events within their social networks. Injury or chronic illnesses are common among the respondents. Most of the aging people may have a perception that injury and chronic illnesses are part of their normal life. Such a perception in the aged group helps to ease the stress level at a certain level comparatively. Most respondents in this study reported that they are suffering from injury or illnesses in the past six months. The second most frequent life event that happened to respondents is change in living condition. Theoretically, changes may lead to increase in stress level, especially change that is perceived as negative. It is reasonable that given the present economic condition, one's lifestyle may change. Even though current financial situation may be fine, some respondents are taking actions to reduce their living expenditure to save more money. The current economic recession has negatively impacted "dependent family members", in particular the aged. Respondents reported that their financial status has declined. Recent retirement and decrease in the main income from the others were cited as the main reasons. Death of spouse and death of close family members/siblings are rarely been found in the sample. A few respondents reported a recent lost of spouses and close family members/siblings. However, since the negative effect of

bereavement is long-lasting, the influence of such event cannot be ignored.

The average life events score of the respondents is 84.66, which is low. This means that they may have low stress level due to the occurrence of life events. Since most of the respondents have no or very few life events happened on them in the past six months, and also the corresponding scores of the life events happened on them are comparatively low, the respondents seem to be less affected by this factor. However, to be worthy of mention, more than 30 percent of the respondents are at typical stress level which means those respondents have a 30 percent chance of developing a major illness in the next two years as a result of stress. Moreover, without any further attention, such a stress level can become worse and many problems may appear.

HEALTH STATUS OF RESPONDENTS

Self-rated health status of respondents

Most of the respondents reported that their health status is fair to good. Thirty-five respondents (33.98%) and 36 respondents (34.95%) reported that their health is fair and good respectively. Only 12 respondents (11.65%) thought that their health is poor. At the other pole, 20 respondents (19.42%) rated their health status as very good. Sixteen male respondents (30.77%) and 19 female respondents (37.25%) reported that the health is fair while 16 male respondents (30.77%) and 20 female respondents (39.22%) reported that their health is good. Only 3 respondents (6.00%) who are aged between 60 and 64 years old reported that their health is poor but around 17% of the respondents in the 65-69 age group (n=5; 17.24%) and the 70+ age group (n=4; 16.67%) reported that their health is poor. On the contrary, 14

respondents (28.00%) in the 60-64 age group reported that their health is very good but only 2 respondents (6.90%) in the 65-69 age group and 4 respondents (16.66%) in the 70+ age group evaluated their health as very good. (see Table 3)

Table 3. Subjective Health Status of Respondents (GH1)

Health status	<u>Whole sample</u>	<u>Male</u>	<u>Female</u>	<u>60-64</u>	<u>65-69</u>	<u>70+</u>
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
Poor	12 (11.65)	8 (15.38)	4 (7.84)	3 (6.00)	5 (17.24)	4 (16.67)
Fair	35 (33.98)	16 (30.77)	19 (37.25)	15 (30.00)	10 (34.48)	10 (41.67)
Good	36 (34.95)	16 (30.77)	20 (39.22)	18 (36.00)	12 (41.38)	6 (25.00)
Very good	20 (19.42)	12 (23.08)	8 (15.69)	14 (28.00)	2 (6.90)	4 (16.66)
Total	103 (100.00)	52 (100.00)	51 (100.00)	50 (100.00)	29 (100.00)	24 (100.00)

Table 4 shows the perception of the respondents towards their own health status. Generally speaking, most of the respondents have a positive attitude towards their health status. (see Table 4)

Table 4. Self Perceived Health of Respondents

	N	%
<i>I seem to get sick a little easier than other people. (GH2)</i>		
Definite false	47	45.63
Mostly false	17	16.51
Don't know	26	25.24
Mostly true	9	8.74
Definitely true	4	3.88
<i>I am as healthy as anybody I know. (GH3)</i>		
Definite false	2	1.94
Mostly false	7	6.80
Don't know	20	19.41
Mostly true	67	65.05
Definitely true	7	6.80
<i>I expect my health to get worse. (GH4)</i>		
Definite false	0	0.00
Mostly false	56	54.37
Don't know	5	4.86
Mostly true	38	36.89
Definitely true	4	3.88
<i>My health is excellent. (GH5)</i>		
Definite false	22	21.36
Mostly false	25	24.27
Don't know	0	0.00
Mostly true	56	54.37
Definitely true	0	0.00

Prevalence of chronic illnesses

Table 5 shows the prevalence of various chronic medical conditions among respondents. The most prevalent medical condition was hypertension which accounted for 35.92% of elderly studied. Rheumatism was the second most common condition (26.21%) affecting people under study and the third was visual and hearing deteriorations (24.27%). (see Table 5)

Table 5. Prevalence of Chronic Illness

Diagnosed disease	N *	%
Hypertension	37	35.92
Rheumatism	27	26.21
Other ^{##}	25	24.27
Chronic bronchitis	12	11.65
Coronary artery disease	11	10.68
Diabetes	10	9.71
Gastric ailment	6	5.83
Fracture	3	2.91
Chronic hepatitis	3	2.91
Osteoporosis	3	2.91
Stroke	2	1.94
Kidney ailment	2	1.94

Mean = 1.37 S.D. = 1.05

* Due to multiple answers, frequencies are noted instead of head counts.

^{##} The respondents reported that they have eyesight and hearing deteriorations.

Summary

The present section has examined the health status of the respondents. The result

shows that generally the respondents showed fair to good assessment on their subjective health status. With regards to the self-perceived health status, respondents showed an optimistic view on their resistance/susceptibility to illness (GH2) and also their prior health (GH3). However, the future health status (GH4) and present health status (GH5) of the respondents showed two poles of answer. Around half of the respondents thought that their health will not get worse while the others thought they will; around half of them thought that their health is excellent while the others thought they are not. It might be because there are differences on education level, life-style, and self-concept among elderly persons. It is expected that higher educated, healthy life-style, and/or more extrovert elderly persons may perceived their health and future health as better than the other elderly persons who have opposite characteristics. The most prevalent medical condition was hypertension which accounted for 35.92% (n=37) of the respondents. Rheumatism was the second most common condition (n=27; 26.21%) affecting people under the study. Other chronic illnesses such as eyesight and hearing deteriorations were also found quite common in the study (n=25; 24.27%).

Age-associated change in subjective health is very small in the study. A number of conditions support the notion that subjective health declines in old age. For example, the accumulation of chronic conditions and diseases increases in frailty, and also the increase in chronic illness and disability may promote a raised preoccupation with body sensations. Although there is an age-associated change in subjective health, it is modest. It may be due to several reasons. First, self-perceived health does not only depend on objective health conditions but also on subjective criteria of evaluating one's health. For example, comparing oneself with age peers in similar or even worse health may contribute to stable, positive health ratings despite

age-associated growing deterioration of objective health. Second, older people may attribute part of their physical problems to old age rather than health problems. Therefore in this case, the age-associated increase in health problems may not be associated with a decrease in positive health perceptions. Third, older people may compensate for some health problems (e.g. by using glasses or hearing aids) so that some deteriorations in health may lose their significance in the perception of subjective health.

SELF-ESTEEM OF RESPONDENTS

Self-esteem level of respondents

Table 6 shows that none of the respondents has low self-esteem level. More than half of the respondents (n=59; 57.28%) have medium level of self-esteem, and 44 respondents (42.72%) have high level of self-esteem. However, there appears to be gender difference on self-esteem. Generally, male respondents showed more positive view on their self-esteem than female respondents. Nineteen male respondents (36.54%) have medium self-esteem level and the rest 33 male respondents (63.46%) have high self-esteem level, while 40 female respondents (78.43%) have medium self-esteem level and the rest 11 female respondents (21.57%) have high self-esteem level. The result also shows that self-esteem level decreased with age. In the 60-64 age group, 31 respondents (62.00%) have high self-esteem level and 19 respondents (38.00%) have medium self-esteem level. On the contrary, medium self-esteem level is common in both 65-69 age group and 70+ age group. 23 respondents (79.31%) in the 65-69 age group and 17 respondents (70.83%) in the 70+ age group have medium self-esteem level, while only 6 respondents (20.69%) in

the 65-69 age group and 7 respondents (29.17%) in the 70+ age group have high self-esteem level. (see Table 6)

Table 6. Self-Esteem of Respondents

Self-esteem level *	<u>Whole sample</u>	<u>Male</u>	<u>Female</u>	<u>60-64</u>	<u>65-69</u>	<u>70+</u>
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
Low	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
Medium	59 (57.28)	19 (36.54)	40 (78.43)	19 (38.00)	23 (79.31)	17 (70.83)
High	44 (42.72)	33 (63.46)	11 (21.57)	31 (62.00)	6 (20.69)	7 (29.17)
Total	103 (100.00)	52 (100.00)	51 (100.00)	50 (100.00)	29 (100.00)	24 (100.00)

* Those who have got 10 – 13 marks belong to low self-esteem level; 14 – 27 marks belong to medium self-esteem level; and 28 – 40 marks belong to high self-esteem level.

Summary

The present section described the self-esteem level of respondents. The result shows that generally the respondents showed a positive sense of personal worth. Over 70 percent of female respondents have medium self-esteem level while only 30 some percent of male respondents has the same level. There are many reasons to explain why the female respondents' self-esteem level more negative compared with male respondents. First, females' disadvantage with regard to health resources occurs because their morbidity rates are higher and because females tend to require more care in later life than males. Second, older females have, on average, lower material resources due to inequity experienced at an early age. As a result of gender segregation in the labor market and females' less stable employment histories, they are less likely to be covered by pensions. Even though they have pensions, on average they have the fewer than males. Females tend to become more financially

dependent with the others than males.

The result also shows that the self-esteem level is better in the 60-64 age group than the 65 or above age groups. Self-esteem level among elderly has been affected by a lack of person control and insufficient social support. As the age increases, the problems seem to be more serious. Those elderly persons who experience deteriorating health that reduces their degree of personal control over their lives, or lack the communication skills to build and maintain an adequate network for social support, appear to be especially at risk for experiencing lower self-esteem. Therefore, the self-esteem level of older persons may be lower than the younger ones.

LOCUS OF CONTROL OF RESPONDENTS

General perception on locus of control of respondents

Table 7 shows the general perception on locus of control of the respondents. More than half of the respondents (N = 59; 57.28%) thought that God/fate controls their life or things that happen on them. Nearly 40 percent of the respondents (N = 41; 39.81%) said that they have the ability and power to control their life or things that happen on them. 40.38% male respondents (n=21) thought that God/fate controls their life or things that happen on them but 74.51% female respondents (n=38) have the same thought. More than half of male respondents (n=29; 55.77%) thought that they have the ability to control their life but only twenty some percent of female respondents (n=12; 23.53%) have the same thought. (see Table 7)

Table 7. General Perception on Locus of Control of Respondents

Locus of control	<u>Whole sample</u>	<u>Male</u>	<u>Female</u>	<u>60-64</u>	<u>65-69</u>	<u>70+</u>
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
Self	41 (39.81)	29 (55.77)	12 (23.53)	27 (54.00)	8 (27.59)	6 (25.00)
God / Fate	59 (57.28)	21 (40.38)	38 (74.51)	22 (44.00)	19 (65.52)	18 (75.00)
Don't know	3 (2.91)	2 (3.85)	1 (1.96)	1 (2.00)	2 (6.89)	0 (0.00)
Total	103 (100.00)	52 (100.00)	51 (100.00)	50 (100.00)	29 (100.00)	24 (100.00)

Internality of respondents

Table 8 shows the degree of internality of the respondents. The scores of the Chinese Locus of Control Scale range from 8 (highest internality) to 32 (lowest internality). The respondents obtained a score between 8 and 16 belong to the group of high internality; 17 and 24 belong to the group of medium internality; and 25 and 32 belong to the group of low internality. Most of the respondents belong to medium internality (N = 77; 74.76%) and the numbers of respondents belong to high internality and low internality are the same (N = 13; 12.62%). The mean score is 20.14 and the standard deviation is 3.36. More than 20 percent of male respondents (n=11; 21.15%) have high internality while only around 4 percent of female respondents have high internality. Most of the respondents in the 60-64 age group have medium to high internality (n=48; 96.00%). However, in the 65-69 age group and 70+ age group, respondents tend to have lower internality. 93.1% (n=27) and 95.83% (n=23) of the respondents in 65-69 age group and 70+ age group respectively showed that they have low to medium internality. (see Table 8)

Table 8. Internality of Respondents

Internality	<u>Whole sample</u>	<u>Male</u>	<u>Female</u>	<u>60-64</u>	<u>65-69</u>	<u>70+</u>
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
High	13 (12.62)	11 (21.15)	2 (3.92)	10 (20.00)	2 (6.90)	1 (4.17)
Medium	77 (74.76)	37 (71.15)	40 (78.43)	38 (76.00)	24 (82.76)	15 (62.50)
Low	13 (12.62)	4 (7.70)	9 (17.65)	2 (4.00)	3 (10.34)	8 (33.33)
Total	103 (100.00)	52 (100.00)	51 (100.00)	50 (100.00)	29 (100.00)	24 (100.00)

Summary

The present section described the locus of control of the respondents. Generally, more than half of the respondents tend to think that God/fate controls their life. Researches suggested that education level and health status are the two main factors that largely responsible for the diminishing feelings of control (e.g. Folkman, Lazarus, Gruen, & DeLongis, 1986; Sandler, & Lakey, 1982; Weigel, Wertlieb, & Feldstein, 1989; Zautra, Reich, & Newsom, 1995). Education is thought to bolster feelings of control over the life course because people with more schooling tend to have better problem-solving abilities, as well as access to more resources. In this study, since male respondents generally have a bit higher educational level than the female respondents, male respondents tend to have greater sense of control than female respondents. However, the majority still fell into the category of medium internality since around 70% of the respondents have no education background. Generally the result means that most of the respondents have a fair belief that outcomes are contingent on relatively stable personal characteristics and they are more likely to form social networks, are more effective in coping with stress, have a generally appraise life events more optimistically. In the 60-64 age group, more respondents have higher internality than those in the 65-69 age group and the 70+

age group. It might be that diminishing health and increasing impairments associated with aging may contribute to the decline in feelings of personal control by progressively reducing the range of activities in which one can exercise control. In addition, the decline in feelings of control across older age groups may be a manifestation of the current cohort of older adults having less schooling, on average, than the younger counterparts.

COPING STRATEGIES OF RESPONDENTS

Coping USE and HELP of respondents

Table 9 shows the coping USE and Table 10 shows the coping HELP reported by the respondents. Table 9 reveals that most of the respondents tend to use positive coping strategies to solve their problems, such as “Considered several alternatives for handling the problem. (Mean = 1.91; S.D. = 0.35)”, and “Discussed the problem with my relatives. (Mean = 1.95; S.D. = 0.22)”. On the other hand, they rarely use avoidance and emotional coping strategies to solve their problems, such as “Asked for compassion of the people around me. (Mean = 3.07; S.D. = 0.77)”, “Avoided talking with my spouse about the problem. (Mean = 3.42; S.D. = 0.50)”, and “Got busy with other things to keep my mind off the problem. (Mean = 3.44; S.D. = 0.59)”. Male respondents tended to use more problem-focused coping, such as more male respondents chose “use it a lot” for the item “Tried to step back from the situation and to be more objective” than female counterparts (Male: n=29, 55.77%; Female: n=0, 0.00%); more male respondents chose “use it a lot” for the item “Talked with professional person about the problem” than female counterparts (Male: n=29, 55.77%; Female: n=5, 9.80%). In addition, Male respondents tended to use more

positive appraisal coping than female respondents. All the male respondents (n=52; 100.00%) chose “use it a lot” for the item “Tried to look at the positive side of the situation” but only 47.06% of the female respondents (n=24) have the same answer; 75% of male respondents (n=39) chose “use it a lot” for the item “Encouraged myself by reminding myself that there are people who are worse off than I” but only 31.37% of the female respondents (n=16) have the same answer. On the contrary, female respondents tended to use more emotional or avoidance coping strategies when they are in trouble than the male counterparts. 72.55% of the female respondents (n=37) use the strategy “Got busy with other things to keep my mind off the problem” while more than 78% of male respondents (n=41; 78.85%) have never use it before; 78.43% of female respondents (n=40) use the strategy “Avoided talking with spouse about the problem” while 61.54% of male respondents (n=32) have never use it before. Female respondents also tended to use more frequent emotional coping strategies than male respondents. For example, 88.24% of female respondents (n=45) would cry when they have problems while all the male respondents (n=52; 100.00%) reported that they rarely cry when they are in trouble. (see Table 9)

Table 9. Coping USE of Respondents

	<u>Whole sample</u>			<u>Male</u>	<u>Female</u>
	N (%)	Mean	S.D.	N (%)	N (%)
<i>1. Considered several alternatives for handling the problem.</i>					
Use it every time	11 (10.68)			10 (19.23)	1 (1.96)
Use it a lot	90 (87.38)			41 (78.85)	49 (96.08)
Use it rarely	2 (1.94)			1 (1.92)	1 (1.96)
Never use it	0 (0.00)	1.91	0.35	0 (0.00)	0 (0.00)
<i>2. Went over the situation in my mind to try to understand it.</i>					
Use it every time	2 (1.94)			2 (3.85)	0 (0.00)
Use it a lot	28 (27.19)			11 (21.15)	17 (33.33)
Use it rarely	73 (70.87)			39 (75.00)	34 (66.67)
Never use it	0 (0.00)	2.69	0.51	0 (0.00)	0 (0.00)
<i>3. Tried to step back from the situation and to be more objective.</i>					
Use it every time	0 (0.00)			0 (0.00)	0 (0.00)
Use it a lot	29 (28.16)			29 (55.77)	0 (0.00)
Use it rarely	73 (70.87)			22 (42.31)	51 (100.00)
Never use it	1 (0.97)	2.73	0.47	1 (1.92)	0 (0.00)
<i>4. Talked with professional person about the problem.</i>					
Use it every time	0 (0.00)			0 (0.00)	0 (0.00)
Use it a lot	34 (33.01)			29 (55.77)	5 (9.80)
Use it rarely	56 (54.37)			22 (42.31)	34 (66.67)
Never use it	13 (12.62)	2.80	0.65	1 (1.92)	12 (23.53)
<i>5. Got busy with other things to keep my mind off the problem.</i>					
Use it every time	0 (0.00)			0 (0.00)	0 (0.00)
Use it a lot	5 (4.86)			0 (0.00)	5 (9.80)
Use it rarely	48 (46.60)			11 (21.15)	37 (72.55)
Never use it	50 (48.54)	3.44	0.59	41 (78.85)	9 (17.65)
<i>6. Avoided talking with my spouse about the problem.</i>					
Use it every time	0 (0.00)			0 (0.00)	0 (0.00)
Use it a lot	0 (0.00)			0 (0.00)	0 (0.00)
Use it rarely	60 (58.25)			20 (38.46)	40 (78.43)
Never use it	43 (41.75)	3.42	0.50	32 (61.54)	11 (21.57)

Continue Table 9

<i>7. Tried to look at the positive side of the situation.</i>					
Use it every time	0 (0.00)			0 (0.00)	0 (0.00)
Use it a lot	76 (73.79)			52 (100.00)	24 (47.06)
Use it rarely	27 (26.21)			0 (0.00)	27 (52.94)
Never use it	0 (0.00)	2.26	0.44	0 (0.00)	0 (0.00)
<i>8. Encouraged myself by reminding myself that there are people who are worse off than I.</i>					
Use it every time	0 (0.00)			0 (0.00)	0 (0.00)
Use it a lot	55 (53.40)			39 (75.00)	16 (31.37)
Use it rarely	47 (45.63)			12 (23.08)	35 (68.63)
Never use it	1 (0.97)	2.48	0.52	1 (1.92)	0 (0.00)
<i>9. I cried.</i>					
Use it every time	0 (0.00)			0 (0.00)	0 (0.00)
Use it a lot	45 (43.69)			0 (0.00)	45 (88.24)
Use it rarely	58 (56.31)			52 (100.00)	6 (11.76)
Never use it	0 (0.00)	2.56	0.50	0 (0.00)	0 (0.00)
<i>10. Asked for compassion of the people around me.</i>					
Use it every time	0 (0.00)			0 (0.00)	0 (0.00)
Use it a lot	27 (26.21)			0 (0.00)	27 (52.94)
Use it rarely	42 (40.78)			18 (34.62)	24 (47.06)
Never use it	34 (33.01)	3.07	0.77	34 (65.38)	0 (0.00)
<i>11. Took it out on other people.</i>					
Use it every time	0 (0.00)			0 (0.00)	0 (0.00)
Use it a lot	17 (16.50)			0 (0.00)	17 (33.33)
Use it rarely	86 (83.50)			52 (100.00)	34 (66.67)
Never use it	0 (0.00)	2.83	0.37	0 (0.00)	0 (0.00)
<i>12. Discussed the problem with my relatives.</i>					
Use it every time	5 (4.85)			0 (0.00)	5 (9.80)
Use it a lot	98 (95.15)			52 (100.00)	46 (90.20)
Use it rarely	0 (0.00)			0 (0.00)	0 (0.00)
Never use it	0 (0.00)	1.95	0.22	0 (0.00)	0 (0.00)
<i>13. Discussed the problem with my friends.</i>					
Use it every time	0 (0.00)			0 (0.00)	0 (0.00)
Use it a lot	57 (55.34)			45 (86.54)	12 (23.53)
Use it rarely	46 (44.66)			7 (13.46)	39 (76.47)
Never use it	0 (0.00)	2.45	0.50	0 (0.00)	0 (0.00)

Table 10 reveals how respondents rate the effectiveness of the coping strategies to deal with problems. The results are quite similar to their coping behaviors. Most of the respondents thought that “Considered several alternatives for handling the problem. (Mean = 1.95; S.D. = 0.22)” and “Discussed the problem with my relatives. (Mean = 1.93; S.D. = 0.25)” are the most effective ways to solve problems. Avoidance coping strategies “Got busy with other things to keep my mind off the problem. (Mean = 3.50; S.D. = 0.59)” and “Avoided talking with my spouse about the problem. (Mean = 3.33; S.D. = 0.47)” are perceived to be the less effective or even perceived to have counter-effect on the problem-solving. There are some gender differences have been found in each of the effectiveness of coping strategies. For example, 92.31% male respondents (n=48) evaluated the strategies “Tried to step back from the situation and to be more objective” as an effective strategy but 56.86% female respondents (n=29) evaluated the same strategy as an effective one; 94.23% male respondents (n=49) evaluated the strategy “Talked with professional person about the problem” as an effective strategy but only 43.14% female respondents (n=22) evaluated the same strategy as an effective one. The same phenomenon is found in the strategies of positive appraisal. All the male respondents (n=52; 100.00%) evaluated the strategy “Tried to look at the positive side of the situation” as an effective strategy but only 47.06% female respondents (n=24) evaluated the same strategy as an effective one. On the other hand, female respondents tended to evaluate avoidance and emotional discharge more effective than the male respondents did. For example, 52.94% female respondents evaluated the strategy “Asked for compassion of the people around me” as an effective strategy while all the male respondents evaluated the same strategy as an ineffective strategy. (see Table 10)

Table 10. Coping HELP of Respondents

	N (%)	Mean	S.D.	Male	Female
<i>1. Considered several alternatives for handling the problem.</i>					
Very effective	5 (4.85)			5 (9.62)	0 (0.00)
Effective	98 (95.15)			47 (90.38)	51 (100.00)
No effect	0 (0.00)			0 (0.00)	0 (0.00)
Counter-effect	0 (0.00)	1.95	0.22	0 (0.00)	0 (0.00)
<i>2. Went over the situation in my mind to try to understand it.</i>					
Very effective	0 (0.00)			0 (0.00)	0 (0.00)
Effective	95 (92.23)			49 (94.23)	46 (90.20)
No effect	8 (7.77)			3 (5.77)	5 (9.80)
Counter-effect	0 (0.00)	2.08	0.27	0 (0.00)	0 (0.00)
<i>3. Tried to step back from the situation and to be more objective.</i>					
Very effective	0 (0.00)			0 (0.00)	0 (0.00)
Effective	77 (74.76)			48 (92.31)	29 (56.86)
No effect	26 (25.24)			4 (7.69)	22 (43.14)
Counter-effect	0 (0.00)	2.25	0.44	0 (0.00)	0 (0.00)
<i>4. Talked with professional person about the problem.</i>					
Very effective	0 (0.00)			0 (0.00)	0 (0.00)
Effective	71 (68.93)			49 (94.23)	22 (43.14)
No effect	32 (31.07)			3 (5.77)	29 (56.86)
Counter-effect	0 (0.00)	2.31	0.47	0 (0.00)	0 (0.00)
<i>5. Got busy with other things to keep my mind off the problem.</i>					
Very effective	0 (0.00)			0 (0.00)	0 (0.00)
Effective	5 (4.86)			0 (0.00)	5 (9.80)
No effect	41 (39.81)			4 (7.69)	37 (72.55)
Counter-effect	57 (55.34)	3.50	0.59	48 (92.31)	9 (17.65)
<i>6. Avoided talking with my spouse about the problem.</i>					
Very effective	0 (0.00)			0 (0.00)	0 (0.00)
Effective	0 (0.00)			0 (0.00)	0 (0.00)
No effect	69 (66.99)			30 (57.69)	39 (76.47)
Counter-effect	34 (33.01)	3.33	0.47	22 (42.31)	12 (23.53)
<i>7. Tried to look at the positive side of the situation.</i>					
Very effective	0 (0.00)			0 (0.00)	0 (0.00)
Effective	76 (73.79)			52 (100.00)	24 (47.06)
No effect	27 (26.21)			0 (0.00)	27 (52.94)
Counter-effect	0 (0.00)	2.26	0.44	0 (0.00)	0 (0.00)

Continue Table 10

8. *Encouraged myself by reminding myself that there are people who are worse off than I.*

Very effective	0 (0.00)			0 (0.00)	0 (0.00)
Effective	52 (50.49)			36 (69.23)	16 (31.37)
No effect	50 (48.54)			15 (28.85)	35 (68.63)
Counter-effect	1 (0.97)	2.50	0.52	1 (1.92)	0 (0.00)

9. *I cried.*

Very effective	0 (0.00)			0 (0.00)	0 (0.00)
Effective	25 (24.27)			1 (1.92)	24 (47.06)
No effect	78 (75.73)			51 (98.08)	27 (52.94)
Counter-effect	0 (0.00)	2.76	0.43	0 (0.00)	0 (0.00)

10. *Asked for compassion of the people around me.*

Very effective	0 (0.00)			0 (0.00)	0 (0.00)
Effective	27 (26.21)			0 (0.00)	27 (52.94)
No effect	76 (40.78)			52 (100.00)	24 (47.06)
Counter-effect	0 (0.00)	2.74	0.44	0 (0.00)	0 (0.00)

11. *Took it out on other people.*

Very effective	0 (0.00)			0 (0.00)	0 (0.00)
Effective	17 (16.50)			0 (0.00)	17 (33.33)
No effect	78 (75.73)			44 (84.62)	34 (66.67)
Counter-effect	8 (7.77)	2.91	0.49	8 (15.38)	0 (0.00)

12. *Discussed the problem with my relatives.*

Very effective	7 (6.80)			2 (3.85)	5 (9.80)
Effective	96 (93.20)			50 (96.15)	46 (90.20)
No effect	0 (0.00)			0 (0.00)	0 (0.00)
Counter-effect	0 (0.00)	1.93	0.25	0 (0.00)	0 (0.00)

13. *Discussed the problem with my friends.*

Very effective	0 (0.00)			0 (0.00)	0 (0.00)
Effective	79 (76.70)			47 (90.38)	32 (62.75)
No effect	24 (23.30)			5 (9.62)	19 (37.25)
Counter-effect	0 (0.00)	2.23	0.42	0 (0.00)	0 (0.00)

Summary

The present section presents the coping USE, HELP and their effectiveness as

evaluated by the respondents. In general, respondents tend to use more positive coping strategies to solve their problems. However, the use of those coping strategies is not quite frequent. In addition, the decrease in the number of social roles may result in fewer stressful events in later life. Therefore, they do not need to tackle stressful events so frequent. Gender differences in use of coping strategies have been found in the study. In general, it is suggested that females appear to favor social support, emotion-focused, and avoidance coping strategies relative to males, whereas, males appear to favor stress release through other activities relative to females. It might be that females tend to have a larger informal support network, and it can be then hypothesized that females would be more likely to make use of coping strategies involve social support more often than males. Furthermore, traditional gender role stereotypes suggest that males are socialized to emphasize instrumental behavior and to suppress emotions and are thus more likely to use problem-focused coping. In contrast, females are socialized to express emotion and seek social support and may therefore rely more on emotion-focused strategies.

With regards to coping effectiveness, female respondents thought that being more objective to problems did not help to solve them so much, whereas male respondents thought that emotion-focused coping strategies did not help to solve the problem. With regards to the avoidance coping strategies, most of the male respondents thought that not only these coping strategies could not help to solve the problems but also have some counter-effect on the problems. Although most of the female respondents thought that avoidance coping strategies were not quite effective to solve the problems, they still use them frequent. It might because females are likely have fewer resources on coping than males. Under the circumstances that when females are lack of coping resources, what they can do might be only cry or escapism.

PSYCHOLOGICAL WELL BEING OF RESPONDENTS

Positive affect of respondents

Table 11 shows respondents' positive affect. Most of the respondents expressed that they rarely have thoughts of the listed items which represent positive affect. The means of the items ranged from 2.60 to 2.97 and the standard deviations ranged from 0.26 to 0.49. Small gender differences have been found in the data. For example, 84.31% female respondents (n=43) reported that they rarely have the thought of "interested" while half of the male respondents (n=26; 50.00%) reported that they often have that thought; nearly 90% of the male respondents (n=45; 88.24%) reported that they rarely have curiosity while more than 50% male respondents (n=27; 51.92%) reported that they often have such thought. (see Table 11)

Table 11. Positive affect of Respondents

	<u>Whole sample</u>			<u>Male</u>	<u>Female</u>
	N (%)	Mean	S.D.	N (%)	N (%)
<i>1. Energetic.</i>					
Very frequently	0 (0.00)			0 (0.00)	0 (0.00)
Often	41 (39.81)			30 (57.69)	11 (21.57)
Rarely	62 (60.19)			22 (42.31)	40 (78.43)
Never	0 (0.00)	2.60	0.49	0 (0.00)	0 (0.00)
<i>2. Interested.</i>					
Very frequently	0 (0.00)			0 (0.00)	0 (0.00)
Often	33 (32.04)			26 (50.00)	7 (13.73)
Rarely	69 (66.99)			26 (50.00)	43 (84.31)
Never	1 (0.97)	2.69	0.49	0 (0.00)	1 (1.96)
<i>3. Personal pride in something.</i>					
Very frequently	0 (0.00)			0 (0.00)	0 (0.00)
Often	5 (4.85)			4 (7.69)	1 (1.96)
Rarely	96 (93.21)			47 (90.39)	49 (96.08)
Never	2 (1.94)	2.97	0.26	1 (1.92)	1 (1.96)

Continue Table 11

<i>4. Elated.</i>					
Very frequently	0 (0.00)			0 (0.00)	0 (0.00)
Often	21 (20.39)			13 (25.00)	8 (15.69)
Rarely	81 (78.64)			38 (73.08)	43 (84.31)
Never	1 (0.97)	2.81	0.42	1 (1.92)	0 (0.00)
<i>5. Curious.</i>					
Very frequently	0 (0.00)			0 (0.00)	0 (0.00)
Often	33 (32.04)			27 (51.92)	6 (11.76)
Rarely	70 (67.96)			25 (48.08)	45 (88.24)
Never	0 (0.00)	2.68	0.47	0 (0.00)	0 (0.00)
<i>6. Alert.</i>					
Very frequently	0 (0.00)			0 (0.00)	0 (0.00)
Often	28 (27.18)			15 (28.85)	13 (25.49)
Rarely	75 (72.82)			37 (71.15)	38 (74.51)
Never	0 (0.00)	2.73	0.45	0 (0.00)	0 (0.00)
<i>7. Aroused.</i>					
Very frequently	0 (0.00)			0 (0.00)	0 (0.00)
Often	16 (15.53)			10 (19.23)	6 (11.76)
Rarely	86 (83.50)			41 (78.85)	45 (88.24)
Never	1 (0.97)	2.85	0.38	1 (1.92)	0 (0.00)
<i>8. Enthusiastic.</i>					
Very frequently	0 (0.00)			0 (0.00)	0 (0.00)
Often	29 (28.16)			18 (34.62)	11 (21.57)
Rarely	74 (71.84)			34 (65.38)	40 (78.43)
Never	0 (0.00)	2.72	0.45	0 (0.00)	0 (0.00)
<i>9. Warmhearted.</i>					
Very frequently	0 (0.00)			0 (0.00)	0 (0.00)
Often	39 (37.86)			27 (51.92)	12 (23.53)
Rarely	64 (62.14)			25 (48.08)	39 (76.47)
Never	0 (0.00)	2.62	0.49	0 (0.00)	0 (0.00)

Depression of respondents

Table 12 shows the frequencies of respondents' depression symptoms. Most of the

respondents reported that they rarely have depression symptoms. The means ranged from 2.90 to 3.67 and the standard deviations ranged from 0.50 to 0.75. There is no sharp gender difference in depression in the data. (see Table 12)

Table 12. Depression of Respondents

	<u>Whole sample</u>			<u>Male</u>	<u>Female</u>
	N (%)	Mean	S.D.	N (%)	N (%)
<i>1. Depressed.</i>					
Very frequently	0 (0.00)			0 (0.00)	0 (0.00)
Often	2 (1.94)			2 (3.84)	0 (0.00)
Rarely	30 (29.13)			12 (23.08)	18 (35.29)
Never	71 (68.93)	3.67	0.51	38 (73.08)	33 (64.71)
<i>2. Worried.</i>					
Very frequently	0 (0.00)			0 (0.00)	0 (0.00)
Often	12 (11.65)			5 (9.62)	7 (13.73)
Rarely	59 (57.28)			33 (63.46)	26 (50.98)
Never	32 (31.07)	3.19	0.63	14 (26.92)	18 (35.29)
<i>3. Sad.</i>					
Very frequently	0 (0.00)			0 (0.00)	0 (0.00)
Often	18 (17.47)			7 (13.46)	11 (21.57)
Rarely	77 (74.76)			43 (82.69)	34 (66.67)
Never	8 (7.77)	2.90	0.50	2 (3.85)	6 (11.76)
<i>4. Blue.</i>					
Very frequently	0 (0.00)			0 (0.00)	0 (0.00)
Often	4 (3.88)			3 (5.77)	1 (1.96)
Rarely	29 (28.16)			11 (21.15)	18 (35.29)
Never	70 (67.96)	3.64	0.56	38 (73.08)	32 (62.75)
<i>5. Lonely.</i>					
Very frequently	3 (2.91)			2 (3.84)	1 (1.96)
Often	11 (10.68)			5 (9.62)	6 (11.76)
Rarely	51 (49.52)			20 (38.46)	31 (60.78)
Never	38 (36.89)	3.20	0.75	25 (48.08)	13 (25.50)

Summary

The present section described the positive affect and frequency of depression of respondents. Generally, the respondents in the study showed a low level of positive affect and depression. Myers and Diener (1995) stated that older adults actually tend to report higher levels of life satisfaction than younger adults. By contrast, young adults typically report higher levels of positive affect and negative affect than older adults. This indicates that younger adults experience greater emotional turmoil that is both pleasurable and stressful. For old adults it is quite the opposite, as they report fairly high levels of life satisfaction but can appear emotional flat (see Diener 1984; Myers and Diener 1995; Stacey and Gatz 1991). These results have generally been explained as resulting from the fact that young and old adults are in different stages in life, rather than being of different age. This means that there are different demands and rewards in different life stages, but also that experiences and events of a lifetime are influencing affectivity. Myers and Diener (1995) also stated that a general finding on old samples is that positive affect is strongly related to extroversion but not to neuroticism. Studies on older adults have shown that old people are less extroverted than people who are young. This makes a possible decrease in social contacts in older adults and lower the positive affect in the aged cohort.

Although respondents reported low depression, caution should be taken since many previous studies stated depression among older persons are usually underestimated. Vulnerable individuals may expose themselves to life circumstances and generate stressful events that promote depression. Therefore, vulnerability to depression is mediate by stressful life events. Moreover, vulnerable individuals may be more

prone to develop depression when exposed to stressful life events than persons with lower vulnerability, so that vulnerability enhances the impact of stressful life events in contributing to depression. However, as state in the previous sections, the respondents in the study have fewer life events happened on them and also they evaluated their health status quite positive, their depression level might be affected by those factors, and therefore they have lower depression level.

GENDER DIFFERENCES AMONG KEY VARIABLES

Table 13 shows the gender differences of the study variables. The results reveal that gender differences were found in self-esteem ($t = 4.72$; $p \leq 0.001$), internality ($t = -3.74$; $p \leq 0.001$), problem-focused coping USE ($t = -8.10$; $p \leq 0.001$), avoidance coping USE ($t = 7.94$; $p \leq 0.001$), positive appraisal coping USE ($t = -2.90$; $p = 0.005$), emotional discharge coping USE ($t = 21.15$; $p \leq 0.001$), problem-focused coping HELP ($t = -5.25$; $p \leq 0.001$), avoidance coping HELP ($t = 7.72$; $p \leq 0.001$), positive appraisal coping HELP ($t = -3.79$; $p \leq 0.001$), emotional discharge coping HELP ($t = 13.81$; $p \leq 0.001$), avoidance coping effectiveness ($t = 2.11$; $p = 0.037$), positive appraisal coping effectiveness ($t = 2.10$; $p = 0.038$), emotional discharge coping effectiveness ($t = -2.12$; $p = 0.036$), and positive affect ($t = -3.11$; $p = 0.002$).

Table 13. Gender differences of study variables

Variable	<u>Male (N=52)</u>		<u>Female (N=51)</u>		<i>t</i> -value
	Mean	S.D.	Mean	S.D.	
Life event	78.64	57.21	90.80	53.56	-1.12
Self-perceived health	13.73	3.63	13.39	3.58	0.48
Self-esteem	28.42	3.17	24.84	4.44	4.72***
Internality	18.98	3.51	21.31	2.77	-3.74***
Problem-focused coping USE	2.27	0.21	2.58	0.18	-8.10***
Avoidance coping USE	3.42	0.18	2.92	0.42	7.94***
Positive appraisal coping USE	2.45	0.32	2.65	0.36	-2.90**
Emotional discharge coping USE	3.22	0.16	2.42	0.22	21.15***
Problem-focused coping HELP	2.00	0.15	2.15	1.34	-5.25***
Avoidance coping HELP	3.62	0.23	2.99	0.53	7.72***
Positive appraisal coping HELP	2.39	0.29	2.64	0.36	-3.79***
Emotional discharge coping HELP	3.04	0.11	2.56	0.23	13.81***
Problem-focused coping effectiveness	0.83	0.37	0.75	0.25	1.29
Avoidance coping effectiveness	0.52	0.36	0.38	0.34	2.11*
Positive appraisal coping effectiveness	0.16	0.25	0.08	0.11	2.10*
Emotional discharge coping effectiveness	0.50	0.24	0.60	0.24	-2.12*
Positive affect	23.79	3.05	25.57	2.75	-3.11**
Depression	16.75	2.57	16.47	2.47	0.56
* $p \leq 0.05$ ** $p \leq 0.01$ *** $p \leq 0.001$					

Summary

Male respondents tended to have higher self-esteem level than female respondents in

the study and therefore the Hypothesis 1⁶ is accepted. There are several reasons why older females' self-esteem level more negative compared with males. Previous research has shown that social integration, good health, and a high socioeconomic status are important predictors of self-esteem in old age (Pinquart & Sorenson, 2000). First, females' disadvantage with regard to health resources occurs because their morbidity rates are higher (Jette, 1996) and because females tend to require more care in later life than males (Hobbs & Damon, 1996). Second, older females have, on average, lower material resources due to inequity experienced at an earlier age. As a result of gender segregation in the labour market and females' less stable employment histories, females are less likely to be covered by pensions (Golombok & Fivush, 1994). They are more likely to live in poverty than older males, especially in very old age. Furthermore, with increasing age, females are considered less attractive and are therefore less valued, whereas males may gain social prestige with age. This, in turn, may lead to lower self-esteem in older females.

With regards to the internality of the respondents, male respondents tend to be more internal than female respondents and therefore the Hypothesis 2⁷ is accepted. It may due to the social stereotype that males are seen to be more independent and powerful, whereas an underlying notion may still exist that females are inferior, particularly in intelligence, to males and more dependent upon others. Traditionally, males are the dominant decision makers in families and they usually get the supreme power in controlling family affairs, whereas females are in a passive position. These stereotypes may lead to differences on internality between males and females – i.e. males are more internality than females.

⁶ Hypothesis 1: Males' self-esteem level is higher than females'.

⁷ Hypothesis 2: Males' locus of control is more internal than females'.

There are gender differences in the use of coping strategies among the respondents. Male respondents tend to use more problem-focused coping and positive appraisal coping strategies than female respondents. On the contrary, female respondents tend to use more avoidance coping and emotional discharge coping strategies than male counterparts. Gender differences in coping may reflect socialization differences in which males are expected to be more independent, instrumental, and ambitious, whereas females are expected to be emotional, supportive, and dependent, as reflected in traditional gender-role orientations (Ptacek, Smith, & Dodge, 1994).

With regards to coping effectiveness, male respondents evaluate avoidance coping and positive appraisal coping as less effective than female respondents, whereas, surprisingly, they evaluate emotional discharge coping as more effective than the female respondents did. There is no gender difference in problem-focused coping effectiveness. Both male and female respondents evaluate problem-focused coping as less effectiveness. It may be due to the fact that elderly persons may lack social resources or they do not know where and how to seek for advice compare with the younger persons.

Finally, gender difference of positive affect is also found between the two sexes. Male respondents tend to have more frequent of the occurrence of signs of positive affect than female respondents and therefore the Hypothesis 3⁸ is accepted. It may be due to the gender differences that were found in the present study on self-esteem level, self-perceived health, internality, and so forth. However, gender difference of depression has not been found in the study. The earlier literature review suggested that gender differences in the prevalence of depressive symptoms stem from gender differences in risk factors. Conversely, the lack of gender differences in depressive

⁸ Hypothesis 3: Males have higher level of positive affect than females.

symptoms may be attributable to similarities by gender in the predictors of depressive symptoms. In other words, to the extent that there are no gender differences in the level of depressive symptomatology, there should be few or no gender differences in social roles, sources of stress, physical health, and socioeconomic status (Feinson, 1987; Gibson, 1988; Radloff & Rae, 1981). In the present study, since no gender difference on depression was found, the Hypothesis 4⁹ is rejected.

CORRELATIONS BETWEEN KEY VARIABLES

Age and study variables

Table 14 shows that there are correlations between age and several main variables in the present study. First, age is significantly correlated with self-perceived health ($r = -0.43$; $p \leq 0.001$). The negative correlation represents that the older the respondent, the worse the health condition perceived. Second, age is significantly correlated with self-esteem ($r = -0.36$; $p \leq 0.001$). The negative correlation represents that the older the respondent, the lower the self-esteem level. Third, age is significantly correlated with internality ($r = 0.51$; $p \leq 0.001$). The positive correlation represents that the older the respondent, the lower the internality level (i.e. more externality). Fourth, age is significantly correlated with the use of problem-focused coping ($r = 0.20$; $p = 0.05$) and age is also significantly correlated with the use of emotional discharge coping ($r = -0.23$; $p = 0.02$). The results represent that the older the respondent, the less frequent the use of problem-focused

⁹ Hypothesis 4: Males are less depressed than females.

coping, and the more frequent the use of emotional discharge coping. Since the age differences are only found in problem-focused coping USE and emotional discharge coping USE and not found in positive appraisal coping USE and avoidance coping USE. Finally, age is significantly correlated with positive affect ($r = 0.32$; $p = 0.001$) and also significantly correlated with depression ($r = -0.23$; $p = 0.02$). The results represent that the older the respondent, the less frequent the signs of positive affect he/she has, and the more frequent the symptoms of depression he/she will suffer. (see Table 14)

Life events and psychological well-being

Table 14 shows that there is no significant correlation has been found between life events and positive affect ($r = 0.18$; $p = 0.07$). The Hypothesis 5a¹⁰, therefore, is rejected. In general, positive affect has been found to correlate with the frequent of pleasant events, whereas negative affect appears to be related to unpleasant events. In the present study, most of the life events in the checklist were unpleasant ones, so it is not strange that there is no significant correlation between life events and positive affect. In addition, as Silver (1982) stated that personality is likely to have long-term effects on positive affect; whereas the effects of life events on positive affect may be more short term. However, relationships may be found if some moderators or mediators are taken into consideration. The analyses of the moderating and mediating effects of variables are presented later in this report.

There is a significant correlation between life events and depression ($r = -0.29$; $p = 0.003$). The negative correlation represents that the more frequent life events occurred, the more frequent the symptoms of depression respondents will suffer.

¹⁰ Hypothesis 5a: Life events are positively correlated with positive affect.

Therefore the Hypothesis 5b¹¹ is accepted. (see Table 14)

Self-perceived health and psychological well-being

Table 14 shows that there is a correlation between Self-perceived health and psychological well-being. Self-perceived health is significantly correlated with positive affect ($r = -0.41$; $p \leq 0.001$). The negative correlation represents that the worse the subjective health a respondent perceived, the less frequent the signs of positive affect he/she has. Therefore, the Hypothesis 6a¹² is accepted. Self-perceived health is also significantly correlated with depression ($r = 0.52$; $p \leq 0.001$). The positive correlation represents that the worse the subject health a respondent perceived, the more frequent the symptoms of depression he/she suffered. The Hypothesis 6b¹³, therefore, is accepted. (see Table 14)

Self-esteem and psychological well-being

Table 14 shows that there is a correlation between self-esteem and psychological well-being. Self-esteem is significantly correlated with positive affect ($r = -0.74$; $p \leq 0.001$). The negative correlation represents that the lower the self-esteem level of a respondent, the less frequent the signs of positive affect. Thus, Hypothesis 7a¹⁴ is accepted. Self-esteem is also significantly correlated with depression ($r = 0.48$; $p \leq 0.001$). The positive correlation represents that the lower the self-esteem level of a respondent, the more frequent the symptoms of depression he/she suffered.

¹¹ Hypothesis 5b: Life events are negatively correlated with depression.

¹² Hypothesis 6a: The worse an individual's self-perceived health, the less frequent the signs of positive affect.

¹³ Hypothesis 6b: The worse an individual's self-perceived health, the more frequent the symptoms of depression.

¹⁴ Hypothesis 7a: The lower an individual's self-esteem level, the less frequent the signs of positive affect.

Therefore, the Hypothesis 7b¹⁵ is also accepted. (see Table 14)

Internality and psychological well-being

Table 14 shows that there is a correlation between internality and psychological well-being. Internality is significantly correlated with positive affect ($r = 0.54$; $p \leq 0.001$). The positive correlation represents that the higher the level of internality of respondent, the more frequent the signs of positive affect. Therefore, Hypothesis 8a¹⁶ is accepted. Internality is significantly correlated with depression ($r = -0.36$; $p \leq 0.001$). The negative correlation represents that the higher the level of internality of respondent, the less frequent the symptoms of depression. Thus, Hypothesis 8b¹⁷ is also accepted. (see Table 14)

Coping USE and psychological well-being

Table 14 shows that there is a correlations have been found between some coping USE scales and psychological well-being. Positive appraisal coping USE is significantly correlated with positive affect ($r = 0.48$; $p \leq 0.001$). The positive correlation represents that the more frequent the use of positive appraisal coping, the more frequent the signs of positive affect. However, since problem-focused coping USE is not significantly correlated with positive affect, Hypothesis 9a¹⁸ is only partially supported. Avoidance coping USE and emotional discharge coping USE are significantly correlated with positive affect (avoidance coping: $r = -0.38$;

¹⁵ Hypothesis 7b: The lower an individual's self-esteem level, the more frequent the symptoms of depression.

¹⁶ Hypothesis 8a: The more an individual internalize the locus of control, the more frequent the signs of positive affect.

¹⁷ Hypothesis 8b: The more an individual internalize the locus of control, the less frequent the symptoms of depression.

¹⁸ Hypothesis 9a: Problem-focused coping strategies (i.e. problem-focused coping and positive appraisal coping) are positively correlated with positive affect.

$p \leq 0.001$; emotional discharge: $r = -0.42$; $p \leq 0.001$). The negative correlations represent that the more frequent the use of avoidance coping or emotional discharge coping, the less frequent the signs of positive affect he/she has. Therefore, Hypothesis 9b¹⁹ is accepted.

Among the four types of coping USE scales, only positive appraisal coping USE is significantly correlated with depression ($r = -0.36$; $p \leq 0.001$). The negative correlation represents that the more frequent the use of positive appraisal coping, the less frequent the symptoms of depression. Thus, Hypothesis 10a²⁰ is partially accepted but the Hypothesis 10b²¹ is not supported. (see Table 14)

Coping HELP and psychological well-being

Table 14 shows that there is a correlation between all coping HELP scales and psychological well-being. Problem-focused coping HELP and positive appraisal coping HELP are strongly significantly correlated with positive affect (problem-focused coping HELP: $r = 0.48$; $p \leq 0.001$; positive appraisal coping HELP: $r = 0.56$; $p \leq 0.001$). The positive correlations represent that the better respondent evaluates the helpfulness of problem-focused coping and/or positive appraisal coping, the more frequent the signs of positive affect. Therefore, Hypothesis 11²² is accepted. On the other hand, avoidance coping HELP and emotional discharge coping HELP are strongly significantly correlated with positive affect (avoidance

¹⁹ Hypothesis 9b: Emotion-focused coping strategies (i.e. avoidance coping and emotional discharge coping) are negatively correlated with positive affect.

²⁰ Hypothesis 10a: Problem-focused coping strategies (i.e. problem-focused coping and positive appraisal coping) are negatively correlated with depression.

²¹ Hypothesis 10b: Emotion-focused coping strategies (i.e. avoidance coping and emotional discharge coping) are positively correlated with depression.

²² Hypothesis 11: The better an individual evaluates the helpfulness of problem-focused coping strategies (i.e. problem-focused coping and positive appraisal coping), the more frequent the signs of positive affect.

coping HELP: $r = -0.62$; $p \leq 0.001$; emotional discharge coping HELP: $r = -0.54$; $p \leq 0.001$). The negative correlations represent that even though the respondents evaluate the avoidance and/or emotional discharge coping is/are helpful for coping with stress, their positive affect is reduced.

Correlations between coping HELP scales and depression have also been found in the present study. Problem-focused coping HELP and positive appraisal coping HELP are significantly correlated with depression (problem-focused coping HELP: $r = -0.38$; $p \leq 0.001$; positive appraisal coping HELP: $r = -0.38$; $p \leq 0.001$). The negative correlations represent that the better respondent evaluates the helpfulness of problem-focused coping and/or positive appraisal coping, the less frequent the symptoms of depression. Therefore, Hypothesis 12²³ is accepted. On the other hand, avoidance coping HELP and emotional discharge coping HELP are positively significantly correlated with depression (avoidance coping HELP: $r = 0.34$; $p \leq 0.001$; emotional discharge coping HELP: $r = 0.23$; $p \leq 0.05$). The positive correlations represent that even though the respondents evaluate the avoidance and/or emotional discharge coping is/are helpful for coping with stress, their depression symptoms are still frequent. It might be because other stressors which are not studied in this study are present and affect the respondents' depression level. (see Table 14)

Coping effectiveness and psychological well-being

Table 14 shows that there is a correlation between two categories of coping effectiveness and psychological well-being. The two categories of coping effectiveness are the problem-focused coping effectiveness and the avoidance coping

²³ Hypothesis 12: The better an individual evaluates the helpfulness of problem-focused coping strategies (i.e. problem-focused coping and positive appraisal coping), the less frequent the symptoms of depression.

effectiveness. Problem-focused coping effectiveness is significantly correlated with positive affect ($r = -0.25$; $p = 0.01$) and also significantly correlated with depression ($r = 0.21$; $p = 0.04$). The negative correlation between problem-focused coping effectiveness and positive affect represents that the more effective of problem-focused coping a respondent evaluated, the more frequent the signs of positive affect. On the other hand, the positive correlation between problem-focused coping effectiveness and depression represents that the more effective of problem-focused coping a respondent perceived, the less frequent the symptoms of depression.

Avoidance effectiveness is significantly correlated with positive affect ($r = -0.58$; $p \leq 0.001$) and also significantly correlated with depression ($r = 0.34$; $p \leq 0.001$). The negative correlation between avoidance effectiveness and positive affect represents that the more effective the avoidance coping a respondent perceived, the more frequent the signs of positive affect. The positive correlation between avoidance coping effectiveness and depression represents that the more effective of avoidance coping a respondent evaluated, the less frequent the symptoms of depression. (see Table 14)

Since only problem-focused coping effectiveness and avoidance coping effectiveness are correlated with positive affect and depression, Hypotheses 13a²⁴ and 13b²⁵ are partially supported.

²⁴ Hypothesis 13a: The more the effectiveness of coping strategies, the more frequent the signs of positive affect.

²⁵ Hypothesis 13b: The more the effectiveness of coping strategies, the less frequent the symptoms of depression.

Summary

The results of the present study reveal that older respondents have poorer self-perceived health than the younger counterparts. A number of conditions support the notion that subjective health declines in old age. First, several studies have shown that the prevalence of numerous health problems and frailty increases in old age (Jette, 1996; Kramarow, Lentzner, Rooks, Weeks, & Saydah, 1999). Old age is characterized by multimorbidity, the accumulation of chronic conditions and diseases (Steinhagen-Thiessen & Borchelt, 1999). Second, the increase in the number of chronic conditions is associated with an age-associated increase in frailty (Hobbs & Damon, 1996). Third, the increase in chronic illness and disability may promote a raised preoccupation with body sensations. Accordingly, Leventhal and Prohaska (1986) have speculated that the incidence of hypochondria and overestimation of poor health would be high among older persons.

Although, in general, the self-esteem levels of respondents were quite high, the results of the study reveal that as age increases, respondents' self-esteem level decreases. Changes in roles, activities, and lifestyles that can occur with ageing may cause the older persons to re-evaluate their self-esteem. Many older persons, especially those suffering from illnesses, may feel less important as they feel more dependent on others. This combination can be especially hard on a person's self-esteem. In addition, most people may feel some loss of control over physical and sensory functions, such as appearance, reaction times, and senses, as they age and lead to lower self-esteem level.

There is a pervasive perception that locus of control is generally less internally oriented among older persons as a group than among younger persons (Cornelius &

Caspi, 1986; Lachman, 1991). This view may stem from the perception of older persons' greater reliance on others, or it may simply reflect a self-fulfilling stereotype that older people are "helpless" as well as "old".

With regards to coping strategies, age may have an indirect effect on coping strategies through the increase in health problems associated with ageing. As one ages, there are changes in types of problems experienced (Aldwin, 1990). The elderly are more likely to be coping with both their own health problems and those of significant others, especially spouses and loved ones. As Folkman and Lazarus (1985) have pointed out, both health and loss problems are more likely to evoke palliative or emotional focus coping than instrumental action. Moreover, age effects can also be understood in terms of cohort differences. There may be historical characteristics of the present population of older persons that affect their choice of coping strategies. For example, it may be that the lower levels of education in the present aged cohort, compared to younger ones, may predispose them to less active forms of mastery, given the positive association between education and internality.

A number of influences on affectivity have been investigated, showing different correlations for positive affect and negative affect. A general finding on both young and old samples is that positive affect is strongly related to extroversion but not to neuroticism, and that negative affect is substantially correlated with measures of neuroticism but not with extroversion (Costa & McCrae, 1980; Diener, 1984; Eysenck, 1990; Watson & Clark, 1994). Studies on older adults have shown that old people are less extroverted and neurotic than younger people, paralleling the age-group differences in positive affect and negative affect (Argyle, 1987). In

addition, most of the researches have found that life event is one of the major factors that affect affectivity. Although there is some evidence that older people experience fewer negative life events than younger people (Henderson, Byrne, & Duncan-Jones, 1981), it has been shown, for both young and old, that positive affect is associated with favourable events and that negative affect is influenced by adverse events (Diener, 1984; Headey & Wearing, 1992). There is also considerable evidence that positive affect is positively related to social contacts in both young and old people (Bradburn, 1969; Clark & Watson, 1988; McIntyre, Watson, & Cunningham, 1990), despite research indicating that older people have smaller social networks than younger people (Headey & Wearing, 1992). The reason for the possible decrease in social contacts in older people may be that they are less extroverted but also that they have lost family and friends. Furthermore, studies have indicated that health status and functional ability are important for well-being in young, old, and very old adults (Bowling, 1990; Clark & Watson, 1988). Specifically, negative affect, rather than positive affect, has been found to be associated with poor health in old adults.

According to research done by Lawton, Kleban and Dean (1993), age differences in positive affect and depression have been found significantly. Comparatively, as noted by Myers and Diener (1995), younger adults typically report higher levels of positive affect than older adults. It may be because younger adults experience greater emotional turmoil that is stressful. The result has generally been explained as resulting from the fact that young and old adults are in different stages in life, rather than being of different age. Since researches suggest that positive affect is strongly related to extroversion (Costa & McCrae, 1980; Diener, 1984; Eysenk, 1990; Watson & Clark, 1994) and the fact that older persons have comparatively smaller social networks which lead to less extroverted, decrease in positive affect may appear

within them. Another factor may lead to decrease in positive affect is the subjective economic status of the respondents. As they perceived their subjective economic status is poor, they may have lower self-esteem level, less power to control the things they are facing, and so forth, that these feelings may lower the positive affect.

Just like many previous researches, the present study, which symptom scales is used to assess depression of samples, reveals a pattern of increasing depression with age (e.g. Gurland, Wilder, & Berkman, 1988; Murrell, Himmelfarb, & Wright, 1983; Newmann, Engel, & Jensen, 1991). Late life is often seen as a time of great, often uncontrollable, stress (Rodin, 1986). Older people are often coping with chronic illness and disability, the loss of friends and family members, and their own impending mortality. Older people are less able to adapt to physiological stress and are more vulnerable to infection, if old people cannot accept the limitations imposed by the ageing process, or lack the needed resource to tackle the problems, depression will be generated. Moreover, since a history of depressive illness is predictive of depression at a later time in life (Horwath, Johnson, Klerman, & Weissman, 1992), real increases in younger cohorts could set the stage for higher rates of depression of these cohorts as they age (Klerman, Lavori, Rice, Reich, Endicott, Andreasen, Keller, & Hirschfield, 1985).

Table 14. Correlations between study variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1. Gender	-----																				
2. Age	.17	-----																			
3. Subjective economic status	-.05	-.25**	-----																		
4. Life events	.11	Neg.	-.01	-----																	
5. Self-perceived health	-.05	-.43***	-.36***	Neg.	-----																
6. Self-esteem	-.43***	-.36***	-.29**	-.18	.53***	-----															
7. Internality	.35***	.51***	.15	.10	-.45***	-.55***	-----														
8. Problem-focused coping USE	.63***	.20*	-.12	.05	.01	-.26**	.22*	-----													
9. Avoidance coping USE	-.62***	-.06	.03	-.10	.02	.53***	-.26**	-.74***	-----												
10. Positive appraisal coping USE	.28**	.19	.10	.03	-.38***	-.57***	.38***	.40***	-.71***	-----											
11. Emotional discharge coping USE	-.90***	-.23*	-.02	-.14	.11	.58***	-.37***	-.67***	.69***	-.34***	-----										
12. Problem-focused coping HELP	.46***	.28**	.04	.22*	-.17	-.41***	.30**	.46***	-.30**	.22*	-.57***	-----									
13. Avoidance coping HELP	-.61***	-.17	-.06	-.15	.20*	.73***	-.43***	-.56***	.91***	-.80***	.68***	-.41***	-----								
14. Positive appraisal coping HELP	.35***	.23*	.12	.06	-.36***	-.65***	.47***	.41***	-.70***	.94***	-.42***	.31**	-.84***	-----							
15. Emotional discharge coping HELP	-.81***	-.26**	-.01	-.14	.18	.67***	-.50***	-.61***	.76***	-.49***	.87***	-.44***	.83***	-.62***	-----						
16. Problem-focused coping effectiveness	-.13	-.05	.11	-.18	.03	.19	-.21*	-.19	.26**	-.12	.11	-.32***	.36***	-.26**	.33***	-----					
17. Avoidance coping effectiveness	-.21*	-.05	Neg.	-.15	.12	.50***	-.30**	Neg.	.46***	-.55***	.20*	-.24*	.72***	-.60***	.46***	.56***	-----				
18. Positive appraisal coping effectiveness	-.20*	-.09	Neg.	-.04	-.13	.10	-.19	.02	-.13	.36***	.20*	-.12	-.03	.01	.32***	.28**	-.02	-----			
19. Emotional discharge coping effectiveness	.21*	-.06	.10	.09	-.02	-.11	-.14	.01	-.09	.02	-.27**	.26**	-.07	-.17	.11	.21*	-.02	.53***	-----		
20. Positive affect	.30**	.32***	.21*	.18	-.41***	-.74***	.54***	.14	-.38***	.48***	-.42***	.48***	-.62***	.56***	-.54***	-.25**	-.58***	-.11	.05	-----	
21. Depression	-.06	-.23*	-.32***	-.29**	.52***	.48***	-.36***	-.04	.16	-.36***	.14	-.38***	.34***	-.38***	.23*	.21*	.34***	-.06	-.03	-.49***	-----

* $p \leq 0.05$ ** $p \leq 0.01$ *** $p \leq 0.001$

Neg. = Pearson's Correlation Coefficient is less than 0.01

INTERVENING EFFECTS (MODERATION) OF MAIN VARIABLES ON THE RELATIONSHIP BETWEEN LIFE EVENTS AND PSYCHOLOGICAL WELL BEING

The intervening effect (moderation) of self-esteem on the relationship between life events and psychological well being

Table 15 shows that even after the variance attributable to the demographic variables is accounted for, score for the self-esteem was significantly related to those for positive affect ($\beta = -0.66$, $p \leq 0.001$) and score for the life events was significantly related to those for depression ($\beta = -0.25$, $p \leq 0.01$). The life events X self-esteem interaction entered at the final step explained a significant incremental portion of variance in positive affect and depression, total $R^2 = 0.58$, $\Delta R^2 = 0.01$, $p \leq 0.001$ and $R^2 = 0.43$, $\Delta R^2 = 0.02$, $p \leq 0.001$ respectively, beyond the variance contributed by the main effects of the demographic variables, life events and self-esteem (see Table 15). Therefore, Hypotheses 14a²⁶ and 14b²⁷ are supported. Although this increment in R^2 reflects a very small amount of variance, it is within the range for moderator effects typically found in nonexperimental studies (Champoux & Peters, 1987).

²⁶ Hypothesis 14a: Self-esteem serves as a moderator on the relationship between life events and positive affect.

²⁷ Hypothesis 14b: Self-esteem serves as a moderator on the relationship between life events and depression.

Table 15. The intervening effect (moderation) of self-esteem on the relationship between life events and psychological well being

Variable	Positive Affect			Depression		
	β	SE B	t	β	SE B	t
<u>Model 1</u>						
Gender	0.28	0.49	3.37***	-0.05	0.42	-0.55
Age	0.15	0.06	1.58	-0.12	0.05	-1.20
Subjective economic status	0.08	0.40	0.73	-0.16	0.34	-1.55
General health status	-0.43	0.34	-4.17***	0.44	0.29	4.16***
	$R^2=0.37$			$R^2=0.33$		
	$F(4,98)=14.20***$			$F(4,98)=11.95***$		
<u>Model 2</u>						
Life events	0.05	0.01	0.78	-0.25	0.01	-3.07**
Self-esteem	-0.66	0.07	-6.40***	0.18	0.07	1.46
	$R^2=0.57$		$\Delta R^2=0.20$	$R^2=0.41$		$\Delta R^2=0.08$
	$F(6,96)=20.96***$			$F(6,96)=11.12***$		
<u>Model 3</u>						
Life events X Self-esteem	0.83	0.001	1.77	1.01	0.001	1.84
	$R^2=0.58$		$\Delta R^2=0.01$	$R^2=0.43$		$\Delta R^2=0.02$
	$F(7,95)=18.80***$			$F(7,95)=10.26***$		
* $p \leq 0.05$ ** $p \leq 0.01$ *** $p \leq 0.001$						

The intervening effect (moderation) of locus of control on the relationship between life events and psychological well being

Table 16 shows that even after the variance attributable to the demographic variables is accounted for, score for the locus of control was significantly related to those for positive affect ($\beta=0.27$, $p \leq 0.05$) and score for the life events was significantly related to those for depression ($\beta=-0.26$, $p \leq 0.001$). The life events X locus of control interaction entered at the final step explained a significant incremental portion of variance in positive affect, total $R^2=0.45$, $\Delta R^2=0.03$, $p \leq 0.001$, beyond the variance contributed by the main effects of the demographic variables, life events and self-esteem (see Table 16). Therefore,

Hypothesis 15a²⁸ is supported. However, there is no change in incremental portion of variance in depression has been found in the final step of the hierarchical regression. Thus, Hypothesis 15b²⁹ is not supported.

Table 16. The intervening effect (moderation) of locus of control on the relationship between life events and psychological well being

Variable	Positive Affect			Depression		
	β	SE B	t	β	SE B	t
<u>Model 1</u>						
Gender	0.28	0.49	3.37***	-0.05	0.42	-0.55
Age	0.15	0.06	1.58	-0.12	0.05	-1.20
Subjective economic status	0.08	0.40	0.73	-0.16	0.34	-1.55
General health status	-0.43	0.34	-4.17***	0.44	0.29	4.16***
	$R^2=0.37$			$R^2=0.33$		
	$F(4,98)=14.20***$			$F(4,98)=11.95***$		
<u>Model 2</u>						
Life events	0.11	0.01	1.42	-0.26	0.01	-3.28***
Locus of control	0.27	0.10	2.50*	-0.06	0.08	-0.56
	$R^2=0.42$		$\Delta R^2=0.05$	$R^2=0.40$		$\Delta R^2=0.07$
	$F(6,96)=11.58***$			$F(6,96)=10.62***$		
<u>Model 3</u>						
Life events X Locus of control	-1.12	0.001	-2.20*	0.08	0.001	0.14
	$R^2=0.45$		$\Delta R^2=0.03$	$R^2=0.40$		$\Delta R^2=Nil.$
	$F(7,95)=11.02***$			$F(7,95)=9.01***$		
* $p \leq 0.05$ ** $p \leq 0.01$ *** $p \leq 0.001$						

²⁸ Hypothesis 15a: Internality (internal locus of control) serves as a moderator on the relationship between life events and positive affect.

²⁹ Hypothesis 15b: Internality (internal locus of control) serves as a moderator on the relationship between life events and depression.

The intervening effect (moderation) of Coping USE and Effectiveness on the relationship between life events and positive affect

To examine the moderating effects of coping USE and coping effectiveness on positive affect, eight hierarchical three-step regression analyses were performed. In the first step, the demographic variables were introduced, in the second step the life event scores and coping USE or coping effectiveness score were entered and, finally, the interaction term was added. Table 17 presents only the second and third steps of the analyses since the first step is common (Gender: $\beta=0.28$, $t=3.37$, $p=0.001$; Age: $\beta=0.15$, $t=1.58$, $p=0.118$; Subjective economic status: $\beta=0.07$, $t=0.73$, $p=0.467$; Subjective health status (GH1): $\beta=-0.43$, $t=-4.17$, $p=0.0001$) to all the analyses. The table shows that the application of coping USE scales did not yield any moderating effects. Thus, Hypothesis 16a³⁰ is not supported. In the case of the coping effectiveness scales, moderating effect was obtained only for avoidance scales, therefore Hypothesis 17a³¹ is only partially supported.

Table 17. The intervening effect (moderation) of Coping USE and Effectiveness on the relationship between life events and positive affect

	<u>Problem-focused</u>		<u>Avoidance</u>		<u>Positive appraisal</u>		<u>Emotional discharge</u>	
	β	t	β	t	β	t	β	t
<i>Coping USE</i>								
Effect	0.01	0.07	-0.29	-2.91**	0.26	2.90**	-0.56	-2.98**
Interaction	-0.53	-0.65	0.11	0.17	-0.65	-1.12	0.05	0.11
<i>Coping effectiveness</i>								
Effect	-0.18	-2.18*	-0.46	-6.09***	-0.06	-0.74	-0.02	-0.23
Interaction	0.39	1.86	0.27	1.96*	0.07	0.47	0.17	0.65
* $p \leq 0.05$ ** $p \leq 0.01$ *** $p \leq 0.001$								

³⁰ Hypothesis 16a: There are significant moderating effects of coping on the relationship between life events and positive affect.

³¹ Hypothesis 17a: There are significant moderating effects of coping effectiveness on the relationship between life events and positive affect.

The intervening effect (moderation) of Coping USE and Effectiveness on the relationship between life events and depression

To examine the moderating effects of coping USE and coping effectiveness on depression, eight hierarchical three-step regression analyses were also performed. In the first step, the demographic variables were introduced, in the second step the life event scores and coping USE or coping effectiveness score were entered and, finally, the interaction term was added. Table 18 presents only the second and third steps of the analyses since the first step is common (Gender: $\beta = -0.05$, $t = -0.55$, $p = 0.586$; Age: $\beta = -0.12$, $t = -1.20$, $p = 0.232$; Subjective economic status: $\beta = -0.16$, $t = -1.55$, $p = 0.124$; Subjective health status (GH1): $\beta = 0.44$, $t = 4.16$, $p = 0.0001$) to all the analyses. The table shows that both the application of coping USE scales and coping effectiveness scales did not yield any moderating effects. Thus, both Hypotheses 16b³² and 17b³³ are rejected.

Table 18. The intervening effect (moderation) of Coping USE and Effectiveness on the relationship between life events and depression

	<u>Problem-focus</u>		<u>Avoidance</u>		<u>Positive appraisal</u>		<u>Emotional discharge</u>	
	β	t	β	t	β	t	β	t
<i>Coping USE</i>								
Effect	-0.12	-1.15	0.17	1.65	-0.18	-2.00*	0.10	0.54
Interaction	-0.54	-0.68	0.46	0.66	-0.62	-1.05	0.62	1.19
<i>Coping effectiveness</i>								
Effect	0.15	1.86	0.21	2.40*	-0.07	-0.90	0.01	0.13
Interaction	0.18	0.84	0.15	0.93	-0.16	-1.12	-0.43	-1.74

* $p \leq 0.05$ ** $p \leq 0.01$ *** $p \leq 0.001$

³² Hypothesis 16b: There are significant moderating effects of coping on the relationship between life events and depression.

³³ Hypothesis 17b: There are significant moderating effects of coping effectiveness on the relationship between life events and depression.

Summary

In a review of the role of psychosocial factors in well being, Barnett and Gotlib (1988) concluded that the lack of a well-anchored sense of self-worth creates a vulnerability or diathesis for depression. As they put it, "Depression is caused by the disruption or loss of a central source of self-worth among individuals who do not have satisfying alternative sources of self-esteem..." (p.119). In other words, aversive events may precipitate depressive symptoms, especially among individuals with fragile or vulnerable self-esteem. Data consistent with this assertion have been obtained in recent decade. For example, Butler, Hokanson and Flynn (1994) examine the relationships among self-esteem lability, stressful life events, and depression. According to Butler *et al.*, self-esteem is labile to the extent that everyday events predict changes in day-to-day self-esteem. Labile self-esteem was related to greater depression, particularly among individuals who experienced substantial major life stress. The present study shows that self-esteem moderated the impact of life events on well being. However, this finding on the interaction between stressors and self-esteem runs counter to that of Ensel and Lin (1991) who did not find any buffering effect for self-esteem in their analysis of three waves of longitudinal data. Their measure of stressful life events, however, is a summation of 118 items, excluding health-related and personal feelings events, a stress indicators that may have been too broad for a buffering effect to be found for any moderator variable. A positive self-esteem probably enhances the ability to cope emotionally with a loss by enabling the individual to focus on alternate identities or to use the loss to construct a more meaningful identity. In other words, individuals with positive self-esteem may suffer less depressive symptoms and/or may have better positive affect state.

However, the interaction terms contributed only a little to the explanation of positive affect and depression. The relatively small increase in variance of the model over the main effects model shows that direct rather than buffering effects are probably more important in explaining the impact of life events, self-esteem, positive affect and depression. Dean, Kolody, and Wood (1990) suggest the same interpretation for their failure to find a significant increase in variance associated with the addition of cross-product terms in a study that examined the interactions between three types of stressors (disability, life events, and financial strain) and support from spouse and friends. Although this raises the need to investigate other stress moderators, as well as the need to use definitions that are more precise in terms of the type of function that a buffering variable is supposed to provide, it may also be that a stressor is not buffered by one or two but rather by a number of moderators acting in concert to bolster individuals' coping abilities to deal with a stressor.

The ability and capacity to deal with the stresses and challenges encountered in life can be greatly affected by a person's feeling of control in life. Since locus of control involves an individual's perceptions regarding control over events in the future, it logically follows that the locus of control construct is directly related to one's coping abilities and efforts (Ganellen & Blaney, 1984). Those coping abilities and efforts, therefore, affect the individual's psychological well being. In addition, as Lefcourt (1982) points out, "evidence has been found that resourcefulness and resilience in the encounters with stressful experience reflect the beliefs held by individuals that they are responsible agents who are at least partially responsible for what befalls them" (p.102).

In the present study, locus of control (internality) shows a slight moderating effect on

the relationship of life events and psychological well being. Because previous research had indicated that internals were better able to find and make use of information than were externals (e.g. Sandler & Lakey, 1982), it is obvious that one's locus of control affects his or her psychological outcome. The findings in the present study reveal that even though a life event has happened on an individual, he or she may not has significant increase in depression or significant decrease in positive affect due to the present of differences in locus of control.

In considering the effects of coping USE and effectiveness in the model, the results show that each of the two types of indices of coping may reveal different patterns of effects on psychological well being. While coping effectiveness scales revealed stress moderating effects for positive affect, coping USE scales revealed main effects for both positive affect and depression. Moreover, only positive appraisal coping effectiveness scales produced negative effects on both positive affect and depression. That is, the more subjects perceived positive appraisal as an effective coping strategy, the less frequent the positive affect and depressive symptoms they have. In addition, even though the subjects perceived problem-focus coping and avoidance coping are effective coping strategies, they actually suffer from more depression and less positive affect. It is possible that these findings can be attributed to the fact that subjects were inclined to underestimate the extent of coping behaviours USE they perceived as clearly ineffective. Another possible is that subjects tended to "adjust" their perception of the extent to which the coping behaviour had been helpful to avoid reporting on the use of inappropriate coping behaviours. These tendencies may be especially evident when subjects have to rate concurrently both the extent of use as well as the helpfulness of each coping behaviour, something that may have the effect of forcing them to confront the inappropriateness of their behaviours. The

findings of the analyses employing coping USE scales are consistent with those of other researchers (e.g. Billing & Moos, 1984; McCrae & Costa, 1986) to the effect that individuals' use of emotion-focused coping strategies like emotional discharge are associated with a greater psychological distress. However, the present findings also indicate that, when employing coping effectiveness scales, even emotional discharge may be seen to have a positive effect on the individual's positive affect and also help to reduce the frequency of depressive symptoms. Moreover, when assuming that the use of emotion-focused coping strategies may have negative consequences because it may hinder the individual in effective problem-focused coping, it may be expected that problem-focused coping and emotion-focused coping strategies are negatively correlated. Indeed, the present study found a strongly negative correlation between the use of problem-focused coping and avoidance coping. However, in the case of coping effectiveness scales, all emotion-focused strategies were positively correlated with problem-focused coping. Thus, the application of coping effectiveness scores confirms Lazarus and his colleagues' (e.g. Lazarus & Folkman, 1984) suggestion that there is no *a priori* "right or wrong" coping pattern. As the effectiveness of the coping effort also depends on the individuals' perception that they are coping "correctly" with the stressful situation, and as it is not always possible to predict the subject's perception of the effectiveness of a given coping strategy, it is equally impossible to decide *a priori* that this strategy is "wrong".

INTERVENING EFFECTS (MEDIATION) OF COPING USE AND EFFECTIVENESS ON THE RELATIONSHIPS BETWEEN MAIN VARIABLES

It is hypothesized that coping USE and effectiveness may mediate the effects of life events on the psychological well being. To assess this mediational model, it is necessary that three conditions be met: (1) the independent variable of interest (e.g. life events) must be associated with the dependent variables (here, positive affect and depression), (2) the mediational variables (here, the four coping USE scales and four coping effectiveness scales) must be associated with the dependent variables, and (3) the independent variable must be associated with the mediational variables. The correlations reported previously indicate that the third of these assumptions was not met since life events score is not significantly correlated with all the coping USE and effectiveness scales; thus, these models were excluded from further analyses. And therefore, Hypotheses 18a³⁴, 18b³⁵, 19a³⁶ and 19b³⁷ are rejected. However, since there are significant correlations between self-esteem/locus of control and psychological well being, mediational analyses have been run in order to test whether any mediating effects of coping USE and effectiveness could be found in the relationships between self-esteem/locus of control and positive affect/depression. The results will be presented in the following.

³⁴ Hypothesis 18a: There are significant mediating effects on the relationship between life events and positive affect.

³⁵ Hypothesis 18b: There are significant mediating effects of coping on the relationship between life events and depression.

³⁶ Hypothesis 19a: There are significant mediating effects of coping effectiveness on the relationship between life events and positive affect.

³⁷ Hypothesis 19b: There are significant mediating effects of coping effectiveness on the relationship between life events and depression.

The intervening effects (mediation) of coping USE and effectiveness on the relationships between self-esteem and positive affect

Note. * $p \leq 0.05$ ** $p \leq 0.01$ *** $p \leq 0.001$

Figure 5. Summary of mediating regression analysis for positive affect including beta-weights, F values, and R^2 s for the model before coping USE and effectiveness are included (Reduced Model) and after the inclusion of the mediators (Full Model). The initial path between self-esteem and positive affect is indicated by the beta-weight on top of the line connecting these variables; whereas the beta-weight after coping USE and effectiveness are included as the mediators is indicated by the value directly under this path.

The overall F values were significant for all regression equations predicting positive affect and are reported with the R^2 in Figure 5. Step 1 in testing the mediator involved examining the relationship that self-esteem has with the various outcomes. The beta-weight for the relationship between self-esteem and positive affect is also illustrated in Figure 5. There is significant relationship between self-esteem and positive affect (beta-weight = -0.53, $p \leq 0.001$). However, in Step 2 when coping USE and effectiveness were entered into the model, the beta-weight of the self-esteem-positive affect relationship (beta-weight = -0.40, $p \leq 0.001$) showed a substantial decrease. That is, coping USE and effectiveness incompletely mediate the self-esteem-positive affect relationship. Self-esteem was significantly related to some types of coping USE or effectiveness scales: problem-focused USE (beta-weight = -0.02, $p \leq 0.01$), avoidance USE (beta-weight = 0.05, $p \leq 0.001$), positive appraisal USE (beta-weight = -0.05, $p \leq 0.001$), emotional discharge USE (beta-weight = 0.06, $p \leq 0.001$), and avoidance effectiveness (beta-weight = 0.04, $p \leq 0.001$). Also, not every coping USE or effectiveness scales were significantly related to positive affect. Only avoidance USE (beta-weight = 3.00, $p \leq 0.05$) and avoidance effectiveness (beta-weight = -3.73, $p \leq 0.001$) were significantly related to positive affect. The patterns of the results show that only partial mediating effect was supported since only avoidance USE and avoidance effectiveness showed significant mediating effect on the relationship between self-esteem and positive affect.

The intervening effects (mediation) of coping USE and effectiveness on the relationships between locus of control (internality) and positive affect

Figure 6. Summary of mediating regression analysis for positive affect including beta-weights, F values, and R^2 's for the model before coping USE and effectiveness are included (Reduced Model) and after the inclusion of the mediators (Full Model). The initial path between locus of control and positive affect is indicated by the beta-weight on top of the line connecting these variables; whereas the beta-weight after coping USE and effectiveness are included as the mediators is indicated by the value directly under this path.

The overall F values were significant for all regression equations predicting positive affect and are reported with the R^2 in Figure 6. Step 1 in testing the mediator involved examining the relationship that locus of control has with the various outcomes. The beta-weight for the relationship between locus of control and positive affect is also illustrated in Figure 6. There is significant relationship between locus of control and positive affect (beta-weight = 0.49, $p \leq 0.001$). However, in Step 2 when coping USE and effectiveness were entered into the model, the beta-weight of the locus of control-positive affect relationship (beta-weight = 0.24, $p \leq 0.01$) showed a substantial decrease. That is, coping USE and effectiveness incompletely mediate the locus of control-positive affect relationship. Locus of control was significantly related to some types of coping USE or effectiveness scales: problem-focused USE (beta-weight = 0.02, $p \leq 0.05$), avoidance USE (beta-weight = -0.03, $p \leq 0.01$), positive appraisal USE (beta-weight = 0.04, $p \leq 0.001$), emotional discharge (beta-weight = -0.05, $p \leq 0.001$), problem-focused effectiveness (beta-weight = -0.02, $p \leq 0.05$), and avoidance effectiveness (beta-weight = -0.03, $p \leq 0.01$). In addition, only avoidance effectiveness scale (beta-weight = -3.91, $p \leq 0.001$) was significantly related to positive affect. The pattern of the results show that only partial mediating effect was supported since only avoidance effectiveness showed significant mediating effect on the relationship between locus of control and positive affect.

The intervening effects (mediation) of coping USE and effectiveness on the relationships between locus of control (internality) and depression

Note. * $p \leq 0.05$ ** $p \leq 0.01$ *** $p \leq 0.001$

Figure 7. Summary of mediating regression analysis for depression including beta-weights, F values, and R^2 s for the model before coping USE and effectiveness are included (Reduced Model) and after the inclusion of the mediators (Full Model). The initial path between locus of control and depression is indicated by the beta-weight on top of the line connecting these variables; whereas the beta-weight after coping USE and effectiveness are included as the mediators is indicated by the value directly under this path.

The overall F values were significant for all regression equations predicting depression and are reported with the R^2 in Figure 7. Step 1 in testing the mediator involved examining the relationship that locus of control has with the various outcomes. The beta-weight for the relationship between locus of control and depression is also illustrated in Figure 7. There is significant relationship between locus of control and depression (beta-weight = -0.27, $p \leq 0.001$). However, in Step 2 when coping USE and effectiveness were entered into the model, the beta-weight of the locus of control-depression relationship (beta-weight = -0.15, $p = 0.07$) dropped to a non-significant level. That is, coping USE and effectiveness incompletely mediate the locus of control-depression relationship. Locus of control was significantly related to some types of coping USE or effectiveness scales: problem-focused USE (beta-weight = 0.02, $p \leq 0.05$), avoidance USE (beta-weight = -0.03, $p \leq 0.01$), positive appraisal USE (beta-weight = 0.04, $p \leq 0.001$), emotional discharge (beta-weight = -0.05, $p \leq 0.001$), problem-focused effectiveness (beta-weight = -0.02, $p \leq 0.05$), and avoidance effectiveness (beta-weight = -0.03, $p \leq 0.01$). In addition, only positive appraisal USE scale (beta-weight = -2.77, $p \leq 0.05$) was significantly related to depression. The pattern of the results show that only partial mediating effect was supported since only positive appraisal USE showed significant mediating effect on the relationship between locus of control and depression.

Summary

With regards to the mediating effects of coping USE and effectiveness on the life events-psychological well being model, no mediating effect has been found in the model since one of the criteria for calculating mediating effect, which is the independent variable (i.e. life events) must be associated with the mediational

variables (i.e. the four coping USE scales and four coping effectiveness scales), could not be met. On the contrary, the results of the present study shows some mediating effects of coping USE and effectiveness on the self-esteem-positive affect and locus of control-positive affect/depression. The findings indicate that even avoidance coping may be seen to have a positive effect on the individual. This application of coping effectiveness scores confirms Lazarus and his colleagues' suggestion that there is no *a priori* "right or wrong" coping pattern. As the effectiveness of the coping effort also depends on the individuals' perception that they are coping "correctly" with the stressful situation, and as it is not always possible to predict the subject's perception of the effectiveness of a given coping strategies, it is equally impossible to decide *a priori* that this strategy is "wrong". Moreover, coping effectiveness may be considered as a first step towards operationalization of concept of reappraisal. In the reappraisal process individuals evaluation the outcomes of their coping efforts. If they perceive their efforts to have been effective, they may conclude that they have greater control over the situation than they initially thought and/or they may reappraise the situation as less threatening. On the other hand, if they evaluate their coping effort as ineffective, they may conclude that they underestimated both the threat constituted by the situation and their difficulty in coping with it. In this case reappraisal may cause them to suffer from increased psychological distress (Lazarus & Folkman, 1984).

However, although there are significant mediating effects on the models have been found, only very few coping USE or effectiveness scales were served as mediational variables. It is hard to conclude that coping USE and effectiveness scales serve as mediator variables in the self-esteem/locus of control-psychological well being models.

< CHAPTER 9 >

DISCUSSIONS

Although many studies examined the impact of life events on physical and mental health, the measurement of life events, the role of life events in the larger stress and coping paradigm, and the factors that moderate and mediate the effects of life events on health outcome, interest in life events did not originate in ageing research. The present study attempted to examine the relationships between life events, self-esteem, coping, locus of control, and psychological well being among older persons in Hong Kong, particular the roles of self-esteem, coping USE and effectiveness, and internality in the life events-psychological well being model. Those variables and demographic data were studied in a sample of 103 older persons in Tseung Kwan O district.

There is association exists between life events and depression in the present study which is in line with most of the studies concerning those variables (e.g. Avison & Turner, 1988; Katona, 1993; Kessler, 1997; Kraaij, Arensman, & Spinhoven, 2002; Kurlowicz, 1993; Murrell, Norris, & Grote, 1988; Orrell & Davies, 1994; Parkes, 1992; Watson, Clark, & Tellegen, 1988). However, there is no significant association exists between life events and positive affect. Lawton and his colleagues (1993) have suggested a situational etiology for positive affect and a more stable dispositional etiology for negative affect and it seems reasonable to expect that desirable life events might be stronger predictors of change in positive affect over time than undesirable events for negative affect. In addition, positive affect has been found to correlate with the frequent of pleasant events, whereas negative affect (such as depression) appears to be related to unpleasant events (e.g. Costa & McCrae,

1980; Diener, 1984; Emmons & Diener, 1985; Warr, Barter, & Brownbridge, 1983). Therefore, it might not be strange that there is no significant relation between life events and positive affect in the present study since most of the life events used in the checklist were unpleasant ones.

Two of the most widely replicated findings for major depression are its greater prevalence in women after adolescence (e.g. Boyd & Weissman, 1981; Kessler, McGonagle, Swartz, Blazer, & Nelson, 1993; Weissman, Bruce, Leaf, Florio, & Holzer, 1991) and its causal association with stressful life events (e.g. Brown & Harris, 1989; Kendler, Karkowski, & Prescott, 1999; Kessler, 1997; Thoits, 1983). However, the present study shows no significant gender difference in life events. Some of the previous studies have not produced a range of findings about gender differences in sensitivity to stressful life events. For examples, Nazroo, Edwards and Brown (1997) and Bruce and Kim (1992) has found that no gender difference in life events in their research findings. It might be that most of these studies have employed self-report measures of “depression” or “distress” rather than syndromal diagnoses of major depression. The majority of studies have reported a greater sensitivity to the pathogenic effect of stressful life events in women that is either global (Van & Jones, 1999) or restricted to certain events, including problems in social relationships (Zimmermann-Tansella, Donini, Lattanzi, Siciliani, Turrina, & Wilkinson, 1991) or children, housing, or reproductive problems (Nazroo, Edwards, & Brown, 1997). Moreover, there is no age difference of life events. It might be that the range of the age of the respondents in the present study (60-80 years old) and the number of respondents in each age-division (60-64, 65-74, and 75 or above) were narrow and this might affected the significance level of the t-test.

Moreover, perception of poor health in the elderly has been associated with the female sex, depression, worries about health, unhappiness, anomia, poor adjustment to the environment, and low activities in many previous researches (e.g. Barberger-Gateau, Letenneur, Marc, Nejari, Tessier, & Dartigues, 1997; Beckett, Brock, Lemke, Mendes de Leon, Guralnik, Fillenbaum, Branch, Wetle, & Evans, 1996; Greiner, Snowdon, & Greiner, 1996). Under normal conditions the positive self-assessment of health has been found to be associated with feelings of happiness, satisfaction, activity, less loneliness and less tension as compared with negative self-assessments of health (Blazer & Haupt, 1979). These results are in line with the present results that self-perceived health is associated with positive affect and depression.

In the present study, subjective economic status shows associations with self-esteem and psychological well being. As many researches have stated that both educational and professional (financial) success are aspects of accomplishments that may contribute to a positive life review. In contrast to education, income may also exert a more direct influence on psychological well being derived from actual life: economic hardship has been shown to be an important stressor that contributes to low positive affect and a diminished self-concept and self-esteem (e.g. Hensrud 2003; Lee & Kim, 2003; Pearlin, Menaghan, Lieberman, & Mullan, 1981). In addition, high income is related to the availability of options that contribute to quality of life in old age (e.g. intensive use of commercial goods).

Both theory and research support the contention that low self-esteem often is a concomitant of depression. In fact, negative self-feelings are often considered to be a defining characteristic of depressive episodes (Beck, 1967). Moreover, numerous

studies have documented a strong concurrent relationship between low self-esteem and depression (e.g. Tennen & Herzberger, 1987; Wood, Heimpel, & Michela, 2003). In the Barnett and Gotlib's study (1988), they concluded that the lack of a well-anchored sense of self-worth creates a vulnerability or diathesis for depression. These results are in line with the notion of the present study that self-esteem affects psychological well being. Butler, Hokanson and Flynn (1994) stated that labile self-esteem was related to greater depression, particularly among individuals who experienced substantial major life stress. The present study shows that self-esteem moderated the impact of life events on psychological well being. However, this finding on the interaction between stressors and self-esteem runs counter to that of Ensel and Lin (1991) who did not find any buffering effect for self-esteem in their study. It might be due to the fact that their measure of stressful life events is a summation of 118 items, excluding health-related and personal feelings events, a stress indicators that may have been too broad for a buffering effect to be found for any moderator variable. In fact, a positive self-esteem probably enhances the ability to cope emotionally with a loss by enabling the individual to focus on alternate identities or to use the loss to construct a more meaningful identity. In other words, individuals with positive self-esteem may suffer less depressive symptoms and may have better positive affect state.

Some previous studies showed that a failure of locus of control to predict depression among Asian elderly persons may suggest that locus of control was inadequately assessed. The measure of locus of control on the Elder Life Adjustment Interview Schedule (ELAIS) (Dubanoski, Heiby, Kameoka, & Wong, 1996) was based on Ireys' (1979) questionnaire developed with primarily Caucasian participants. The construct validity coefficient for the perceived control measure of the ELAIS was

higher for Caucasian participants in comparison to Asian participants. Moreover, some researchers may argue that locus of control may not be related to depression for Asian individuals because of cultural factors. For example, Asians may accept the fact that there are many things not within their control. This acceptance may result in a lack of a dysphoric effect of low perceived control on mood. This is reflected in Asians' conception of interdependence and group control of many of life's experiences (Hui, 1988; Markus & Kitayama, 1991; Sun, 1995). On the contrary, the present study shows a strong correlation between locus of control (internality) and psychological well being which is different from the afore-mentioned studies. The reason might be that the questionnaire for measuring locus of control in the present study is designed for Asian people and it has been tested and validated in many studies with Asian samples.

The moderating effect of locus of control between stress and strain is consistent with the evidence that individuals' locus of control beliefs moderate the relations between stress and strains in many previous studies (e.g. Kliever & Sandler, 1992; Weigel, Wertlieb, & Feldstein, 1989). In addition, Cohen and Edwards (1989) found that locus of control was the personality variable with the most consistent evidence for a stress-moderating effect with adult samples. Seligman, Abramson, Semmel, and von Baeyer (1979) and Metalsky, Abramson, Seligman, Semmel, and Peterson (1982) contended that internal-global-state attributions result in depression when negative outcomes are experienced. In contrast, Lefcourt (1982), after reviewing the literature concerned with locus of control and stress, concluded that internality more often seems to have a moderating effect on the relationship between stress and mood disturbances.

The findings of analyses employing coping USE scales are not consistent with those of other researchers (e.g. Billings & Moos, 1984; McCrae & Costa, 1986) to the effect that individuals' use of emotion-focused coping strategies like emotional discharge are associated with a greater psychological distress. However, the present findings indicate that, when employing coping effectiveness scales, even avoidance coping may be seen to have a positive effect on the individual. Moreover, when someone might assume that the use of emotion-focused coping strategies may have negative consequences because it may hinder the individual in effective problem-focused coping strategies, it may be expected that problem-focused coping strategies and emotion-focused coping strategies are negatively correlated. Indeed, the present study found a strongly negative correlation between the use of avoidance coping and problem-focused coping. However, in the case of coping effectiveness scales, all emotion-focused coping strategies were positively correlated with problem-focused coping strategies. Thus, the application of coping effectiveness scores confirms Lazarus and his colleagues' (e.g. Lazarus & Folkman, 1984) suggestion that there is no *a priori* "right or wrong" coping pattern. As the effectiveness of the coping effort also depends on the individuals' perception that they are coping "correctly" with the stressful situation, and as it is not always possible to predict the subject's perception of the effectiveness of a given coping strategies, it is equally impossible to decide *a priori* that this strategy is "wrong". Moreover, coping effectiveness may be considered as a first step towards operationalization of concept of reappraisal. In the reappraisal process individuals evaluate the outcomes of their coping efforts. If they perceive their efforts to have been effective, they may conclude that they have greater control over the situation than they initially thought and/or they may reappraise the situation as less threatening

(Folkman, 1984; Lazarus & Folkman, 1984).

Although correlations have been found between coping USE/effectiveness and psychological well being, the variance of the coping USE and effectiveness indices (in the analysis of moderating effect of life events-psychological well being model) would be too small, and their application would not yield the significant moderating effects found in the present study.

With regards to the mediating effects of coping USE and effectiveness on the life events-psychological well being model, no mediating effect has been found in the model since one of the criteria for calculating mediating effect, which is the independent variable (i.e. life events) must be associated with the mediational variables (i.e. the four coping USE scales and four coping effectiveness scales), could not be met. On the contrary, the results of the present study shows some mediating effects of coping USE and effectiveness on the self-esteem-positive affect and locus of control-positive affect/depression. However, although there are significant mediating effects on the models have been found, only very few coping USE or effectiveness scales were served as mediational variables. It is hard to conclude that coping USE and effectiveness scales serve as mediator variables in the self-esteem/locus of control-psychological well being models.

In summary, findings of this study did confirm some existing notions about predictors of the mental health status of elderly people – Life events are one of the key variables affecting positive affect and depression; self-esteem, coping and locus of control do have buffering effects on life events-psychological well-being model. Elderly respondents in the present study admitted to depressive symptoms at a rate that is lower than that found in other research on this group. However, it may be

due to the small sample size and the voluntary nature of participation and also the influencing power of the independent variable compared with the other well established factors such as quality of life or informal/formal support. On the other hand, it is possible that the findings of the study underestimated these Chinese respondents' mental health problem since their responses might be affected by the Chinese cultural norm of moderation in expressing feelings and emotions. However, depressive symptoms increase slightly with age in the present study. This increase is not merely a cohort effect or an artifact of measuring symptoms of comorbid physical illness. It is confirmed in the study that certain negative life events, which are reported more frequently in late life, are correlated with depressive symptoms.

The findings also suggest that elderly persons are vulnerable to psychological distress in the form of depressive symptoms. This may be due in part to the stresses associated with illnesses and financial problems of themselves or family members. Their modest depression levels may be moderated by relatively positive self-perceived health status, high level of self-esteem, effective coping strategies used and more internal locus of control. However, the study cannot depict a clear picture about the causal relationships between each of the tested variables; so, further research is required to clarify those relationships especially the ways in which they affect well-being, in terms of depression and positive affect separately, among Chinese cohort.

< CHAPTER 10 >

CONCLUSIONS

In conclusion, the results of the present study reveal that the respondents have low stress level due to fewer occurrences of life events. However, even though the occurrences of life events were fewer among them, this factor still affected the level of psychological well-being. Therefore, with more life events occurred or higher life event scores, the respondents' positive affect level decreased and their depression level increased. In addition, self-esteem level, coping strategies and effectiveness, and internal locus of control not only directly affect the psychological state of the respondents but also serve as buffering factors in different aspects of psychological well-being. The study also confirmed that positive affect and depression are two independent dimensions which high positive affect and low depression level are not apodictic linked, and vice versa. Interestingly, many ageing researches reveal that Chinese older persons have externally oriented locus of control and low self-esteem level but in the present study the phenomenon is quite different – most of the respondents have medium internal oriented locus of control while the two poles are the same but less frequent; and their self-esteem levels were high. It might be due to the fact that one's socio-economic background affects his/her locus of control and self-esteem level. With such a medium internally oriented locus of control and relative high self-esteem level, the respondents seem to be better off in terms of psychological well-being.

In the view of coping strategies, this factor affects directly to the psychological well-being but shows none buffering effects on life events-psychological well-being model. However, as discussed in previous chapters, the disappointed result might

be due to the inappropriate instruments used, unrealistic answers from the respondents and/or some other factor such as availability of certain coping strategies among the respondents. Even though the result cannot show the buffering effect of coping strategies on the life events-psychological well-being model, the investigator of the present study still expects that coping strategies are strong predicting factors in such a model among Chinese older persons.

IMPLICATIONS

Once older persons are clearly identified as suffering from depression, the question of whether they can respond to treatment and whether or not they should receive treatment becomes moot. Elderly patients who suffer from depression and poor life integration skills clearly benefit from various psychosocial interventions. This appears to be independent of the presence of pseudodementia or dementia. Older persons who suffer from depression respond to the treatment tend to minimize the impact of a lifetime of accumulated stressors. It is also better for them to relieve their distress by introducing more adaptive coping mechanisms. Though it may be debated which interventions are the most appropriate and effective, psychosocial treatment clearly relieves a wide range of depressive symptoms and increases coping skills. Treatment also had a positive impact on the symptoms associated with pseudodementia as well.

It is noted that depression in older persons is associated with and is closely related to the ageing process. A lifetime of depressing events (such as painful illnesses and bereavement coupled with the effects of physical illness, decreasing mental and diminishing physical energy) reduces the ability of many older persons to cope with

not only the impact of past events, but also to solve problems in the present. This leads to greater dysfunction, poorer coping with stress, lowering positive affect, and greater levels of depression. The fact that these causal and contributing factors are so common among older persons that they appear to normative and a part of the normal ageing process, may delude some clinicians into the false belief that treatment for this population is neither effective, nor desirable.

On the contrary, the research base and demographic trends make it clear that treatment for depression among older persons is both effective and beneficial not only for the individual but society as a whole. As medical treatment and improvement in preventative health continues into the 21st century, life spans continue to increase. This trend also has an impact on the vitality and creative contributions of the elderly as well. As life spans increase, people remain productive for more years and contribute to not only their own development but to their social circles and to society. Improving their ability to cope with multiple stressors and continue to solve problems in the face of failing health or long term debilitating medical conditions, not only serves their interest by reducing their depression, but serves society as well.

Though the older depressive patient has special needs and conditions that require specialized psychosocial care, they are no different than any other special needs population. A lifetime of stress, specific catastrophic events, and failing physical conditions contribute to reduce coping, but are all conducive to treatment. Thus, accepting a normative view of depression among elderly and considering it a normal function in the life cycle, is categorically flawed and thus, unethical as well. Instead, clinicians should be concentrating their efforts on expanding systems and

techniques/models that have proven efficacy for these patients.

In addition to direct treatment for depression, improved housing and social conditions that contribute to isolation, withdrawal and depression should be addressed and efforts made to provide the resources that will improve the quality of life for this group. It is clear that instead of finding rationale for limiting services, it should be continued the struggle to determine what works, for depressed elderly, under a variety of circumstances to improve their connection with their community and reduce their distress to the greatest extent possible.

POLICIES ON THE ELDERLY IN HONG KONG

In Hong Kong, in view of the growing ageing population, an Elderly Commission was set up in 1998 to advise the government on the formation of a comprehensive policy for the elderly, to coordinate the planning and development, and to monitor the implementation of programmes and services for the elderly. Ensuring financial security for the elderly is considered fundamental to achieving the policy objective of caring for the elderly (Health and Welfare Bureau, 1999). However, the major initiative in this area was to set up the Mandatory Provident Fund (MPF) System that will not provide dignified financial security to most of the elderly now, and especially the female population since most of them were in non-working class or in low-income group even they worked to earn their living. No alternative scheme is planned for ensuring the financial security of women who contribute to the economy in the informal sector or as homemakers. The Comprehensive Social Security Assistance scheme that provides welfare assistance to the needy on application is not an equitable option.

Medicare Scheme for the elderly has been discussed by the professionals and the public for years; however, because of the practical issues and the economic deficit of the Hong Kong Government, such proposed Scheme has not been put into consideration yet. It is obvious that from many news and medical reports, the expenses of outpatient prescription drug among the elderly are quite high and most of the time such expenses insert much financial pressure to both the older persons and their family. Since outpatient prescription drug use is not covered by any kind of subsidy from the Government (except those elderly who are under CSSA Scheme), it is a major source of out-of-pocket expenditures for the elderly. What makes this financial burden all the more daunting is that most of the elderly population has no insurance coverage for prescription drugs. Given this burden, it is not surprising and also necessary that policy makers should consider establishing some kinds of subsidiary schemes and mandatory insurance for, at least partially, supporting the expenditure of prescription drugs among the elderly. Of course, before the implementation of certain kinds of medical subsidiary schemes or mandatory insurance policies, some key questions have to be answered to ensure the cost-benefit is in balanced – how much the financial burden is, how much coverage might increase demand for prescription drugs, and how much coverage might cost?

On the area of family care, providing the necessary community care and support services is an important policy that will facilitate the family to take up the care-giving role. The initiatives of the Elderly Commission in this area are in the right direction. In addition to providing more day care and home services to the elderly in need, the government is also reviewing the mode of provision of home help service and the introduction of day respite services as forms of support to families caring for their elderly members. On the other hand, initiatives to

encourage the elderly to lead an active life have remained in the traditional models of social welfare that engage the elderly person in social and recreational activities or in voluntary social services. However, there is another way to make the elderly persons be proactive in social participation. For example, the Government and some related agencies can promote mutual help scheme in order to promote mutual help spirit among the elderly persons. The scheme can cultivate this spirit through social, recreational, sports activities and so forth. Set up more senior citizens' club and/or activity centres and encourage the elderly persons to participate in organizing activities in those club and centres is another way to let the elderly persons to participate proactively.

Actually, the vast potential of the human talents from different groups of the elderly population could be looked up as resources for the family and the community. For example, the possible contributions of active elderly parents to childcare within the family as well as in the community could be explored, organized, and promoted.

With the changes in the level of education attainment and labor force participation of women in the past few decades, the demography of the future ageing population will be different from that of the present population. Long-term planning for our future ageing population needs to take into account not only the current needs and potentials of elderly persons, but also the situation of different cohorts of the population who will become the elderly in the future. Ageing is no longer a term for problematic, troublesome stereotype; it can represent a diverse group who can be healthy, active and independent.

In long term, the whole community should be hand-in-hand to drive the effort to enable successful ageing for all Hong Kong people. The Government can work in

partnership with other public and private agencies to address key concerns on the elderly such as social integration, financial security, employment, healthcare and intergenerational cohesion.

In order to design and implement valuable, practicable policies for the elderly persons, the policy makers and agencies should have a clear picture in their mind that what are the desired outcomes the policies will bring. For instance, policies should be aimed at several desired outcomes: at individual level, all of us should have an idea in mind that the older persons should age with respect and dignity as integral members of our society; at the family level, there should be strong and caring families where members are interdependent on each other; at the community level, there should a strong network of community services to support the family in its care of the young and old and also to development a high level of preparedness, to maintain strong intergenerational cohesion, and to maximize the opportunities of an ageing population.

< CHAPTER 11 >

LIMITATIONS

With reference to limitation, some words of caution are necessary. First, although this study has a sample of 103, it is not a random sample drawn from the whole elderly population. Rather, it is a cluster sample drawn from 4 estates in Tseung Kwan O district. It has its merits such as convenient and easier to handle, but it cannot be claimed to have representative of elderly people in Hong Kong or say the problem of low generalizability exists.

Second, no cognitive test has been carried out to screen out those samples who are unfit cognitively. There might be some invalid or unreliable answers collected. It can be improved by administering some screening instruments (e.g. Mini Mental State Examination (MMSE)) in order to choose appropriate samples. Moreover, during the interviews, the respondents might not release their true feeling to the interviewer since the relationship is not built up. Therefore, the respondents might only give positive answer to please themselves or to project a socially desirable image. Such bias might affect the validity of the findings.

Third, the retrospective nature of the data introduces the potential for error in recall, especially with regard to the duration of the stressor. However, previous research shows that the onset of recent life events can be reliably dated (Kessler & Wethington, 1991), and given that the accuracy of dating increases with greater proximity of the event to the interview, we would expect that the retrospective dating of stressor cessation is likely to be at least as accurate, if not more accurate, than onset dating. A related dating concern is that the self-report nature of the duration

variable leaves open the possibility that the individual may be dating the duration of the distress experienced as a result of the stressor rather than the duration of the stressor itself.

Fourth, the cross-sectional nature of the data leaves open the possibility of reverse causality. For example, individuals who have a tendency to use ineffective coping strategies may be more likely to experience stressors which are more difficult to resolve; in other words, their ineffectiveness is expressed in both their coping behavior and their inability to avoid chronic stressors. Longitudinal studies are needed to test the direction of effects. In addition, many of the statistically significant contrasts we found were of a relatively small magnitude. Thus, these differences should not be over-interpreted.

Fifth, life events and buffering factors should not be considered as the only causes for psychological well being. More complex models, including genetic, biological, and psychological attributes, should be considered.

Sixth, Rosenberg Self-Esteem Scale is the most widely used measure of self-esteem and it was designed for research into adolescent self-esteem. Although it has been used in well-being research on all age groups, and is considered to be an appropriate measure of self-esteem in the elderly (Breytspraak & George, 1979; Duffy & MacDonald, 1990; Krause, 1987), it is not well validated with older persons in Hong Kong. Therefore, caution should be made when we interpret the data of self-esteem level among the respondents in this research and further researches for validation should be made.

Finally, as coping effectiveness depends on the nature of the stressors, the characteristics of the copers and the circumstances under which they operate, it is

necessary, before drawing any conclusions regarding the impact of coping effectiveness indices, to further investigate these factors. Moreover, bearing in mind the fact that there are several types of coping scales, it is necessary to examine the operationalization of coping effectiveness indices in other types of coping scales.

APPENDIX I

BASIC PROFILE OF RESPONDENTS

- Table A1. Distribution of sources of respondents by estate
- Table A2. Gender of respondents
- Table A3. Age distribution of respondents
- Table A4. Marital status of respondents
- Table A5. Number of children of respondents
- Table A6. Education level of respondents
- Table A7. Religious belief of respondents
- Table A8. Residential type of respondents
- Table A9. Household composition of respondents
- Table A10. Employment status of respondents
- Table A11. Main source of income of respondents
- Table A12. Subjective economic status of respondents

Table A1. Distribution of Sources of Respondents by Estate

Estate	N	%
Po Lam Estate	40	38.83
Ying Ming Court	6	5.83
Tsui Lam Estate	36	34.95
King Lam Estate	21	20.39
Total	103	100.00

Table A2. Gender of Respondents

Gender	N	%
Male	52	50.49
Female	51	49.51
Total	103	100.00

Table A3. Age Distribution of Respondents

Age group	N	%
60 – 64	50	48.54
65 – 69	29	28.16
70 – 74	19	18.45
75 – 79	4	3.88
80 or above	1	0.97
Total	103	100.00

Mean = 65.61

S.D. = 4.84

Min. = 60 years old

Max. = 80 years old

Table A4. Marital Status of Respondents

Marital status	N	%
Married	83	80.58
Single	13	12.62
Widowed	6	5.83
Divorced	1	0.97
Total	103	100.00

Table A5. Number of Children of Respondents

	N	%
No child	21	20.39
Only son(s)	22	21.36
Only daughter(s)	17	16.50
Both son(s) and daughter(s)	43	41.75
Total	103	100.00

Table A6. Education Level of Respondents

Education level	N	%
No education	72	69.90
Private tuition	7	6.80
Primary	21	20.39
Lower secondary	3	2.91
Total	103	100.00

Table A7. Religious Belief of Respondents

Religion	N	%
No belief *	93	90.29
Buddhism	7	6.80
Christianity	2	1.94
Taoism	1	0.97
Total	103	100.00

* Note that those reported they regularly burn incense sticks but without having any form of ceremony of a certain religion are considered as no religious belief.

Table A8. Residential Type of Respondents

Residential type	N	%
Public housing	91	88.35
Private housing	6	5.83
Nursing home	1	0.97
Aged hostel	5	4.85
Total	103	100.00

Table A9. Household Composition of Respondents

Household composition	N	%
Alone	11	10.68
Spouse	11	10.68
Children	6	5.83
Spouse and children	71	68.93
Relatives	2	1.94
Friends	2	1.94
Total	103	100.00

Table A10. Employment Status of Respondents

Employment status	N	%
Retired	71	68.93
Unemployed	13	12.62
Working – Full-time	9	8.74
Working – Part-time	3	2.91
Working – Temporary	7	6.80
Total	103	100.00

Table A11. Main Source of Income of Respondents

Source	N	%
Salary	14	13.59
Children	69	66.99
Saving	6	5.83
Government	14	13.59
Total	103	100.00

Table A12. Subjective Economic Status of Respondents

Economic status	N	%
More than enough	11	10.68
Just enough	67	65.05
Not enough	15	14.56
Extremely not enough	10	9.71
Total	103	100.00

APPENDIX II

RELIABILITIES OF SCALES USED IN THE STUDY

The reliabilities of scales “Positive affect”, “Depression”, “Self-perceived health”, “Self esteem”, and “Locus of control” are very high, ranging from 0.84 to 0.91. However, in general, the reliabilities of the scales for “Coping use” are moderate and for “Coping help” are low. They are ranging from 0.50 to 0.67 and 0.39 to 0.47 respectively.

Item	Alpha	Mean	S.D.
Positive affect (9)	0.91	2.74	0.34
Depression (5)	0.90	3.32	0.50
Locus of control (8)	0.87	2.52	0.42
Self-perceived health (4)	0.84	3.39	0.90
Self esteem (10)	0.84	2.67	0.42
Coping use – ED (3)	0.67	2.82	0.44
Coping use – AV (2)	0.61	3.43	0.46
Coping use – PA (2)	0.51	2.37	0.40
Coping use – PFC (6)	0.50	2.42	0.25
Coping help – PA (2)	0.47	2.38	0.39
Coping help – AV (2)	0.46	3.42	0.43
Coping help – PFC (6)	0.45	2.09	0.15
Coping help – ED (3)	0.39	2.80	0.30

Note: PFC = Problem-focused Coping; AV = Avoidance;
PA = Positive Appraisal; ED = Emotional Discharge

APPENDIX III

QUESTIONNAIRE (CHINESE VERSION)

《長者的生命事件與心理健康之關係：自尊心、因應方式及控制觀之角色》

本人正進行一項有關香港長者心理健康的研究。你所提供的資料非常寶貴，請你合作回答所有問題。

- 你所提供的資料將**絕對保密**。
- 除了本研究的研究員外，其他人將不允許翻閱已完成的問卷。
- 只有本研究的研究員有權處理問卷答案，其他人將不允許將問卷答案作任何用途。
- 研究報告只會提及到總的趨勢，絕不涉及任何個人的資料或意見。

多謝你的合作！

研究員
余國雄

第一部份 ～ 個人資料

1. 性別：☐男 ☐女
2. 年齡：歲
3. 婚姻狀況：☐已婚 ☐單身 ☐離婚 ☐分居
☐喪偶 ☐不回答
4. 子女數目：子 女
5. 教育程度：☐從未受過教育 ☐私塾 ☐小學 ☐初中 ☐高中
☐大專或以上 ☐不回答 / 不記得
6. 宗教信仰：☐無宗教信仰 ☐天主教 ☐基督教 ☐佛教
☐道教 ☐其他
7. 住屋類型：☐公共屋邨 ☐私人屋苑 ☐安老院
☐長者宿舍 ☐其他
8. 與哪些人同住：☐獨居 ☐配偶 ☐子女 ☐配偶及子女
☐兄弟姊妹 ☐親友 ☐朋友 ☐其他
9. 工作狀況：☐退休 ☐失業 ☐全職工作 ☐兼職工作
☐臨時工作 ☐不回答
10. 主要收入來源：☐自己賺錢 ☐子女幫助 ☐退休金 ☐積蓄
☐政府援助或津貼 ☐其他
11. 你認為你每月的收入足夠維持你的開支嗎？
☐足夠有餘 ☐剛好足夠 ☐少許不足夠 ☐根本不足夠應付開支

第二部份 ～ 健康狀況

1. 總括來說，你認為你的健康狀況是：
☐差 ☐一般 ☐好 ☐很好 ☐極佳
2. 你認為以下對你的描述是否正確？
 - a. 我好似比其他人較容易生病。
☐絕對不正確 ☐多數不正確 ☐不知道 ☐多數正確 ☐絕對正確

- b. 我的健康與我認識的人一樣好。
☐絕對不正確 ☐多數不正確 ☐不知道 ☐多數正確 ☐絕對正確
- c. 我估計我的健康會變差。
☐絕對不正確 ☐多數不正確 ☐不知道 ☐多數正確 ☐絕對正確
- d. 我的健康狀況極佳。
☐絕對不正確 ☐多數不正確 ☐不知道 ☐多數正確 ☐絕對正確
3. 你有沒有患上以下疾病？(可選多項)
☐風濕 ☐高血壓 ☐骨折 ☐胃病 ☐糖尿病 ☐慢性支氣管炎
☐冠心病 ☐甲狀腺官能癥 ☐小便失禁 ☐中風 ☐排泄失禁
☐甲狀腺機能亢進 ☐癌病 ☐腎病 ☐慢性肝病 ☐骨質疏鬆
☐其他_____

第三部份 ～ 生命事件

請問你在過去半年內有沒有發生以下事件？

	有	沒有	不記得
1. 配偶死亡	☐	☐	☐
2. 離婚	☐	☐	☐
3. 夫妻分居	☐	☐	☐
4. 直系親屬死亡 (例如子女、兄弟姊妹)	☐	☐	☐
5. 外傷 / 疾病	☐	☐	☐
6. 子女被解僱	☐	☐	☐
7. 退休	☐	☐	☐
8. 家庭成員患病 / 受傷	☐	☐	☐
9. 家庭增添成員 (例如子女添丁)	☐	☐	☐
10. 經濟狀況改變	☐	☐	☐
11. 好友死亡	☐	☐	☐
12. 夫妻爭吵	☐	☐	☐
13. 子女離家 (例如搬家、移民)	☐	☐	☐
14. 與兒媳 / 女婿關係不好	☐	☐	☐
15. 配偶開始 / 停止工作	☐	☐	☐
16. 生活狀況改變	☐	☐	☐
17. 個人習慣改變	☐	☐	☐
18. 搬家	☐	☐	☐
19. 文娛活動改變 (例如增加睇電視的時間)	☐	☐	☐
20. 社會活動改變 (例如增加參與社區活動次數)	☐	☐	☐
21. 睡眠習慣改變	☐	☐	☐
22. 家庭聚會次數改變	☐	☐	☐
23. 飲食習慣改變	☐	☐	☐

第四部份 ～ 自尊心

	極不同意	不同意	同意	極同意
1. 我覺得自己有很多優點	☐	☐	☐	☐
2. 我希望自己得到更多的尊重	☐	☐	☐	☐
3. 我覺得我是一個有用的人， 至少與其他人一樣	☐	☐	☐	☐

4. 我覺得自己沒有可以引以為傲的事情	☐	☐	☐	☐
5. 我對人生抱有積極的態度	☐	☐	☐	☐
6. 有時我會覺得自己沒有用	☐	☐	☐	☐
7. 總的來說，我越來越感覺到自己是一個失敗者	☐	☐	☐	☐
8. 大多數人做得到的事情，我都有能力做到	☐	☐	☐	☐
9. 有時我會想我是一個完全沒有優點的人	☐	☐	☐	☐
10. 總的來說，我對自己感到滿意	☐	☐	☐	☐

第五部份 ～ 對人生掌握的態度

1. 總括來說，你認為身邊發生的事情是由誰來操控？

☐自己 ☐上天 / 命運 ☐不清楚

	極不同意	不同意	同意	極同意
2. 人定勝天	☐	☐	☐	☐
3. 事在人為	☐	☐	☐	☐
4. 天變不足畏（不必害怕天意）	☐	☐	☐	☐
5. 矢志不移（應按照自己的目標來爭取成功）	☐	☐	☐	☐
6. 聽天由命	☐	☐	☐	☐
7. 生死有命	☐	☐	☐	☐
8. 富貴由天	☐	☐	☐	☐
9. 人算不如天算	☐	☐	☐	☐

第六部份 ～ 應付困難之方法

※請分別在甲部及乙部各選取一個答案。甲部是涉及你會否採用該種應付困難的方法，而乙部則是你對該種應付困難方法的有效度作出評價。

甲部 ～ 1=每次都採用 2=多數採用 3=很少採用 4=沒有用過

乙部 ～ 1=非常有效 2=有效 3=沒有效果 4=反效果

	<u>甲部</u>				<u>乙部</u>			
	1	2	3	4	1	2	3	4
1. 嘗試用不同的方法去解決問題	☐	☐	☐	☐	☐	☐	☐	☐
2. 在腦海重溫問題的始末，以便了解該事的情況	☐	☐	☐	☐	☐	☐	☐	☐
3. 嘗試以第三者的客觀角度去看該問題	☐	☐	☐	☐	☐	☐	☐	☐
4. 與專業人士討論該問題	☐	☐	☐	☐	☐	☐	☐	☐
5. 忙於其他事情，令自己無暇理會該問題	☐	☐	☐	☐	☐	☐	☐	☐
6. 避開與配偶討論該問題	☐	☐	☐	☐	☐	☐	☐	☐
7. 嘗試從正面去觀看情況	☐	☐	☐	☐	☐	☐	☐	☐
8. 提醒自己有很多人的處境比自己更差，用以自我鼓勵	☐	☐	☐	☐	☐	☐	☐	☐
9. 哭泣	☐	☐	☐	☐	☐	☐	☐	☐

10.尋找身邊的人的同情	☐	☐	☐	☐	☐	☐	☐	☐
11.我會向其他人發洩	☐	☐	☐	☐	☐	☐	☐	☐
12.與親人討論該問題	☐	☐	☐	☐	☐	☐	☐	☐
13.與朋友討論該問題	☐	☐	☐	☐	☐	☐	☐	☐

第七部份 ～ 心理健康

※於上個月內，有否出現以下的感覺？

	非常頻繁	經常	極少	從不
1. 精力充沛	☐	☐	☐	☐
2. 對每事也感興趣	☐	☐	☐	☐
3. 對某些事情感到自豪	☐	☐	☐	☐
4. 得意揚揚，興高采烈	☐	☐	☐	☐
5. 對每事也感好奇	☐	☐	☐	☐
6. 對每事也提高警覺	☐	☐	☐	☐
7. 奮發的，極為興奮的	☐	☐	☐	☐
8. 熱心的	☐	☐	☐	☐
9. 親切而有同情心的	☐	☐	☐	☐
10.感到抑鬱	☐	☐	☐	☐
11.焦慮不安	☐	☐	☐	☐
12.憂愁的	☐	☐	☐	☐
13.感到沮喪	☐	☐	☐	☐
14.孤獨的	☐	☐	☐	☐

【全卷完，多謝合作】

APPENDIX IV

QUESTIONNAIRE (ENGLISH VERSION)

**A STUDY OF LIFE EVENTS AND PSYCHOLOGICAL
WELL-BEING AMONG OLDER PERSONS: THE ROLE OF
SELF-ESTEEM, COPING AND LOCUS OF CONTROL**

I am carrying out a research on the relationship between life events, self-esteem, coping, locus of control and psychological well-being among older persons in Hong Kong. To do this I rely on information from you. I would therefore be grateful if you would take the time to complete the following questionnaire.

- All the information provided will be treat **in the strictest confidence**.
- No other people will see the completed questionnaire except the member of the research team.
- Only the investigator of the study will have access to the completed questionnaires.
- Only general trends will be reported. **No individual will be identified.**

Thank you very much for your help.

Billy She
(Investigator)

Section 1 – Personal information

1. Gender: ☐Male ☐Female
2. Age: _____ years old
3. Marital status: ☐Married ☐Single ☐Divorced ☐Separated
☐Widowed ☐No answer
4. No. of children: _____ son(s) _____ daughter(s)
5. Education level: ☐No education ☐Private tuition ☐Primary
☐Lower secondary ☐Upper secondary ☐Tertiary or above
☐No answer / Forgotten
6. Religious belief: ☐No belief ☐Catholic ☐Christian ☐Buddhist
☐Taoist ☐Other _____
7. Residential type: ☐Public housing ☐Private housing ☐Nursing
☐Aged hostel ☐Other _____
8. Living with: ☐Alone ☐Spouse ☐Children ☐Spouse & children
☐Siblings ☐Relatives ☐Friends ☐Other _____
9. Employment status: ☐Retired ☐Unemployed ☐Working (FT)
☐Working (PT) ☐Working (Temp.) ☐No answer
10. Main source of income: ☐Salary ☐Children ☐Retirement pension
☐Saving ☐Government ☐Other _____
11. Is the money enough for daily expenses?
☐More than enough ☐Just enough ☐Not enough ☐Extremely not enough

Section 2 – Health status

1. In general would you say your health is:
☐Poor ☐Fair ☐Good ☐Very good ☐Excellent

2. How true or false is each of the following statement for you?
 1=Definitely false; 2=Mostly false; 3=Don't know; 4=Mostly true; 5=Definitely true.
a. I seem to get sick a little easier than other people.	1	2	3	4	5
b. I am as healthy as anybody I know.	1	2	3	4	5
c. I expect my health to get worse.	1	2	3	4	5
d. My health is excellent.	1	2	3	4	5
3. Are you suffering from the following illnesses (can choose more than one)?
- ☐ Rheumatism ☐ Hypertension ☐ Fracture ☐ Gastric ailment ☐ Diabetes mellitus
- ☐ Chronic bronchitis ☐ Coronary artery diseases ☐ Hypothyroidism
- ☐ Incontinence (urination) ☐ Incontinence (faeces) ☐ Stroke ☐ Hyperthyroidism
- ☐ Cancer ☐ Kidney ailment ☐ Chronic hepatitis ☐ Osteoporosis ☐ Other _____

Section 3 – Life events

	Yes	No	Forgotten
1. Death of spouse	☐	☐	☐
2. Divorced	☐	☐	☐
3. Marital separation	☐	☐	☐
4. Death of close family members/siblings	☐	☐	☐
5. Injury/Illnesses	☐	☐	☐
6. Son or daughter unemployed	☐	☐	☐
7. Retirement	☐	☐	☐
8. Injury/Illnesses of family members	☐	☐	☐
9. Gain of new family members (e.g. becoming grandparents)	☐	☐	☐
10. Change in financial status	☐	☐	☐
11. Death of good friends	☐	☐	☐
12. Increase frequency of couple quarrel	☐	☐	☐
13. Son or daughter leaving home, or emigration	☐	☐	☐
14. Poor relation with in-laws	☐	☐	☐
15. Spouse starts a new job/stop working	☐	☐	☐
16. Change in living condition	☐	☐	☐
17. Change in personal habits	☐	☐	☐
18. Change in residence	☐	☐	☐
19. Change in leisure activities (e.g. increasing time of watching TV)	☐	☐	☐
20. Change in social activities (e.g. increasing frequency of participation)	☐	☐	☐
21. Change in sleeping habit	☐	☐	☐
22. Change in frequency of family gathering	☐	☐	☐
23. Change in eating habit	☐	☐	☐

Section 4 – Self-esteem

	Strongly disagree	Disagree	Agree	Strongly agree
1. I feel I have a number of good qualities.	1	2	3	4
2. I wish I could have more respect for myself.	1	2	3	4
3. I feel I am a person of worth, at least on an equal plane with others.	1	2	3	4
4. I feel I do not have much to proud of.	1	2	3	4
5. I take a positive attitude toward myself.	1	2	3	4
6. I certainly feel useless at times.	1	2	3	4
7. All in all, I am inclined to feel that I am a failure.	1	2	3	4
8. I am able to do things as well as most other people.	1	2	3	4
9. At times I think I am no good at all.	1	2	3	4
10. On the whole, I am satisfied with myself.	1	2	3	4

Section 5 – Locus of control

1. Generally speaking, who controls your life or things that happen on you?
☐ I, myself ☐ God or fate ☐ Don't know

	Strongly disagree	Disagree	Agree	Strongly agree
2. Man's will, not heaven, decide.	1	2	3	4
3. Human effort is the decisive factor.	1	2	3	4
4. There is no need to be afraid of "change of the heaven".	1	2	3	4
5. You should follow your own aim to achieve success.	1	2	3	4
6. You should resign yourself to your fate.	1	2	3	4
7. Life and death are decreed by fate.	1	2	3	4
8. Wealth and rank are matters of destiny.	1	2	3	4
9. Whatever human minds intend, it's heaven that decides the end.	1	2	3	4

Section 6 – Coping strategies

***Please choose **ONE option from Part A** and **ONE from Part B**.

For Part A: 1=Use it every time; 2=Use it a lot; 3=Use it rarely; 4=Never use it.

For Part B: 1=Very effective; 2=Effective; 3=No effect; 4=Counter-effect.

	<u>Part A</u>				<u>Part B</u>			
1. Considered several alternatives for handling the problem.	1	2	3	4	1	2	3	4
2. Went over the situation in my mind to try to understand it.	1	2	3	4	1	2	3	4
3. Tried to step back from the situation and to be more objective.	1	2	3	4	1	2	3	4
4. Talked with professional person about the problem.	1	2	3	4	1	2	3	4
5. Got busy with other things to keep my mind off the problem.	1	2	3	4	1	2	3	4
6. Avoided talking with my spouse about the problem.	1	2	3	4	1	2	3	4
7. Tried to look at the positive side of the situation.	1	2	3	4	1	2	3	4
8. Encouraged myself by reminding myself that there are people who are worse off than I.	1	2	3	4	1	2	3	4
9. I cried.	1	2	3	4	1	2	3	4
10. Asked for compassion of the people around me.	1	2	3	4	1	2	3	4
11. Took it out on other people.	1	2	3	4	1	2	3	4
12. Discussed the problem with my relatives.	1	2	3	4	1	2	3	4
13. Discussed the problem with my friends.	1	2	3	4	1	2	3	4

Section 7 – Psychological well-being

***Rate the frequency with which each of the following feeling has been experienced during the past month.

	<u>Very frequently</u>	<u>Often</u>	<u>Rarely</u>	<u>Never</u>
1. Energetic	1	2	3	4
2. Interested	1	2	3	4
3. Personal pride in something	1	2	3	4
4. Elated	1	2	3	4
5. Curious	1	2	3	4
6. Alert	1	2	3	4
7. Aroused	1	2	3	4
8. Enthusiastic	1	2	3	4
9. Warmhearted	1	2	3	4
10. Depressed	1	2	3	4
11. Worried	1	2	3	4
12. Sad	1	2	3	4
13. Blue	1	2	3	4
14. Lonely	1	2	3	4

- END -

APPENDIX V

LIFE CHANGE UNIT

(LCU)

Based on their famous 1967 study and follow-up studies, Dr. Thomas H. Holmes and Dr. Richard H. Rahe developed the Social Readjustment Rating Scale (SRRS). They had suggested that stressful events would be positively correlated with illness. The SRRS demonstrated a positive correlation between the total stress people experienced within a year and their increased chances of becoming ill. The Table in the next page is a list of stress inducing events, in the order of their Life Change Unit (LCU), from high to low.

Life Event	LCU
1. Death of spouse	100
2. Divorce	73
3. Marital separation	65
4. Jail term	63
5. Death of a close family member	63
6. Personal injury or illness	53
7. Marriage	50
8. Being fired from work	47
9. Reconciliation with spouse	45
10. Retirement	45
11. Change in health of family member	44
12. Pregnancy	40
13. Sexual difficulties	39
14. Addition of family member	39
15. Major business readjustment	39
16. Major change in financial state	38
17. Death of a close friend	37
18. Changing to a different line of work	36
19. Change in frequency of arguments with spouse	35
20. Mortgage for loan or major purchase over \$15,000	31
21. Foreclosure on a mortgage or loan	30
22. Major change in responsibilities at work	29
23. Children leaving home	29
24. Trouble with in-laws	29
25. Outstanding personal achievement	28
26. Spouse begins or stops work	26
27. Starting or ending school	26
28. Change in living conditions	25
29. Revision of personal habits (dress, manners, associations)	24
30. Trouble with boss	23
31. Change in work hours, conditions	20
32. Change in residence	20
33. Change in school	20
34. Change in recreational activities	19
35. Change in church activities	19
36. Change in social activities	18
37. Mortgage or loan under \$15,000	17
38. Change in sleeping habits	16
39. Change in number of family gatherings	15
40. Change in eating habits	15
41. Vacation	13
42. Christmas	12
43. Minor violation of the law	11

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