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MINOR STRESSORS AND UPLIFTS, AFFECT INTENSITY, AND OPTIMISM AS INFLUENCES ON HEALTH OF THE ELDERLY.

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ABSTRACT

An investigation was undertaken to examine the influence of minor stressors, uplifts, affect intensity, and dispositional optimism on the health of the elderly. The function of affect intensity and dispositional optimism as possible moderators of the relationships between minor stressors and uplifts to objective and subjective health was examined. In addition, the relationships between stressors and uplifts to somatic symptoms and subjective health were explored for causal effects. A sample of 114 elderly individuals, drawn from Fielding and Palmerston North, completed two questionnaires which included measures of hassles, uplifts, dispositional optimism, affect intensity, subjective health, somatic symptoms, functional limitation, and chronic ill-health. Uplifts were unexpectedly found to be related to subjective health. Neither dispositional optimism nor affect intensity were found to moderate the stressor-health or uplift-health relationships. Stressors were not found to cause ill-health. Our findings add further weight to the view that subjective health is a useful and valuable measure of health in the elderly. The tenuous nature of the moderating effects of dispositional characteristics on the stressor-health and uplift-health relationships are discussed. Reasons for stressors not being causative of ill-health in this sample are considered. Finally, our study provides evidence for constancy and stability in the lives of elderly people.

To the memory of my late mother Doreen Hazel Laird.

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CHAPTER I

INTRODUCTION

Much of modern research into stress has focused on "dramatic events and severely taxing situations" (Kanner, Coyne, Schaefer, & Lazarus, 1981, p. 2). This focus is no more evident than in the literature on life events. This approach conceptualizes stressors as being discrete events that require adjustment in one's life pattern. The seminal work on life events was carried out by Holmes and Rahe (1967). These researchers, backed by modest empirical support, concluded that the readjustment required by major life changes substantially increases the risk of physical illness. Numerous studies have made use of the life events approach (e.g. Byrne & Whyte, 1980; Dohrenwend & Dohrenwend, 1974; Holmes & Rahe, 1967; McFarlane, Norman, Streiner, Roy, & Scott, 1980).

The life events approach has been subjected to a great deal of criticism in recent years. The Holmes Social Readjustment Rating Scale (Holmes & Rahe, 1967) has been criticized on the basis that substantial portions of the scale can be considered symptoms of physical and mental illness, thus confounding this measure with measures of health outcomes (see Brown, 1974; Hudgens, 1974). The assumptions on which the approach is based have been questioned (e.g. Kaplan, 1979; Mechanic, 1974; Sarason, Johnson, & Siegel, 1978) and scale construction has also been criticized (e.g. Rabkin & Struening, 1976). Numerous other conceptual, methodological, and empirical limitations of the life events approach have also been addressed (e.g. Brown, 1974; Cleary, 1980; DeLongis, Coyne, Dakof, Folkman, & Lazarus, 1982; Dohrenwend, 1974; Dohrenwend & Dohrenwend, 1978; Kanner et al.,

1981; Lazarus & DeLongis, 1983; Perkins, 1982; Sarason, DeMonchaux, & Hunt, 1975; Wershaw & Reinhart, 1974).

The domination of this approach to stress measurement is somewhat curious in the light of its efficacy. Rabkin and Struening (1976) report that cumulated life events (whether weighted or otherwise) relate only weakly with health outcomes, the average relationship being around .12. Rabkin and Struening (1976, p. 1015) conclude that "In practical terms ..... life event scores have not been shown to be predictors of the probability of future illness".

The life events approach has dominated stress research for a number of reasons. Most significantly, researchers have noted that it has been difficult to study stress in more sophisticated ways, such as considering the subjective significance of an event (Horowitz, Wilner, & Alverez, 1979) or in taking into account individual differences in coping skills and resources (Andrews, Tennant, Hewson, & Schonell, 1978). Ironically, in the absence of superior alternative approaches, the inability to overcome weaknesses in the life events approach has lead to its continued use in recent years (Kanner et al., 1981).

Hassles Research

In contrast to the life events approach, Lazarus and his colleagues have presented an alternative approach to stress measurement. In a series of theoretical papers (e.g. Coyne, Kanner, & Hulley, 1979; Kanner & Coyne, 1979; Lazarus, 1980; Lazarus, 1984; Lazarus & Cohen, 1977; Lazarus, Kanner, & Folkman, 1980b) the adaptational significance of relatively minor stresses and pleasures in everyday life is proposed. Lazarus termed these minor stressors and pleasures "hassles" and "uplifts". It is clear that hassles and uplifts are quite different conceptually from life events. An essential difference is that hassles account for an individual's psychological situation (Lewin, 1936, 1951); that is, the environment as perceived and reacted to as opposed to the

objective environment (Lazarus, 1984). Lazarus suggests that the concept of hassles implies a knowing person who appraises the significance of what is happening to his or her wellbeing. This appraisal process is determined to some degree by the individual's beliefs, values and commitments. According to Kanner et al. (1981) many hassles have their origin in the person's characteristic style, routine environment, or their interaction; and thus are quite different from the impact life events have on an individual. Hassles and uplifts patterns, then, will tell us something about the psychodynamics and sociodynamics of stress, coping, and adaptation (Lazarus, 1984). This point is summarized by Weinberger, Hiner, and Tierney (1987, p. 20): "The introduction of hassles is an important concept because it delineates a social-psychological mechanism by which life change events can affect health."

Kanner et al. (1981) proceeded to develop a stress measure, the Hassles Scale, which focuses on these relatively minor events. Daily hassles are defined by Lazarus (1984, p. 376) to be "experiences and conditions of daily living that have been appraised as salient or threatening to the endorser's wellbeing." In contrast, Lazarus (1984, p. 376) defined daily uplifts to be "experiences and conditions of daily living that have been appraised as salient and positive or favourable to the endorser's wellbeing."

There appears to be merit in studying uplifts along with hassles (Kanner et al., 1981). Lowenthal and Chiriboga (1973) report that a person's resources and deficits taken together predict adaptation better than either alone. Gerstein, Langer, Eisenberg, and Orzeck (1974) emphasize a balance between desirability and undesirability of life events as the critical element in their effect on health status. These and related studies (e.g. Kanner, Kafry, & Pines, 1978) argue for a tandem measurement of both hassles and uplifts. The measurement of hassles alone, without a regard for uplifts, could produce a distorted conception of the relationship between stress and illness (Kanner et al., 1981).

The major finding that stems from the work of Lazarus and his colleagues concerns the relative efficacy of the life events approach compared to the hassles approach to stress measurement. A number of researchers (e.g. Burks & Martin, 1985; DeLongis et al., 1982; Holahan, Holahan, & Belk, 1984; Kanner et al., 1981; Weinberger et al., 1987) report that hassles are more strongly associated with adaptational outcomes than are life events. Lazarus (1984, p. 377) reported that "hassles frequency and intensity (are) capable of explaining psychological and somatic health better than life events can, (with) these bivariate relationships to health being quite robust." Further, all the variance accounted for by life events can also be accounted for by hassles and, in addition, hassles add their own unique variance to the relationship. Monroe (1983) has suggested that hassles are a truly independent predictor of disturbance, not merely mediators of the effect of life events. According to this research, hassles are a unique psychosocial dimension fully predictive of dysfunction. Burks and Martin (1985) did find a significant interaction between the two types of stressors, but it explained only a very small amount of variance in symptoms. The utility of hassles research, then, is clearly established and we now go on to examine some of the more basic findings from this research.

Kanner et al. (1981) report a mean hassles/uplifts correlation using frequency scores of .51 ($p<.001$) and that for intensity scores of .28 ($p<.01$). Here, frequency scores are computed by calculating the number of items checked. Intensity scores are computed by calculating cumulative severity, being the summation of item scores, and dividing by frequency. This positive relationship reflects either a common response style or a tendency that persons with many hassles also have many uplifts, and for those who perceive their hassles as intense do so also with respect to uplifts (Kanner et al., 1981). Few studies have examined the stability of hassles over time. Kanner et al. (1981) report that the average month-to-month correlation over nine months for hassles frequency was .79. The same figure for intensity of hassles in this study was much lower at .48. DeLongis, Folkman, and Lazarus (1988) report a mean

day-to-day correlation for hassles frequency of .77, with a mean monthly correlation of .82. According to DeLongis et al. (1982) the average monthly test-retest correlation for uplifts over nine administrations is .72 for frequency scores and .60 for intensity scores.

Hassles, Uplifts and Health

There is little agreement as to what constitutes an adequate theoretical and operational definition of health (Wolinsky & Zusman, 1980). There is, however, agreement that the concept consists of two separate and distinct states, objective health and subjective health (Shanas et al., 1968). In their usual context, both of these states are taken to be referring to an individual's somatic health.

A number of studies (e.g. Cox, Taylor, Nowacek, Holley-Wilcox, & Pohl, 1984; DeLongis et al., 1982; Holahan et al., 1984; Kanner et al., 1981; Lazarus, 1984; Monroe, 1983; Weinberger et al., 1987; Zarski, 1984) report a positive relationship between hassles and objective health. This means that the greater the number of hassles perceived by an individual the greater the number of somatic symptoms reported.

Research by Holahan et al. (1984) used an elderly sample and concluded that life events and hassles were associated with psychological distress and physical symptoms in men; and hassles alone were associated with these outcomes for women. In research carried out by DeLongis et al. (1982) hassles frequency and intensity were found to be significantly related to somatic symptoms. These researchers found a low order positive correlation between life events and somatic illness; with hassles adding significantly to the relationship between life events and somatic illness. When the effects of life events were partialed out, hassles remained significantly related to somatic illness.

A number of researchers (e.g. DeLongis et al., 1982; Zarski, 1984) report no relationship between uplifts and health. It appears that any relationship that does exist between these two variables can be accounted for in terms of uplifts sharing variance with hassles. When this shared variance is removed, uplifts do not relate to somatic health at all (DeLongis et al., 1982). According to Lazarus (1984) uplifts do not buffer the deleterious effects of stress. He hypothesizes that it is the ability of the individual to put a positive light on experiences and have adaptive expectations that allow for the experience of uplifts.

A number of researchers propose mechanisms to explain the relationship between hassles and health. DeLongis et al. (1982) hypothesize that a stable pattern of stress is more likely to have impact on health. According to Kanner et al. (1981) no individual is likely to lead a hassle-free life and consequently the impact of hassles on physical health must depend on factors such as a chronically high frequency of hassles, the heightening of hassles during a crisis, or the presence of one or a few repeated hassles of compelling psychological importance. Kaplan (1979) has argued that hassles may operate via their affective significance to an individual or by disrupting characteristic coping processes. Several possible explanations exist, and there has been limited research attempting to establish the exact mechanisms involved.

We should note also that some kinds of health outcomes are likely to be unresponsive to stress. Disorders such as atherosclerosis, Alzheimer's disease etc are not particularly subject to changes in day-to-day stress levels, whereas the psychosomatic illnesses are likely to be subject to changes in stress levels (Lazarus, 1984).

According to Pennebaker (1982) symptom reporting represents only an imperfect measure of underlying physiological activity. He comments that the self-report of physical symptoms is influenced by other factors, including those that are more

cognitive, cultural, and psychological in nature. Zarski (1984) recommends a multidimensional approach to the measurement of health to ensure its comprehensive assessment. Measures of functional limitation and chronic ill-health are therefore included in the present study.

Functional limitations

Research by Belloc, Breslow, and Hockstim (1971) report that the percentage of persons with disability rises rapidly with age. According to this research over one-third of individuals in the age group 65-74 years have some disability, and nearly half of those over the age of 75 years are disabled. The inclusion of a functional limitation measure when studying the elderly would, therefore, appear to be most relevant.

Assessment of this type of measure can be carried out by trained assessors of functional disability (Martini & McDowell, 1976) or via the use of functional status questionnaires. Either type of assessment is designed to elicit behavioural rather than clinical evidence. Perhaps the most commonly used measure of functional limitation is the index Activities of Daily Living (ADL) (Katz, Ford, Moskowitz, Jacobson, & Jaffe, 1963). This instrument assesses six areas of functioning which can be considered primarily biological: bathing, dressing, toileting, transfer, continence and feeding. The score obtained reflects the degree to which an individual is capable of independent living.

Two shortcomings of functional disability measures are their failure to distinguish disability due to chronic disease from those of acute conditions and also their instability in measuring certain disease states (Harvey, 1985). ADL scores, for example, would change substantially with changes in disability attributable to an unstable disease such as multiple sclerosis, even though the prognosis of the patient would remain consistently morbid (Stone, Cohen, & Adler, 1979). In spite of these

shortcomings it appears valuable to include a measure of functional limitation in the present study. The relevancy of this type of measure to the elderly is clearly indicated.

The relationship between stressors and uplifts to functional limitations in the elderly has not been previously researched. It is anticipated that stressors will predict functional limitations but uplifts will not. A result paralleling established hassles research, in which stressors relate to somatic symptoms but uplifts do not (e.g. Lazarus, 1984), is expected.

Chronic ill-health

Wingate (1976, p. 103) defines chronic (diseases) to be "conditions of long duration, often characterised by a gradual onset". Belloc et al. (1971) report that chronic conditions are much more prevalent among the elderly compared to younger groups. According to this research individuals with somatic symptoms but without chronic conditions make up 40% of the group under the age of 35 years, but only 7% in the age groups over 65 years. The inclusion of chronic ill-health as a further objective health measure in the present study would, then, appear to be most relevant.

The relationship of this variable to stressors and uplifts has not been previously determined. It is anticipated that stressors will relate to chronic ill-health but uplifts will not (c.f. Lazarus, 1984).

Subjective Health

According to Lipman (1962) research in the area of subjective health has tended to focus on the elderly. Two reasons for this tendency can be offered. First, the number of health problems encountered by this group is greater than other groups and, second, health has a distinct saliency to the elderly. The present research includes subjective health as a further measure of health.

Harvey and Chamberlain (1988, p. 3) define subjective health to be "the perception an individual holds of his or her health status." In essence, self-ratings represent perceived (subjective) health rather than actual (objective) health. A number of researchers (e.g. Ferraro, 1980; LaRue, Bank, Jarvik, & Hetland, 1979; Mossey & Shapiro, 1982; Suchman, Phillips, & Streib, 1958) report low to moderate correlations ranging from .15 to .36 between objective and subjective health. According to Suchman et al. (1958) the process of self-rating health draws upon numerous factors other than those involved in making judgments about objective health. Barsky (1988) delineates four factors to account for the discrepancy between objective and subjective assessment of health. First, the advance of medicine has lowered mortality rate due to acute infectious diseases, and thus the relative prevalence of chronic and degenerative disorders has increased. Second, society's heightened consciousness concerning health has led to greater self-scrutiny and increased awareness of symptomatology. Third, the commercialization of health, particularly by the media, has led to a climate of apprehension, insecurity and alarm about disease. Finally, the progressive medicalization of daily life has led to unrealistic expectations of cure that make untreatable infirmities and unavoidable ailments seem even worse.

A number of studies have validated subjective self-ratings of health by elderly persons. Aside from being strongly related with a physician's assessment (e.g. LaRue et al., 1979), subjective health status has been associated with increased number of visits to a physician, days in bed, and days hospitalized (Linn & Linn, 1980). There is growing evidence in the literature that the use of subjective health self-report is both reliable and valid, especially for the elderly (Weinberger et al., 1987). Subjective health assessment therefore can be an economical means of gaining information about the health of the elderly (Ferraro, 1980).

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The relationship between hassles and uplifts to subjective health is yet to be determined. However, subjective health is likely to be more strongly related to stress than objective health because hassles, uplifts and subjective health all involve perceptions by the individual. This is quite different from the processes involved in making judgments about objective health.

Hassles, Health and Personality

Interest and enthusiasm in the relationship between personality and health outcome variables has waxed and waned for the last sixty years (Suls & Rittenhouse, 1987). Often referred to in the discipline of behavioural medicine, the personality-health relationship has generated a great deal of interest over the years.

According to Cronkite and Moos (1984) there are two categories of moderators of the stress-health relationship. The first of these is social resources. The common assertion here is that intimate ties, such as those afforded in marriage, buffer the effects of stress. The second category can be labelled coping. Here, a typical distinction is made between coping resources (e.g. dispositions) and coping responses (behaviours and cognitive assessments). Numerous studies have examined the moderating effect of dispositions (e.g. Antonovsky, 1979; Johnson & Sarason, 1979; Kobasa, 1979; Kobasa, Maddi, & Courington, 1981; Kohn, 1972, 1977; Pearlin & Schooler, 1978; Scheier & Carver, 1985; Wheaton, 1983; Worden & Sobel, 1978; Zika & Chamberlain, 1987), and this is also a focus in the present study.

A basic question is addressed in this type of research: Why do some people develop chronic disease and psychological disorder after exposure to stress and others do not? The assumption underlying this type of research is that personality characteristics dispose the person to cope in certain ways that either impair or facilitate the various components of adaptational status (Folkman, Lazarus, Gruen, & DeLongis, 1986).

In general, older research in this area has suffered from a lack of reliable and valid conceptual and methodological tools (Suls et al., 1987), but in more recent research these shortcomings are being addressed.

The personality characteristics dispositional optimism (Scheier & Carver, 1985) and affect intensity (Larsen & Diener, 1987) are relatively recent constructs and are previously uninvestigated in their roles as moderators. In addition, both these dispositions are found to relate to physical health and are therefore plausible contenders for investigation. The possible moderating roles of dispositional optimism and affect intensity are considered in the present study.

Affect Intensity

Affect intensity is described by Larsen and Diener (1987, p. 4) to be "a stable individual difference characteristic which is defined in terms of the average or characteristic magnitude of emotional responsiveness." Affect intensity refers to the typical strength of affective states, regardless of how frequently those states are experienced. It is this notion that distinguishes affect intensity from the more traditional emotionality dispositional characteristic (Larsen & Diener, 1987). According to Larsen and Diener high affect intensity individuals do not have more frequent occurrences of either positive or negative life events than low affect intensity individuals, but simply react more strongly to those events.

Some correlates of affect intensity include the undertaking of more complex goals, more fragmented social network, higher levels of activity, extroversion, emotionality, and psychosomatic distress symptoms such as headaches, irritability, and nervousness (Larsen & Diener, 1987). However, high affect intensity individuals do not score lower on measures of happiness, life satisfaction, or psychological wellbeing; despite the toll that a higher level of affect has on health outcomes (Larsen & Diener, 1987). Affect intensity shows clear relation to mood and various mood constructs. This

dispositional characteristic covaries with daily mood intensity, specific daily moods, general mood variability, and clinical indicators of mood disturbance (Larsen & Diener, 1987).

Larsen and Diener report that affect intensity correlates with measures of somatic and neurotic health. Research conducted by Derogatis (1975) assessed the relationship between a strongly related construct of affect intensity and somatic disturbance. These researchers found that the total number of symptoms endorsed (e.g. headaches, heart pounding, shortness of breath etc) was positively related to this construct. Larsen and Diener (1987) report that in a number of studies concerned with daily events and affect intensity it has been found that high affect intensity individuals rate their daily events as being more important and more salient.

It appears there are age and sex differences in affect intensity. Previous research indicates that young persons and females report greater average levels of both positive and negative affect over time (Bradburn, 1969; Cameron, 1975; Campbell, 1981; Gurin, Veroff, & Feld, 1960). Diener, Sandivik, and Larsen (1985) found that these two groups are also higher in affect intensity than other groups. Further, they found that affect intensity decreases with age.

Dispositional Optimism

Scheier and Carver (1987) define optimism to be a generalized expectation that good things will happen. According to these researchers expectancies of this type are likely to impact on the types of problems that arise during the course of day-to-day living.

Dispositional optimism appears to be linked to a number of different positive health outcomes. A central result is that dispositional optimism correlates with somatic health (Reker & Wong, 1983; Scheier & Carver, 1985; Scheier & Carver, 1987; Scheier et al., 1986).

Reker and Wong (1983) studied groups of institutionalized and non-institutionalized elderly persons. Initially a measure of optimism was completed by respondents and two years later a subset of these respondents reported their physical symptoms, and provided additional information about their overall physical, psychological and general wellbeing. These researchers found that persons assessed as optimists initially reported fewer symptoms, along with having more positive physical, psychological and general wellbeing.

In a study carried out by Scheier and Carver (1987) respondents completed a measure of optimism and a measure of somatic symptoms twice, at the outset of the study and four weeks later. These researchers found that optimism was negatively associated with symptom reporting at both assessment times, and that optimism and symptom reporting were also negatively correlated across time.

Scheier et al. (1986) examined the impact of optimism on patients recovering from coronary artery bypass surgery. Optimists were judged to have a significantly faster rate of recovery than pessimists. Further, optimists tended to reach 'milestones to recovery' faster than pessimists. In general, optimists seemed to show fewer signs of intraoperative complications and to evidence a faster rate of recovery.

Scheier and Carver (1987) present a mechanism to explain why dispositional optimists enjoy better somatic health. Essentially, optimism instills a sense of confidence in the individual to deal with whatever obstacles are encountered during daily activity. Thus, these obstacles are likely to be less disruptive and have less adverse consequences for optimists than for pessimists (c.f. Reich & Zautra, 1981; Zautra & Simons, 1979). Optimists, then, display coping strategies that involve continued positive striving and making the best of whatever situation they are confronted with. Pessimists, in contrast, may try to deny the stressor's reality, are

preoccupied with their emotional distress, and tend to disengage from the goals with which the stressor is interfering. Stated more simply, when confronting adversity optimists keep trying, whereas pessimists are more likely to become emotional and disengage from the activity. Scheier & Carver (1985) also suggest an alternative mechanism that optimistic persons may take steps to deal with presenting problems sooner than persons who are less optimistic. The benefit to physical health would be attributable to the increased likelihood of successful coping that comes from confronting problems early, before they can become overly burdensome.

A number of studies provide evidence that there is also a relationship between optimism and subjective health. Maddox (1962) reports a consistent positive relationship between subjective assessments of good health and high levels of activity, with high levels of activity being associated with optimistic individuals. According to Tissue (1972) positive self-image, high morale and activity, and a minimal degree of anomia correlates with subjective assessments of good health in the elderly. Other researchers (e.g. Freidsam & Martin, 1963; Maddox, 1962; Nowlin, 1972) have found poor adjustment to the environment, depression, worries about health to be associated with the subjective assessment of poor health.

Aging and the Elderly

One view of the elderly is that they lack the ability to adapt to stressful situations. Older individuals are sometimes portrayed as being rigid in their responses or as using regressive defense mechanisms that distort reality instead of dealing effectively with it (e.g. Gutmann, 1970; Pfeiffer, 1977). Other literature (e.g. Holahan et al., 1984; McCrae, 1982) does not support this view and suggests that adaptive defense mechanisms are employed by the elderly. Simon (1980) estimates that mental health problems are limited to only 20 to 25 percent of the older population. Harris (1975) reports that four in five older individuals look back on life with satisfaction; and that three out of four feel that life is as interesting as ever.

Studies of age differences in stress have been largely confined to life events (e.g. Chiriboga & Cutler, 1980; Dekker & Webb, 1974; Goldberg & Comstock, 1980; Holmes & Masuda, 1974; Lazarus & DeLongis, 1983; Lowenthal, Thurnher, & Chiriboga, 1975; Uhlenhuth, Lipman, Balter, & Stern, 1974). A general finding from this research is that, compared to younger people, the older individual experiences fewer life events although they experience more loss events (e.g. death of a spouse).

Holahan et al. (1984) evaluated the relationship between life events, hassles, and psychological wellbeing in a 65-75 year age group. These researchers concluded that hassles are more strongly related to distress than are life events for this particular group. Chiriboga and Cutler (1980) reported similar findings. Holahan et al. (1984) suggest that the hassles reported by elderly persons reflect ongoing life strains which seem to be particularly relevant to them, rather than trivial disturbances. Health related issues such as concerns about health in general, concerns about weight, feelings that physical abilities are declining, and illness of a family member were among the most frequent hassles mentioned. Concerns over economic wellbeing was reflected in the frequent mention of rising prices. Women generally reported more hassles than men.

Research by Folkman, Lazarus, Pimley, and Novacek (1987) documents some of the major age differences in stress and coping. According to this research younger adults experience significantly more hassles in the domains of finance, work, home maintenance, family, and friends than older people do. This hassles pattern encountered by younger individuals may be accounted for in terms of role-related effects (Folkman et al., 1987). On the other hand, older individuals report proportionally more hassles in the areas of somatic health, financial concerns, and social issues (Folkman et al., 1987). It is likely that the disproportionate number of health hassles encountered by the elderly are age-related. Quite simply, health

problems increase in frequency and intensity as a direct function of age. Financial concerns and social issues are also likely to have age-related explanations in the case of the elderly.

In a study by Weinberger et al. (1987) high levels of hassles relating to health were reported by a group of elderly, low-income people suffering from osteoarthritis. Hassles were found to predict all three dimensions of the Arthritis Impact Measurement Scale; physical disability, psychological disability and pain. In passing, these researchers note that a large number of hassles items were irrelevant to this particular group.

In summary, apart from the above studies not a great deal of research has been done using hassles with older samples (Folkman et al., 1987). Some literature portrays the elderly as using predominantly regressive defense mechanisms (e.g. Pfeiffer, 1977), and other literature (e.g. McCrae) suggests that they use predominantly adaptive defense mechanisms.

Summary

Our discussion began with a brief consideration of the life events approach to stress research. By far the majority of research into stress has employed this methodology (Kanner et al., 1981). Even today, this approach continues to dominate despite numerous conceptual, methodological and empirical limitations (Lazarus, 1984).

In contrast to the life events approach, Lazarus and his colleagues present an alternative approach to stress measurement. These researchers (e.g. Lazarus, 1984) argue in favour of the adaptational significance of relatively minor stressors and pleasures, and termed these events "hassles" and "uplifts".

A most significant finding emerging from the work of Lazarus and others concerns the relative efficacy of the life events approach compared to the hassles approach. A

number of researchers (e.g. Kanner et al., 1981) report that hassles are more strongly associated with adaptational outcomes than are life events. Hassles, then, are a more effective predictor of health outcomes.

A number of researchers (e.g. Zarski, 1984) report a relationship between hassles and somatic health. DeLongis et al. (1982) hypothesize that a stable pattern of stress is more likely to have impact on health. Interestingly, research indicates that there is no corresponding relationship between uplifts and somatic health (e.g. Lazarus, 1984). DeLongis et al. (1982) comment that uplifts do not buffer the effects of stress or preserve health. It is hoped to replicate these two findings in the present study.

The relationship of hassles and uplifts to subjective health is yet to be determined. It is hypothesized that there will be a stronger relationship between hassles and subjective health than has been demonstrated between hassles and objective health. No relationship is expected between uplifts and subjective health.

Larsen and Diener (1987) report that affect intensity does not covary with measures of happiness, life satisfaction, or psychological wellbeing, but is found to be related to objective health. It is hypothesized that affect intensity will also be related to subjective health. It is postulated that individuals with high affect intensity will experience hassles and uplifts more strongly than individuals with low affect intensity. Thus, there should be a stronger relationship between stressors and health for high affect intensity individuals compared to low affect intensity individuals. Second, it is predicted that there will be a small but significant relationship between uplifts and health outcomes for high affect intensity individuals.

Dispositional optimism is linked to number of positive health outcomes (Scheier & Carver, 1987). Quite a few studies (e.g. Scheier & Carver, 1985) report that optimism correlates with somatic health. Scheier and Carver suggest that optimism

instills a sense of confidence in the individual to deal with whatever obstacles are encountered in daily activity; and thus these obstacles are likely to be less disruptive and have less adverse consequences for optimists. It is anticipated that dispositional optimism will be correlated with subjective health. An analogous set of hypotheses to those proposed for the possible moderating role of affect intensity are also examined for dispositional optimism.

There have only been a limited number of studies using the hassles stress measure with elderly samples (Folkman et al., 1987). A number of researchers (e.g. Pfeiffer, 1977) suggest that the elderly lack the ability to adapt to and cope with stress. Other research (e.g. McCrae, 1982) suggest that the elderly cope effectively with day-to-day stress.

The repeated measures design employed in our study lends itself nicely to an exploration of the possible causal relationships between hassles and uplifts to health measures. It is hypothesized that hassles do contribute to the etiological explanation of ill-health, and that uplifts do not.

The present study examines, in an older population, the relationship between stressors and uplifts to four different measures of somatic health, and the moderating effects of affect intensity and dispositional optimism on the stressor-health and uplift-health relationships are considered.

CHAPTER II

METHOD

The Sample

Respondents were drawn from elderly persons living in pensioner flats in the town of Fielding and the city of Palmerston North. Approximately half the sample was drawn from each centre. All respondents resided in homes owned by the Local Body. One criteria for entry to this accommodation is that the individual is aged 60 years or over. This is the same criteria for the inclusion of a respondent in the sample. All respondents were living independently or with minimal professional support from, for example, a community nurse.

No specific sampling procedure was used in the present study. Potential respondents were simply approached door-to-door by the researcher. Of those approached 53% agreed to participate in the study. A refusal rate of 47% represents individuals who were either out on two separate occasions, judged to be incapable of filling out the two questionnaires or who were simply uninterested in participating. Unless it was very obvious that the person approached would have considerable difficulty with the questionnaires he or she was encouraged to participate.

Respondents were eliminated from the study for three reasons. First, some respondents withdrew from the sample after having initially agreed to participate. With Questionnaire 1, administered in person, the attrition rate by withdrawal was 17%, and for Questionnaire 2, administered by post, the figure was 7%. Second, a few subjects returned either blank or vastly incomplete data and consequently were

also eliminated (Questionnaire 1, 7%, Questionnaire 2, 4%). Finally, two respondents were eliminated because they did not meet the age criteria of 60 years or over. These two individuals were accommodated in pensioner flats for reasons of disability. A total of 131 subjects completed Questionnaire 1 and a total of 120 completed Questionnaire 2, with 114 completing both questionnaires.

Demographic Information

Demographic statistics were computed for the 114 subjects that completed both questionnaires. These statistics are presented in detail in Table 1. Respondents ranged in age from 60 to 86 years, with a mean age of 72 years (SD = 6.6 years). Of the 114 respondents, 40 were male (35%) and 74 were female (65%). The higher percentage of females reflects two factors: first, elderly females have greater longevity than elderly males and, second, the distribution of the elderly in this type of accommodation favours females (Harvey, 1985). Almost all of the respondents (97%) were European, with 2% being Maori. Only one respondent was engaged in part-time work. All other respondents considered themselves to be retired. The majority of respondents were widowed (40%), with 35% being married or de-facto. Almost half the respondents (52%) had no high school education, with 34% responding they had completed some high school education. Two thirds of the respondents lived alone with most of these responding that they knew their neighbours well. The remaining third lived with their spouse.

Procedure

Data was collected over a 3 month period, from mid-June to mid-September, 1988. Two questionnaires (see Appendices 2 & 4) were administered, separated by a period of one month. The same data collection procedure was used for all respondents.

In the first instance, the researcher approached the Local Body administering accommodation for potential respondents, and was supplied with information on addresses.

Table 1: Age, sex, ethnicity, educational level, occupational status, marital status, and living situation for the sample (N=114).

	N	%
Age group		
60 - 64	11	9.7
65 - 69	30	26.6
70 - 74	33	29.2
75 - 79	17	15.0
80 - 84	19	16.8
85 and over	3	2.7
(missing)	1	
Sex		
Males	40	35.1
Females	74	64.9
Ethnicity		
European	111	97.4
Maori	2	1.8
Other	1	0.9
Educational level		
No high school	59	51.8
Some high school	39	34.2
Completed high school	12	10.5
More than high school	4	3.5
Occupational status		
Retired	113	99.1
Employed part-time	1	0.9
Marital status		
Single	13	11.4
Married or de-facto	40	35.1
Separated	4	3.5
Divorced	11	9.6
Widowed	46	40.4
Living situation		
Alone, do not know neighbours	22	19.3
Alone, know neighbours	53	46.5
With spouse	39	34.2

Respondents were approached to participate only during the daylight hours. With Questionnaire 1 respondents were approached in person at their residence, as it was felt that personal involvement would improve response rate. A letter (see Appendix 1) identifying the researcher and outlining the study was presented to each person. Occupants who agreed to participate had the questionnaire format explained, and

some time was spent ensuring that each respondent was clear on the requirements of answering. A date was arranged with the respondent to return and collect the completed questionnaire. The time period between administration and collection was normally no more than three days in an attempt to ensure a reasonable response rate.

Questionnaire 2 was sent by post one month after the completion of Questionnaire 1. Respondents who returned unusable first round data also received the posting, largely as a matter of courtesy. A self-addressed, post-paid envelope was included to maintain response rate. An enclosed letter (see Appendix 3) requested that respondents complete Questionnaire 2 within one or two days if at all possible. The researcher reapproached respondents who had not returned this questionnaire within about a week. Respondents were sent a summary of the findings upon completion of the study to thank and debrief them for their participation.

Survey Content

The format of both questionnaires was designed for self-completion by respondents. Questionnaire 1 contained measures of hassles, uplifts, dispositional optimism, emotional intensity, subjective health and somatic symptoms. Questionnaire 2 contained measures of hassles, uplifts, subjective health, somatic symptoms, functional limitation, chronic ill-health, as well as demographic questions. The variables emotional intensity, dispositional optimism, functional limitation and chronic ill-health were considered to be stable characteristics and were assessed only once. Hassles, uplifts, subjective health and somatic symptoms were measured on both occasions. A measure of state mood was included in both questionnaires but did not contribute to the study and was not analyzed.

The revised version of the Hassles and Uplifts Scales (DeLongis, 1985) was used to measure relatively minor stressors and uplifts. This 53 item version differs from the original in that redundant items and items suggesting psychological and somatic

symptoms have been eliminated. The scale items reflect a variety of everyday concerns: work, family, social activities, environment, practical considerations and finances. Each item is rated as both a potential hassle or uplift on 4-point scales ranging from 0 (Not at all or Not applicable) to 3 (A great deal). A few items were reworded to make them appropriate in a New Zealand context. DeLongis et al. (1982) report that the original version of the Hassles Scale has high test-retest coefficients (average r=.79) for the frequency of hassles and moderate reliability (average r=.48) for the intensity of hassles. The average test-retest correlation for uplifts frequency was .72 and for uplifts intensity was .60. Numerous researchers (e.g. Kanner et al., 1981) report that hassles are better predictors of adaptational outcomes than are life events, thus indicating the validity of the hassles measure.

The Life Orientation Test (LOT) (Scheier & Carver, 1985) was used to measure dispositional optimism. The LOT consists of 8 items, four phrased in a positive way (e.g. "In uncertain times, I usually expect the best") and four phrased in a negative way (e.g. "If something can go wrong for me it will"). Respondents indicated extent of agreement on a 5-point Likert scale, ranging from 1 (Strongly agree) to 5 (Strongly disagree). Factor analysis of the items indicates that the scale can be construed as unidimensional (Scheier & Carver, 1987). Internal reliability is adequate (Chronbach's alpha = .76) and the test-retest reliability is also satisfactory (r =.79 over a 4-week interval, .72 over a 13-week interval). Findings bearing on the convergent and discriminant validity of LOT are also encouraging. For example, Scheier & Carver (1985) report that the LOT correlates moderately in the theoretically appropriate direction with measures of internal-external control, hopelessness, alienation and perceived stress.

The Affect Intensity Measure (AIM) (Larsen & Diener, 1987) was used to measure affect intensity. This 40-item instrument assesses the characteristic magnitude or intensity with which individuals experience emotions. Respondents indicated on a 6-

point scale, ranging from 1 (Never) to 6 (Always) how they react to typical events. Larsen & Deiner (1987) report Chronbach alphas ranging from .90 to .94 across four separate samples. According to Larsen (1984, cited in Larsen & Diener, 1987) the test-retest reliabilities for the AIM at one, two and three month intervals are .80, .81, and .81 respectively. The validity of the AIM has been assessed relative to others ratings of affect intensity. In one study (Larsen & Diener, 1987) parental-report and peer-report of affect intensity correlated .50 and .41 respectively with the AIM. Further, other related constructs covary with the AIM. These include specific daily moods, the complexity of life situation, general mood variability, and clinical indicators of mood (Larsen & Diener, 1987).

Subjective health was measured with two items. One asked respondents to rate their current health compared to persons their own age, and was included as a relative measure of subjective health. A second asked respondents to rate their current health compared to the person in excellent health, and was included as a general measure of subjective health. Both items were rated on a 7-point scale ranging from 1 (Terrible) to 7 (Excellent). Measures similar to these have been used successfully in previous research on subjective health (LaRue et al., 1979; Wan, 1976). Heyman & Jeffers (1963) report that these types of subjective health measure have been found to be reliable. The strongest correlate of subjective health is objective health (Harvey & Chamberlain, 1988). Harvey (1985) reports correlations ranging from .41 to .61 between these two measures, which indicates the validity of subjective health measures.

Somatic symptoms were measured by the Cohen-Hoberman Inventory of Physical Symptoms (CHIPS) (Cohen & Hoberman, 1983). This inventory is a checklist of 39 common physical symptoms. Six items were deleted from this scale at the suggestion of the original authors (S. Cohen, personal communication, April 8, 1988). Items were selected to exclude symptoms of an obviously psychological nature. The scale

does, however, include some physical symptoms that could be viewed as psychosomatic. Items were rated for how much that problem bothered or distressed the respondent, on a 5-point scale ranging from 0 (Not at all) to 4 (Extremely). The internal reliability of the CHIPS is reported to be .88 (Cohen & Hoberman, 1983). These authors report that in two separate college samples, the CHIPS was found to be significantly correlated (.22 and .29) with the use of Student Health Facilities.

The instrument to measure functional limitations consisted of eight items designed to investigate the respondent's ability to carry out daily activities. Respondents were required to indicate either Yes or No to each item. The scale is taken from a World Health Organization draft research protocol (K. Chamberlain, personal communication, May 6, 1988). The reliability and validity of this measure are untested. Comparable instruments are the Activities of Daily Living (ADL) (Katz et al., 1963) and the Functional Status Index (FSI) (Reynolds, Rushing, & Miles, 1974) and these have been found to be reliable and valid. Reynolds et al. report that the FSI correlates in the expected direction with age (r=-.59), number of health contacts (r=.48) and the individual's subjective assessment of his or her health (r=-.72).

Chronic ill-health was measured by a 16 item extract from the Belloc et al. (1971) General Population Survey of Physical Health. Respondents were asked to indicate either Yes or No as to whether they suffered from any of the chronic physical conditions listed. This extract from Belloc et al.'s (1971) inventory requests respondents to list any chronic conditions they have that are not included in the inventory. Meltzer and Hochstim (1970) found this survey acceptably reliable and valid in comparison to medical records.

A final set of questions were included to canvas demographic information. Data on age, sex, ethnicity, education level, occupation, marital status and living situation was collected.

CHAPTER III

RESULTS

The presentation of results is divided into four sections. In the first instance, the hassles and uplifts patterns are described. A sequence of tables examining the correlational relationships among variables are next considered. Hierarchical multiple regression analyses which examine the moderating effect of affect intensity on the stressor-health and uplift-health relationships are then presented. Finally, the results of cross-lagged analyses exploring the causal relations among hassles and uplifts to somatic symptoms and subjective health are presented.

Hassles and uplifts patterns

Previous research (e.g. Folkman et al., 1987) reports that the elderly perceive frequent hassles in the areas of health, finances and social issues. In the present study the Hassles and Uplifts Scales were ranked to give the most frequently endorsed hassles and uplifts. Rankings were established by computing frequencies for each hassle and uplift using data from Questionnaire 1.

Table 2: Ten most frequently endorsed hassles (N=131).

Hassle	%
Your health	63.5
News events	57.6
Your physical abilities	55.6
Enough money for emergencies	55.6
Enough money for necessities	54.8
Enough money for extras	51.6
Conserving (gas, electricity, petrol etc)	50.8
The weather	49.6
Your medical care	48.8
Political or social issues	48.0

The hassles pattern indicates three main problem areas for elderly persons. First, health is considered to be the most salient hassle. The elderly rank their health and their physical abilities as the first and third most endorsed hassles. In addition, they rank their medical care in ninth position. Second, economic concerns figure as prominent hassles in the lives of these people. Enough money for emergencies, necessities, and extras are respectively ranked as the fourth, fifth, and sixth most frequent hassles. Last, the elderly consider news events and political or social issues to be important hassles. These are respectively ranked second and tenth.

Table 3: Ten most frequently endorsed uplifts (N=131).

Uplift	%
Home entertainment	87.1
Time spent with family	82.9
Recreation and entertainment outside the home (e.g. movies, sport, eating out, walking)	79.0
Amount of free time	76.0
Eating	75.8
Your friends	72.6
Your neighbourhood (e.g. neighbours, the area you live in)	71.8
Your children	70.4
Your environment (e.g. quality of air, noise levels, trees and greenery)	69.7
Your health	63.5

The uplifts pattern obtained suggests that the elderly derive pleasure from three main areas of their lives. In the first instance, contact with other people is seen as uplifting. Here, the elderly rank time spent with family, their friends and their children as the second, sixth and eighth most frequent uplifts respectively. A second area is relaxation where home entertainment is ranked first, recreation and entertainment outside the home is ranked third and amount of free time is ranked fourth. Finally, the neighbourhood and environment are generally seen as uplifting. It is interesting that health is also ranked among the top ten uplifts as well as being the most important

hassle. Health has considerable saliency to the elderly individual regardless of whether poor or good health is prevailing. This may be because the elderly anticipate declining health with age.

When the uplifts pattern is compared to the hassles pattern it is clear that uplifts are endorsed more frequently than hassles. This may mean that the elderly are more likely to endorse 'positive' events compared to 'negative' events.

Correlational Relationships

The Hassles and Uplifts Scales were further scored to provide cumulative severity scores, as recommended by Kanner et al. (1981). It was expected that hassles would be associated with uplifts, and that both hassles and uplifts would be stable over time. The intercorrelations between hassles and uplifts over the two measurements are presented in Table 4.

Table 4: Intercorrelations between hassles and uplifts across both times (N=114).

	Time 1		Time 2	
	Hassles	Uplifts	Hassles	Uplifts
Time 1				
Hassles	1.00	.24*	.76**	.19
Uplifts		1.00	.01	.62**
Time 2				
Hassles			1.00	.00
Uplifts				1.00

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

The hassles measure relates moderately to strongly with itself over time (r=.76), as does the uplifts measure (r=.62). There is a low relationship between hassles and uplifts (r=.24) at the first measurement. These measures have no relationship at all (r=0) at the second measurement. This last result is most unexpected in the light of previous research (e.g. Kanner et al., 1981), and an explanation for this is not clear. Other correlations between hassles and uplifts are not significant. It seems that the

frequencies of hassles and uplifts perceived by the elderly would appear to be stable over time, but that the relationship between hassles and uplifts over time is variable.

The three measures of objective health used in the present study are somatic symptoms, functional limitation and chronic ill-health. Each of these measures was summed over items to provide total frequency scores. The two subjective health measures are single items and consequently these are the scores used in computation. The intercorrelations among the various health measures are presented in Table 5.

Table 5: Intercorrelations between health measures across both times (N=111).

	1	2	3	4	5	6	7	8
Time 1								
1. Somatic symptoms	1.00	-.52*	-.64*	.91*	-.50*	-.54*	.37*	.37*
2. Relative subjective health		1.00	.83*	-.56*	.74*	.71*	-.48*	-.48*
3. General subjective health			1.00	-.65*	.66*	.69*	-.51*	-.57*
Time 2								
4. Somatic symptoms				1.00	-.57*	-.62*	.37*	.52*
5. Relative subjective health					1.00	.87*	-.49*	-.60*
6. General subjective health						1.00	-.52*	-.58*
7. Functional limitation							1.00	.36*
8. Chronic ill-health								1.00

* p<.001

Relationships among Time 1 health measures are all moderate to strong. Here, somatic symptoms correlates with relative subjective health at -.52 and with general subjective health at -.64. A strong correlation of .83 exists between the two subjective health measures. These results are replicated at Time 2.

Functional limitation is found to be moderately related to Time 1 health measures. This variable correlates with somatic symptoms at .37, and is associated with relative and general subjective health at -.48 and -.51 respectively. These results are replicated at Time 2. Similar results are found in the case of chronic ill-health. Here, at Time 1, chronic ill-health correlates moderately with somatic symptoms at .37 and

is associated with relative and general subjective health at -.48 and -.57 respectively. These results are also replicated at Time 2. Functional limitation is found to relate moderately with chronic ill-health at .36.

Of the four health outcomes measured only somatic symptoms and the subjective health measures are assessed twice. In general these two measures are found to be stable over time. Somatic symptoms appears to be particularly stable over the two measurements (r=.91). Relative subjective health is stable (r=.74), as is general subjective health (r=.69). To some degree these results are expected with only one month separating measurements.

As was predicted there is a moderate relationship between subjective and objective health measures, with correlations ranging from -.48 to -.65.

In summary, it is clear from the moderate relationships between the three objective health measures that each is measuring a different aspect of health. The stability of somatic symptoms and subjective health reflects little change in health status over a period of one month. Subjective and objective health are found to be related.

In line with results reported by Lazarus (1984) it was hypothesized that hassles would predict health but uplifts would not. The relationships between hassles, uplifts and the health measures are presented in Table 6.

A central result here is that hassles are predictive of the objective health measures, somatic symptoms and chronic ill-health. Moderate correlations range from .32 to .40 and our results provide support for previous research (e.g. Lazarus, 1984). Further, this relationship is stable over time. The only objective health measure which is not predicted by hassles is functional limitation (r=.18). This appears reasonable in that functional limitations are unlikely to be responsive to stress.

Hassles also predict subjective health, with significant relations ranging from -.24 to -.32. These associations are not as strong as those that exist between hassles and the objective health measures. The relationship between hassles and subjective health is also stable over time.

Table 6: Intercorrelations between hassles, uplifts and health measures across both times (N = 111).

	Time 1			Time 2				
	Relative Subjective Health	General Subjective Health	Somatic Symptoms	Relative Subjective Health	General Subjective Health	Somatic Symptoms	Functional Limitation	Chronic Ill-health
Hassles	-.24*	-.32**	.40**	-.25*	-.32**	.32**	.18	.35**
Uplifts	.33**	.30*	-.11	.36**	.36**	-.14	-.27*	-.19

* p<.01 ** p<.001

Our results support the finding that uplifts do not predict objective health (e.g. Lazarus, 1984). Insignificant associations are obtained between uplifts and somatic symptoms, and between uplifts and chronic ill-health. Once again, functional limitation proves to be the exception to the rule and correlates at -.27 with uplifts. This may indicate that functional limitations prevent the experience of uplifts. There is, however, a relationship between uplifts and subjective health. A moderate and a stable relationship , ranging from .30 to .36, exists between these two variables. Both uplifts and subjective health involve perceptions by the individual and thus a stronger relationship than exists between uplifts and objective health could be expected.

The relationship between stressors and uplifts to affect intensity and dispositional optimism has not been previously researched. Both these dispositional measures were summed over items to produce total frequency scores. The relationships of the two personality characteristics to hassles and uplifts at Time 1 are presented in Table 7.

Table 7: Intercorrelations between affect intensity, dispositional optimism and hassles, uplifts at Time 1 (N=108).

	Optimism	Affect Intensity
Hassles	.04	.20
Uplifts	-.09	.47*

* p<.001

Dispositional optimism is unrelated to both hassles and uplifts, with correlations being close to zero. There seems to be a very small correlation between affect intensity and hassles, but this does not reach significance. Affect intensity does however relate moderately to uplifts (r=.47). This suggests that high affect intensity individuals perceive more uplifts than low affect intensity individuals.

The relationships between the personality characteristics and the health measures are presented in Table 8.

Table 8: Intercorrelations between affect intensity, dispositional optimism and health measures across both times (N=106).

	Somatic Symptoms Time 1	Somatic Symptoms Time 2	Functional Limitations	Chronic Ill-health	Relative Subjective Health Time 1	General Subjective Health Time 1	Relative Subjective Health Time 2	General Subjective Health Time 2
Affect Intensity	.10	.09	-.05	-.04	.12	.07	.07	.12
Optimism	-.12	-.05	-.04	-.02	-.02	.11	-.01	-.08

Note: All correlations are non-significant

It was hypothesized that there would be a relationship between affect intensity and health, and a relationship between dispositional optimism and health. However, the results here indicate that there are no relationships between these variables.

Optimism and affect intensity as moderators

We now examine the hypotheses that dispositional optimism and affect intensity moderate the various stressor-health and uplift-health relationships. Dispositional optimism is unrelated to hassles, uplifts and health outcomes (see Tables 7 and 8) and thus it appears very unlikely that it would have moderating effects. Affect intensity is related to uplifts but not hassles (see Table 7); and hierarchical multiple regression was used to ascertain if moderating effects exist. The intercorrelations between subjective health, somatic symptoms, functional limitation and chronic ill-health are generally moderate (see Table 5). Consequently, each of these measures was involved as a dependent variable in turn as it was assumed each was measuring a different aspect of health. Relative subjective health correlates strongly with general subjective health and consequently only one measure was included in the analysis. Relative subjective health was arbitrarily chosen for this purpose. Affect intensity was entered into the equation first, followed by either uplifts or hassles and finally the interaction term (affect intensity multiplied by hassles or uplifts) was entered. Regression analyses were carried out on Time 1 data and Time 2 data separately and the results are presented in Table 9.

According to Lazarus (1984) hassles predict health and uplifts do not. It was hypothesized that affect intensity would moderate the relationships between hassles and health, and between uplifts and health. The results of the multiple regression analyses indicate that affect intensity does not act as a moderating variable in any of the stressor-health or uplift-health relationships; none of the interactions explain significantly more variance in health.

Table 9: Hierarchical multiple regression analyses between affect intensity, hassles, uplifts and health measures (N=111).

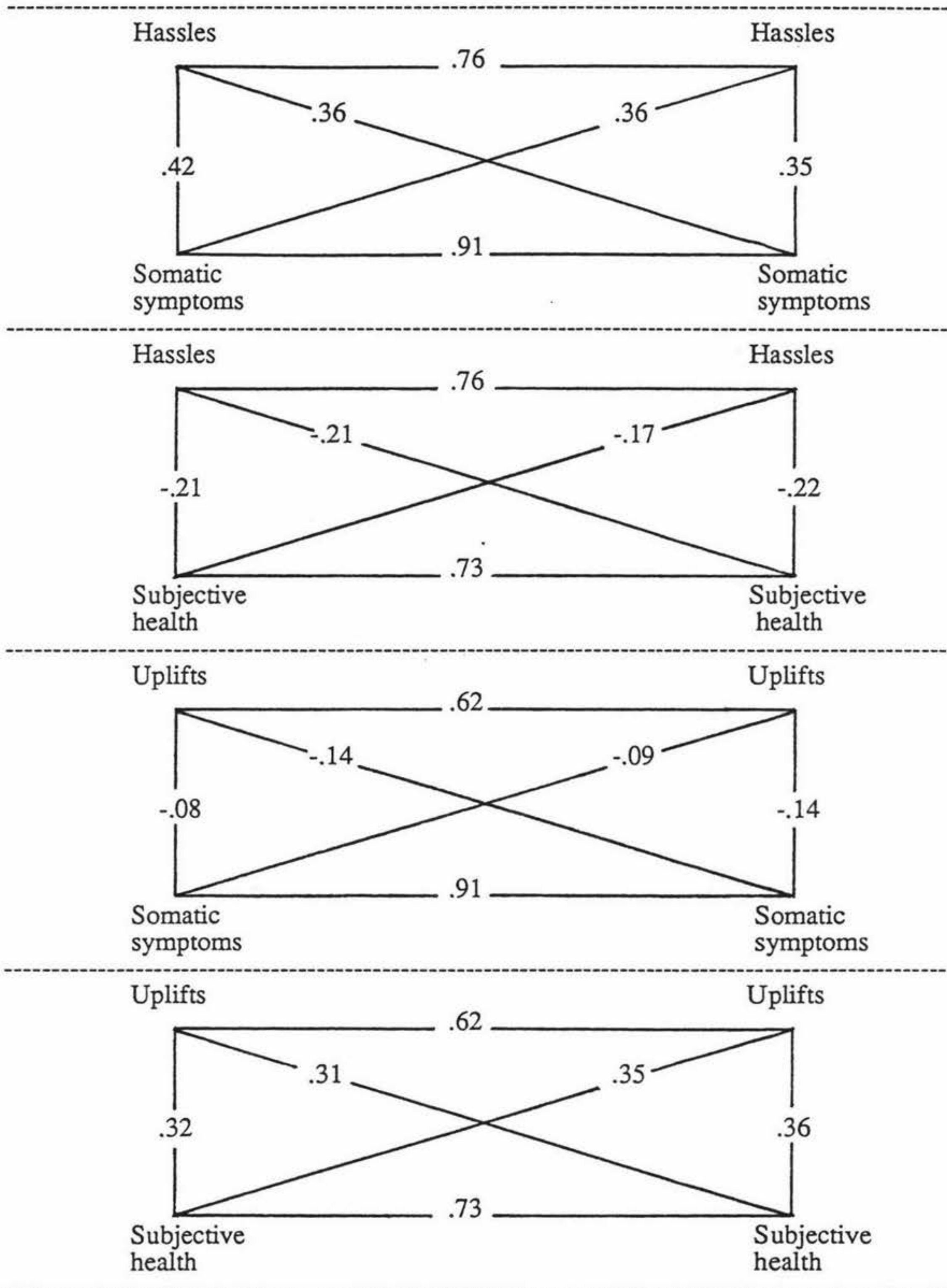
Variable	Time 1		Time 2	
	R^2 Change	F	R^2 Change	F
Somatic symptoms				
Affect Intensity	.017	1.85	.010	1.15
Uplifts	.034	3.87	.031	3.49
AffInt*Uplifts	.005	.57	.000	.01
Affect Intensity	.017	1.85	.010	1.15
Hassles	.151	19.53**	.101	12.29**
AffInt*Hassles	.001	.17	.016	2.02
Functional limitations				
Affect Intensity	.001	.07	.001	.07
Uplifts	.010	1.12	.075	8.71*
AffInt*Uplifts	.002	.22	.001	.16
Affect Intensity	.001	.07	.001	.07
Hassles	.007	.73	.032	3.53
AffInt*Hassles	.001	.03	.000	.01
Chronic ill-health				
Affect Intensity	.004	.44	.004	.44
Uplifts	.020	2.20	.032	3.56
AffInt*Uplifts	.014	1.53	.001	.14
Affect Intensity	.004	.44	.004	.44
Hassles	.100	12.05**	.127	15.84**
AffInt*Hassles	.000	.01	.001	.12
Relative Subjective Health				
Affect Intensity	.011	1.23	.003	.31
Uplifts	.099	12.04**	.127	15.75**
AffInt*Uplifts	.002	.21	.002	.20
Affect Intensity	.011	1.23	.003	.31
Hassles	.047	5.38	.065	7.50*
AffInt*Hassles	.004	.49	.000	.00

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

Causality

The design of the research allowed us to explore causal relationships among hassles and uplifts to somatic symptoms and subjective health by conducting cross-lagged analyses. Relative subjective health was chosen for use in these computations. Diagrammatic representation of the four analyses involved are presented in Figure 1. Correlations were calculated separately for each analysis.

Figure 1: Cross-lagged diagrams for hassles, uplifts, somatic symptoms, and relative subjective health (All N=114).



Cross-lagged analyses were carried out using tests developed by Pearson and Filon (Kenny, 1979). Synchronous correlations were tested for stationarity and cross-lagged correlations were tested for spuriousness. The results are presented in Table 10.

Table 10: Cross-lagged analyses for hassles, uplifts, somatic symptoms, and relative subjective health (All N=114).

Analysis	Stationarity Test Z	Crosslagged Test Z
Hassles/ Somatic symptoms	1.09	.00
Hassles/ Subjective health	.12	.28
Uplifts/ Somatic symptoms	.70	.57
Uplifts/ Subjective health	.45	-.44

Note: All Z scores are non-significant

The results of the stationarity tests indicate the various stressor-health and uplift-health relationships are stable over time as required in cross-lagged analysis. We recall that we have already presented evidence in support of the stability of these relationships. The insignificant findings from the cross-lagged tests indicate that causal relationships cannot be established. The stability of the health variables over time may partly account for these results.

CHAPTER IV

DISCUSSION

The elderly are frequently portrayed as being rigid, unable to adapt, and prone to stress (Pfeiffer, 1977), and this is also a popular view of this group. Our results refute this notion and we conclude that the elderly lead balanced and stable lives uninterrupted by marked fluctuations in either stress levels or health.

In discussing these results, we begin with a consideration of hassles and uplifts as perceived by the elderly. Next, the relationships between uplifts, hassles and health are discussed, and explanations of the links considered. Then dispositional influences are considered, most specifically with regard to their possible roles as moderators of the stressor-health and uplift-health relationships. These discussions culminate in a general theme of stability in the lives of our elderly people.

Hassles and uplifts

In the present study salient hassles are reported by the elderly in the areas of health, economic circumstances, and social issues. A number of researchers (e.g. Chamberlain & Zika, 1988; Folkman et al., 1987; Holahan et al., 1984) report concurring results. Chamberlain and Zika, using the 117 item Hassles Scale (Kanner et al., 1981) in contrast to the revised scale (Delongis, 1985) used here, found a most similar hassles pattern in a demographically comparable sample.

Three salient areas of uplifts are reported in our findings. First, the elderly emphasize good interpersonal relations and second, quiet leisure activities and amount of free

time as uplifting. Finally, the neigbourhood and environment are seen as important uplifts. In addition, health is also seen as an uplift. Although no previous research reports the uplifts pattern in case of the elderly, our results resemble the findings of Kanner et al. (1981) who used a middle-aged sample, and found that good human relations and health were reported as important uplifts.

Folkman et al. (1987) propose an age-related rather than a role-related explanation for the hassles pattern found. Hassles over health would certainly seem to be age-related, with health problems growing more numerous as age increases (see Belloc et al., 1971). It is likely that hassles over economic concerns also have age-related explanation. Prerequisites for entry into the pensioner flats are that the individual is retired and has a low income, and it is unlikely that these elderly persons could generate much in the way of income at this age in any case. An explanation for the saliency of social issues is not as clear. Folkman et al. (1987) hypothesize the role-related explanation that this hassles group becomes more focused with age as the importance of parenting and work demands diminish. An alternative age-related hypothesis proposes that older people broaden their perspectives as they age, regardless of the roles they play. It will become clear that the present research tends to support the second of these two hypotheses.

It would seem reasonable that the three areas of uplifts emphasized by the elderly also have age-related explanations. Certainly, these sources of enjoyment are readily available to the more infirmed elderly, whereas other sources of enjoyment, such as sport, may not be. The endorsement of health as both an important hassle and uplift may be explained by the fact that as health declines with age (Weg, 1978), it has a distinct saliency regardless of whether the individual is experiencing poor or good health.

In summary, it seems that the hassles and uplifts patterns experienced by the elderly can be explained in terms of age-related rather than role-related effects. The decline of health with age can be forwarded as the most potent factor determining these patterns. It is hypothesized that this factor accounts for the finding that the elderly present distinctly different hassles and uplifts patterns compared to younger groups (Folkman et al., 1987). This requires further investigation.

Hassles and uplifts severity are both stable over a one month period at .76 and .62 respectively. Chamberlain and Zika (1988), with a demographically comparable sample, report .69 over 3 months and .69 again over 6 months for hassles severity. DeLongis et al. (1982) report a mean month-to-month association for uplifts frequency of .72 over nine months using a younger sample. The aged individual tends to perceive both the level of stress and the level of uplifts in his or her life as stable.

The stability of hassles indicates that the elderly are not subject to fluctuating stress. Moreover, in light of the data from Chamberlain and Zika (1988), stress levels are stable for a period of at least six months in the case of this group. This is presumably true only in the absence of life events such as the death of a spouse. The result lends support to the view of McCrae (1982) that, in general, the lives of elderly persons are not in a state of flux, but rather involves a stable ongoing level of stress. The stability of uplifts indicates that the elderly enjoy a stable level of pleasurable events in their lives.

Health, hassles and uplifts

A number of researchers (e.g. Zarski, 1984) endorse a multidimensional approach to the measurement of objective health as a means of ensuring its comprehensive assessment. This is the approach taken here. The moderate relationships found

among somatic symptoms, chronic ill-health and functional limitation indicate that each measure reflects a different aspect of health, and this is the desired outcome of the approach. This is most clearly demonstrated by the fact that hassles and uplifts relate differentially to the three levels of objective health measured.

Subjective health was also assessed in the present study. A strong association between the relative and general measures of subjective health used indicates that they are interchangeable. Subjective health measures relate moderately to objective health measures, and are therefore a valuable addition to the multidimensional approach taken.

Chronic ill-health and functional limitation were assumed to be stable and assessed only once. Somatic symptoms and subjective health were assessed twice, and found to be stable over the one month period. The number of symptoms experienced did not vary greatly and the elderly perceived constancy in their health over this period. Previous research (e.g. Brown & Rawlinson, 1976; Garrity, Somes, & Marx, 1978) has also found subjective health to be stable. Although the elderly experience poorer health compared to younger groups (Weg, 1978), both their somatic symptoms and subjective health are stable over the measurement period. More marked fluctuations in health may well be evident over greater periods of time, but the common notion that the elderly experience frequently fluctuating health is not supported by our results.

Previous research (e.g. Ferraro, 1980; Mossey & Shapiro, 1982; Suchman et al., 1958) documents a moderate relationship between objective and subjective health, and the present research replicates this finding. In most of this research objective health is assessed by physicians and not self-reported. However, in the present study, where both are self-assessed, comparable results are obtained. Suchman et al.

forward three reasons why a perfect relationship between these two health measures does not exist. First, the covert nature of some diseases can lead the health professional to erroneous conclusions about an individual's health. Second, inaccuracies in the methods and instruments used to assess objective and subjective health can affect the relationship between these states. Third, some individuals may not be sufficiently skilled in making judgements about their own health and tend to overlook or be unaware of pathology. Two further explanations can be forwarded. First, the elderly may be desensitized to and/or accepting of the existence of somatic symptoms as a result of the continued intermittent presence of these symptoms over time, and consequently ignore them. Second, they may be overly optimistic about their health and attach limited importance to the experience of some symptoms. This second explanation is supported by previous research. According to Cockerham, Sharp, & Wilcox (1983) the elderly perceive their health in a significantly more optimistic fashion to younger groups. In addition, Ferraro (1980) reports that older elderly (75 plus years) rate their health more positively than younger elderly (64-75 years). The relationship between objective and subjective health in the elderly may, at least in part, be attributed to overly optimistic feelings over health, and the consequent limited importance attached to some symptoms. Essentially, the processes involved in the perception of health are different to those involved in objective health assessment. In the present study, for example, global measures are used to assess subjective health and detailed inventories are used to assess objective health. Although only moderate associations between objective and subjective health were found, our research supports the view that subjective health is a useful substitute for objective health in research with the elderly. The strongest correlate of objective health is subjective health (Harvey & Chamberlain, 1988). Subjective health therefore provides an efficient way of collecting data on health that avoids the long and detailed inventories used in objective health. There is also much utility in studying subjective health in its own right. Research by Mossey and Shapiro (1982),

for example, found subjective health predicts mortality with objective health controlled.

It is well documented that health is influenced by stress. A number of studies from hassles research (e.g. Kanner et al., 1981; Zarski, 1984) report that stressors predict objective health. Our findings support this research with hassles predicting somatic symptoms and chronic ill-health but not functional limitation. Hassles are also found to predict subjective health. Uplifts, in contrast, are not associated with somatic symptoms or chronic ill-health, but are associated with functional limitation (c.f. Lazarus, 1984). A new finding emerges in that uplifts are associated with subjective health.

In general, the associations between hassles and health mirror those obtained between uplifts and health. This indicates that hassles and uplifts operate independently and, apparently, symmetrically. We recall the view of Kanner et al. (1981) that hassles and uplifts should be studied in tandem as a means of ensuring undistorted interpretations of their relationships to health. Except for the associations involving functional limitation the relationships between uplifts, stressors and objective health are as hypothesized. Functional limitations are not predicted by hassles and this is reasonable given they are unlikely to be responsive to stress. The negative association between uplifts and functional limitation probably indicates that individuals with more disability have less opportunity to experience uplifts. The new finding of a relationship between uplifts and subjective health may be accounted for by the fact that both these constructs involve perceptions by the individual. It therefore follows that there will be a stronger relationship here than exists between uplifts and objective health. In line with this finding it had been anticipated that stressors would be more strongly related to subjective health than to objective health. This is not found to be the case. One possible explanation is that there are significant

aspects of subjective health that do not relate to stress. A better defined account of the subjective health construct would be a necessary prerequisite for considering this possibility.

It is clear from the moderate relations between stressors and somatic symptoms, and stressors and chronic ill-health that hassles only account for a relatively small proportion of the variance in health. Numerous other factors are involved in illness. The exploratory cross-lagged analyses conducted here do not support stressors as causative of somatic symptoms or subjective health, but this result can be attributed to limitations in the present design. Appropriate cross-lagged design features (see Cook & Campbell, 1976; Kenny, 1975) were not incorporated as this was not an intended focus in the present study. The results can largely be attributed to a measurement period of only one month, and the demonstrated stability of somatic symptoms and subjective health over this period. Kenny (1979) reports that cross-lagged analysis is inappropriate for examining causal effects of variables that do not change over time. In addition, a sample size much greater than available here is required in cross-lagged analysis. Regardless, a large body of research promotes a causative relationship between stressors and health, and we now go on to consider mechanisms involved.

Mechanisms to explain the relationship between stressors and health have been forwarded by only a few authors (e.g. Kanner et al., 1981; Kaplan, 1979; Lazarus & Folkman, 1984b). Kanner et al. postulate that no individual leads a hassle-free life. Consequently the impact of hassles on health must depend on factors such as having a chronically high frequency of hassles, the heightening of hassles during a crisis, or the presence of a few repeated hassles of compelling saliency. The positive relationship between hassles and health provides some support for the first of these three mechanisms. The remaining two mechanisms are more aligned with life events

research and are therefore less plausible. An alternative level of explanation would involve a consideration of coping processes (e.g. Lazarus & Folkman, 1984b), but this is beyond the scope of the present research. There has been limited research attempting to establish the exact mechanisms involved.

Lazarus (1984) offers a mechanism to explain the lack of association between uplifts and health. According to Lazarus what preserves health is not uplifts themselves, but rather the ability of the individual to put a positive light on experiences and have expectations that allow for the experience of uplifts. Dispositional characteristics, then, may well be important in the relationship between uplifts and health.

Dispositional Characteristics

In this study we consider the moderating effect of dispositional optimism and affect intensity on the stressor-health and uplift-health relationships. We were most interested in whether these characteristics moderate the relationship between uplifts and health. Both dispositions have been found previously to be related to objective health.

Earlier research by Scheier and Carver (1985) found optimism to be negatively associated with a measure of perceived stress (see Cohen, Kamarck, & Mermelstein, 1983). They conclude that pessimists tend to perceive more in the way of stress than optimists. Our results do not confirm the findings of Scheier and Carver in the case of the elderly. There are three possible explanations for this finding. First, Scheier and Carver did not use an elderly sample and there may be developmental differences in optimism with the elderly. It may be that the elderly do not vary greatly in optimism and the null result was obtained because of a lack of variance in this construct. A comparison of the Scheier and Carver data with our own reveals no support for this explanation. Scheier and Carver report mean scores and standard

deviations for LOT with an undergraduate sample of 21.03 and 4.56 for men, and 21.41 and 5.22 for women. Our results are quite comparable, with a mean of 21.14 and a standard deviation of 4.84 for the whole sample. The absence of a relationship between optimism and stressors cannot, therefore, be explained in terms of a lack of variance in the optimism construct. Second, the stress measure used by Scheier and Carver is not the same as used in the present study and may have different psychometric properties. Third, it may be that elderly individuals interpret the meaning of LOT items differently to younger individuals. They may be responding to the items from a different perspective; a perspective which is likely to be age-related. There is, then, the possibility that the construct validity of the scale is different for the elderly, and this requires further investigation. Based on our findings, we conclude that optimism does not influence the perception of stress in the elderly.

The relationship between optimism and uplifts has not been previously determined. Our results indicate no association between these two variables and we conclude that the perception of uplifts is independent of optimism in the elderly.

No previous research documents the relationship between hassles, uplifts, and affect intensity. Our research indicates no relationship between stressors and affect intensity. We conclude that the perception of stressors is independent of affect intensity in the elderly. Affect intensity does, however, influence the perception of uplifts. A moderate association here indicates that high affect intensity elderly perceive more uplifts than low affect intensity elderly. An explanation can be offered for these results. According to Larsen and Diener (1987) high and low affect intensity individuals do not differ in the types of events that occur in their daily lives. The severity of events perceived (good or bad) is independent of affect intensity. These researchers report that high affect intensity individuals may tend to seek out

emotional stimulation and more frequently engage in activities that provide stimulation. Our results demonstrate that uplifts are endorsed more frequently than hassles, and support the idea that persons with high affect intensity seek out uplifting events. In contrast, the frequency of stressors perceived by the individual is unlikely to be reduced in this way. Affect intensity is not a determinant of the perception of stressors but is a determinant of the perception of uplifts.

Based on previous research (e.g. Derogatis et al., 1975) it was hypothesized that there would be a relationship between affect intensity and health in the elderly. Further, it was anticipated there would be a relationship between dispositional optimism and health (Scheier & Carver, 1985). The present research provides no support for either of these effects in the case of the elderly. According to Diener, Sandivik, & Larsen (1985) affect intensity correlates with age at -.26. This decrease in affect intensity with age may explain the lack of a relationship between affect intensity and health. In the case of optimism we have already demonstrated comparable variance in LOT across age but suggested that the construct validity of this measure may be age-bound. This measure needs to be better understood and/or improved in future research with the elderly. We conclude here that health of the elderly is unaffected by the dispositions, affect intensity and dispositional optimism.

It was hypothesized that affect intensity and dispositional optimism would interact with hassles and uplifts in predicting health. A null result for dispositional optimism was already clear from correlational evidence and only affect intensity was tested. Results of multiple regression analyses with affect intensity provides no evidence of moderating effects.

It is not uncommon to find either insufficient or inconsistent results when examining the moderating effect of personality variables on adaptational outcomes (e.g. Cooke

& Rousseau, 1983; Ganellen & Blaney, 1984; Kobasa, Maddi, & Kahn, 1982; Lefcourt, Miller, Ware, & Sherk, 1981; Zika & Chamberlain, 1987). Zika and Chamberlain suggest that personality dispositions might influence the perception of hassles and consequently are more likely to present as a main effect rather than an interaction. This is presumably also true for uplifts. These relationships are tenuous in nature and conclusions should be drawn cautiously. The null results obtained must be considered inconclusive in any case.

Stability

Pfeiffer (1977) portrays the older individual as being rigid, unable to adapt and prone to the use of passive and ineffective coping mechanisms. He suggests that many elderly use primitive defense mechanisms such as unmodified anxiety, depression-withdrawal, projection, somatization and denial. Gutmann (1970) proposes that as an individual moves toward old age distortion and denial become more widely employed, and the individual attempts to wish away real-life problems. Based on these views we would expect the elderly to be burdened with stress and generally flux-bound. This is also a popular view held of the elderly. Evidence from the present study points to a very different conclusion.

It is clear from the hassles and uplifts patterns obtained that the elderly have adjusted to the reality that their health is declining with age. This is most obvious when considering the uplifts pattern. Here, the elderly emphasize good interpersonal relations and leisure activities, sources of enjoyment which are readily available even to the infirmed elderly. The focusing by the elderly on health as a salient hassle and uplift also indicates ties to reality. Their health has a rightful saliency and cannot be considered a trivial concern. Other frequently endorsed hassles such as financial concerns also appear to be reality bound.

Should the views of Pfeiffer (1977) and others be correct we would expect the elderly to focus on the 'negative side of life'. We have evidence to the contrary from the present study, where the elderly endorse common uplifts more frequently than common hassles. This suggests that the elderly assume a generally 'positive' orientation to life rather than a 'negative' one as commonly thought.

Further evidence of stability can be taken from the results showing that both hassles and uplifts are stable over the measurement period of one month. It seems that these aged people deal with a stable ongoing level of stress and enjoy a stable ongoing level of uplifts. Further, according to Chamberlain and Zika (1988) stress levels in demographically similar elderly are stable for a period of at least six months. In general, then, the aged individual's relation to his or her environment is not in a state of upheaval but rather relatively consistent. We must assume the individual is not in the midst of a life event.

Another common perception of the elderly is that they suffer from marked and frequent fluctuations in health. It is true that the elderly do not enjoy comparable health to younger age groups (Weg, 1978) and that chronic conditions are more prevalent for them (Belloc et al., 1971). However, our results indicate that elderly people enjoy relatively stable health. The number of somatic symptoms reported in the present study is particularly stable. This conclusion is based on a period of only one month, and may be conservative. More marked fluctuations in health are quite likely, even inevitable, as health declines with increasing age. Although health is the most salient hassle for the elderly, the present findings suggest that the aged are not constantly required to deal with rapidly shifting somatic symptoms.

In addition to the experience of stable somatic symptoms, the perception of subjective health is also found to be stable over time. This provides further evidence that the

elderly experience stable health. Objective and subjective health are found to be moderately related in the present study. It seems that the elderly are capable of making reasonably accurate judgments about their own health, and this indicates further ties to reality.

In summary, our results refute the notion that the elderly are prone to stressful change and unstable health. The elderly are not required to deal with rapidly shifting stress levels or frequently fluctuating health. Both these indices are stable which suggests adaptive coping mechanisms are employed by the elderly. The views of Pfeiffer (1977) and Gutmann (1970) are rejected here. According to Vaillant (1977) the defenses used by the elderly become increasingly more effective and less distorting of reality. This researcher suggests that the use of mature mechanisms such as altruism, humour, suppression, anticipation and sublimation increase with age. Other studies (Billings & Moos, 1981; Folkman & Lazarus, 1980; Ilfeld, 1980; McCrae, 1982) suggest that the elderly cope in much the same way as younger people, employing different mechanisms only because they are faced with different types of stress. Our research provides supporting evidence for these views. We conclude that the elderly cope successfully with their environment and lead balanced and stable lives uninterrupted by marked fluctuations in either stress levels or health.

Limitations

The main limitation of the present study is that it is essentially a correlational design and little can be said about causal relationships between variables. Although the approach taken here resembles a cross-lagged design it is not intended to fulfill the requirements of that design (see Cook and Campbell, 1976; Kenny, 1975). Consequently, the analysis for causal relationships in the present study can only be exploratory and tentative. An ipsative-normative approach (Lazarus, 1984) making use of a much larger sample would be an improvement on the present design.

However, this would involve a great deal more in the way of resources and time.

Zarski (1984) has observed that there is a need to explore more theoretically relevant variables to measure health. There is much controversy about what constitutes an adequate definition of health (Wolinsky & Zusman, 1980). In our investigation we defined health to be the absence of disease and symptoms and according to Zarski this may be an unnecessary limitation. A number of investigators (e.g. Zarski, 1984) comment on the problems inherent in using self-report measures rather than actual measures of health. Effects such as the social desirability bias indicate the importance of including behavioural and biophysical indices of health. The inclusion of these suggestions in future research would, once again, involve more in the way of resources and time.

Future research

In the first instance the present research provides support for the use of the hassles measure in future stress research. Our study successfully replicates a number of previous findings and, in addition, has lead to some new findings. The view of Chamberlain and Zika (1988, p. 21) is endorsed here: " .... the hassles scale (is) a powerful, reliable, and sensitive assessment of stress."

A revised replication of the present study should be attempted. We report here that dispositional optimism and affect intensity do not moderate the stressor-health or uplift-health relationships. These null results do not provide conclusive evidence for the lack of moderating effects, with a number of alternative explanations possible. A further study examining these issues is required in an attempt to provide clearer evidence for the null results obtained. In particular, a closer examination of the construct validity of LOT in the case of the elderly is required. More generally, explanations offered for the obtained results are age-related, and consideration should

be given to examining the relationships with a younger sample.

It is clear from the present study that subjective health is both an interesting and useful variable. Our results support the view of Weinberger et al. (1987) that subjective health is a reliable and valid measure of health in the elderly, and can be used as an efficient substitute for objective health in research. Our investigation established the new result that uplifts are predictive of subjective health. We recall that uplifts are not predictive of objective health (c.f. Lazarus, 1984). Our study suggests that future research with subjective health is likely to be informative. The need to examine perceived health in greater depth is clearly indicated, with limited research to date.

Our results also permit the conclusion that elderly persons lead stable and balanced lives, uninterrupted by marked fluctuations in stress levels or health. An important outcome of research can be to dispel myth and common misconceptions. The present study has made a contribution to this goal in the case of the elderly.

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APPENDIX 1

Letter - Time 1

DEPARTMENT OF PSYCHOLOGY

RESEARCH PROJECT ON HEALTH OF THE ELDERLY

We are involved in a major study to learn about the things that lead to changes in elderly peoples' health. This study will look at how older people feel and what they think about life. We believe this type of research is extremely valuable, and no one can tell us more about these things than you yourself.

If you are willing to help us with this research these are the things that will be required of you:

1. To fill out a questionnaire which we will bring you, and explain the instructions. This will take about one half hour to complete, at a time convenient to you.

2. To fill out one additional questionnaire which will be mailed to you approximately one month after the first questionnaire. This questionnaire will also take about one half hour to complete.

Both questionnaires are quite straight forward and easy to complete. Everything you write will be kept completely confidential. You can decline to answer any questions that you object to and drop out of the study at any point. Nobody, apart from us, will see your answers and your name will not appear on either questionnaire. We will, though, need to obtain your name and address so that we can mail the second questionnaire to you. On completion of the study, we will mail you a summary of the results.

We would greatly appreciate your assistance with this project. We believe that you will find it an interesting and enjoyable experience.

If you have any questions about this study at all you can contact us at Massey University 69-099, extension 8300 or 7694.

Yours faithfully,

Richard Laird
Researcher

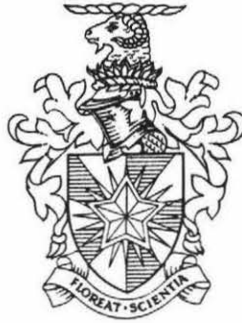
Kerry Chamberlain
Senior Lecturer

APPENDIX 2

Questionnaire 1

MASSEY UNIVERSITY

I.D.__________



Elderly Health Project

Please read the following instructions and follow them carefully.

Remember that all the information you give us is confidential. The information gathered by this questionnaire will be used only for the purposes of this study.

This questionnaire will take about one half hour to complete. We would like you to find a time when you will not be disturbed, and to answer all the questions in one session if possible. Please do this at the earliest convenient time for you after receiving the questionnaire.

It is important that you give your own answers to the questions. Therefore, we would ask that you do not discuss the questions with others. Of course, if you need help to read the material or with the meaning of some of the questions, you should ask someone to help you.

Please try to answer all the questions, and be careful not to skip any pages. We have printed alternate pages on a different colour to help you with this.

When you have finished please place the questionnaire in the envelope provided and it will be collected at the time agreed.

2

3

Please write in today's date: ___________________

The questions we are asking here focus on your experiences and how things have been with you. There are no right or wrong answers to these questions. An answer is correct if it is true for you.

In the first set of questions we want to ask about the hassles and uplifts you have been experiencing this last month. Hassles are irritants that can range from minor annoyances to fairly major pressures, problems, or difficulties. Uplifts are things that make you feel good; they can make you feel joyful, glad or satisfied. Hassles or uplifts can occur few or many times.

Below is a list of some things that can be considered hassles and uplifts in day-to-day life. During the course of the last month some of these things will have been only a hassle for you and some will have been only an uplift. Others will have been both a hassle and an uplift. Please think how much of a hassle and how much of an uplift each of these things was for you during the last month. Indicate on the left-hand side of the page (under "HASSLES") how much of a hassle each statement was by circling the appropriate number. Then indicate on the right-hand side of the page (under "UPLIFTS") how much of an uplift it was for you by circling the appropriate number.

How much of a hassle was this item for you this last month?

How much of an uplift was this item for you this last month?

HASSLES

0 = Not at all
1 = Somewhat
2 = Quite a bit
3 = A great deal

UPLIFTS

0 = Not at all
1 = Somewhat
2 = Quite a bit
3 = A great deal

Remember you must circle two answers for every item.

0 1 2 3 ... Your child(ren)........................... 0 1 2 3

0 1 2 3 ... Your parents or parents-in-law............. 0 1 2 3

0 1 2 3 ... Other relative(s)......................... 0 1 2 3

0 1 2 3 ... Your spouse............................... 0 1 2 3

0 1 2 3 ... Time spent with family.................... 0 1 2 3

0 1 2 3 ... Health or well-being of a family member..... 0 1 2 3

0 1 2 3 ... Sex....................................... 0 1 2 3

0 1 2 3 ... Intimacy.................................. 0 1 2 3

0 1 2 3 ... Family related obligations................ 0 1 2 3

0 1 2 3 ... Your friend(s)............................ 0 1 2 3

0 1 2 3 ... Fellow workers............................ 0 1 2 3

11

25

HASSLES		UPLIFTS		
0 = Not at all 1 = Somewhat 2 = Quite a bit 3 = A great deal		0 = Not at all 1 = Somewhat 2 = Quite a bit 3 = A great deal		
0 1 2 3	Clients, customers, patients etc	0 1 2 3		27
0 1 2 3	Your supervisor or employer	0 1 2 3		
0 1 2 3	The nature of your work	0 1 2 3		
0 1 2 3	Your work load	0 1 2 3		
0 1 2 3	Your job security	0 1 2 3		35
0 1 2 3	Meeting deadlines or goals on the job	0 1 2 3		
0 1 2 3	Enough money for necessities (e.g. food, clothing, housing, health care, taxes, insurance)	0 1 2 3		
0 1 2 3	Enough money for education	0 1 2 3		
0 1 2 3	Enough money for emergencies	0 1 2 3		
0 1 2 3	Enough money for extras (e.g. vacations, recreation, entertainment)	0 1 2 3		45
0 1 2 3	Financial care for someone who doesn't live with you	0 1 2 3		
0 1 2 3	Investments	0 1 2 3		
0 1 2 3	Your smoking	0 1 2 3		
0 1 2 3	Your drinking	0 1 2 3		
0 1 2 3	Mood-altering drugs	0 1 2 3		55
0 1 2 3	Your physical appearance	0 1 2 3		
0 1 2 3	Contraception	0 1 2 3		
0 1 2 3	Exercise(s)	0 1 2 3		
0 1 2 3	Your medical care	0 1 2 3		
0 1 2 3	Your health	0 1 2 3		65
0 1 2 3	Your physical abilities	0 1 2 3		
0 1 2 3	The weather	0 1 2 3		69

HASSLES

0 = Not at all
1 = Somewhat
2 = Quite a bit
3 = A great deal

UPLIFTS

0 = Not at all
1 = Somewhat
2 = Quite a bit
3 = A great deal

HASSLES	Item	UPLIFTS	Code
0 1 2 3	News events	0 1 2 3	71
0 1 2 3	Your environment (e.g. quality of air, noise level, trees and greenery)	0 1 2 3	
0 1 2 3	Political or social issues	0 1 2 3	75
0 1 2 3	Your neighbourhood (e.g. neighbours, the area you live in)	0 1 2 3	
0 1 2 3	Conserving (gas, electricity, water petrol, etc)	0 1 2 3	
0 1 2 3	Pets	0 1 2 3	2/1
0 1 2 3	Cooking	0 1 2 3	
0 1 2 3	Housework	0 1 2 3	
0 1 2 3	Home repairs	0 1 2 3	
0 1 2 3	Yardwork	0 1 2 3	
0 1 2 3	Car maintenance	0 1 2 3	
0 1 2 3	Taking care of paperwork (e.g. paying bills, filling out forms)	0 1 2 3	
0 1 2 3	Home entertainment (e.g. T.V., music, reading)	0 1 2 3	15
0 1 2 3	Amount of free time	0 1 2 3	
0 1 2 3	Recreation and entertainment outside the home (e.g. movies, sport, eating out, walking)	0 1 2 3	
0 1 2 3	Eating (at home)	0 1 2 3	
0 1 2 3	Church and community organizations	0 1 2 3	
0 1 2 3	Legal matters	0 1 2 3	25
0 1 2 3	Being organized	0 1 2 3	
0 1 2 3	Social commitments	0 1 2 3	29

The next group of questions are concerned with how your mood has been at this time. For each of the following, please circle a number for the one answer that comes closest to the way you have been feeling at this time. Please use the scale provided.

Not at all.......... 1
Very slightly....... 2
Somewhat............ 3
Moderately.......... 4
Very much........... 5
Extremely........... 6

Depressed..................................	1 2 3 4 5 6	30
Happy......................................	1 2 3 4 5 6	
Frustrated.................................	1 2 3 4 5 6	
Joyful.....................................	1 2 3 4 5 6	
Unhappy....................................	1 2 3 4 5 6	
Pleased....................................	1 2 3 4 5 6	35
Angry......................................	1 2 3 4 5 6	
Enjoyment/fun..............................	1 2 3 4 5 6	
Worried....................................	1 2 3 4 5 6	

The next few questions concern how you feel about things that happen to you. For each question, please circle a number for the <u>one</u> answer that comes closest to the way you feel. Please use the scale provided.

Strongly agree.......... 1
Agree................... 2
Neutral................. 3
Disagree................ 4
Strongly disagree....... 5

In uncertain times, I usually expect the best.....	1 2 3 4 5	
If something can go wrong for me it will..........	1 2 3 4 5	40
I always look on the bright side of things........	1 2 3 4 5	
I'm always optimistic about my future.............	1 2 3 4 5	
I hardly ever expect things to go my way..........	1 2 3 4 5	
Things never work out the way I want them to......	1 2 3 4 5	
I am a believer in the idea that "every cloud has a silver lining".................................	1 2 3 4 5	
I rarely count on good things happening to me.....	1 2 3 4 5	46

In the next set of questions we are concerned with your emotional reactions to typical events. Please indicate how you react to these events by circling a number from the following scale. Please base your answers on how you react, not on how you think others react or how you think a person should react.

Never.............. 1
Almost never....... 2
Occasionally....... 3
Usually............ 4
Almost always...... 5
Always............. 6

When I accomplish something difficult I feel delighted or elated.............................. 1 2 3 4 5 6 [ ] 47

When I feel happy it is a strong type of exuberance.. 1 2 3 4 5 6 [ ]

I enjoy being with other people very much......... 1 2 3 4 5 6 [ ]

I feel pretty bad when I tell a lie............... 1 2 3 4 5 6 [ ]

When I solve a small personal problem, I feel euphoric..................................... 1 2 3 4 5 6 [ ]

My emotions tend to be more intense than those of most people.................................. 1 2 3 4 5 6 [ ]

My happy moods are so strong that I feel like I'm "in heaven"................................... 1 2 3 4 5 6 [ ]

I get overly enthusiastic......................... 1 2 3 4 5 6 [ ]

If I complete a task I thought was impossible, I am ecstatic.................................... 1 2 3 4 5 6 [ ] 55

My heart races at the anticipation of some exciting event................................... 1 2 3 4 5 6 [ ]

Sad movies deeply touch me........................ 1 2 3 4 5 6 [ ]

When I'm happy it's a feeling of being untroubled and content rather than being zestful and aroused.............................. 1 2 3 4 5 6 [ ]

When I talk in front of a group for the first time my voice gets shaky and my heart races....... 1 2 3 4 5 6 [ ]

When something good happens, I am usually much more jubilant than others................... 1 2 3 4 5 6 [ ]

My friends might say I'm emotional................ 1 2 3 4 5 6 [ ]

The memories I like the most are of those times when I felt content and peaceful rather than zestful and enthusiastic.................... 1 2 3 4 5 6 [ ] 62

Never.............. 1
Almost never....... 2
Occasionally....... 3
Usually............ 4
Almost always...... 5
Always............. 6

Item	Scale	Code
The sight of someone who is hurt badly affects me strongly................................	1 2 3 4 5 6	63
When I'm feeling well it's easy for me to go from being in a good mood to being really joyful..	1 2 3 4 5 6	
"Calm and cool" could easily describe me..........	1 2 3 4 5 6	
When I'm happy I feel like I'm bursting with joy..	1 2 3 4 5 6	
Seeing a picture of some violent car accident in the newspaper makes me feel sick to my stomach.......................................	1 2 3 4 5 6	
When I'm happy I feel very energetic..............	1 2 3 4 5 6	
When I receive an award I become over-joyed.......	1 2 3 4 5 6	
When I succeed at something, my reaction is calm contentment.................................	1 2 3 4 5 6	70
When I do something wrong I have strong feelings of shame and guilt......................	1 2 3 4 5 6	
I can remain calm even on the most trying days....	1 2 3 4 5 6	
When things are going good I feel "on top of the world"...................................	1 2 3 4 5 6	
When I get angry it's easy for me to still be rational and not overreact....................	1 2 3 4 5 6	
When I know I have done something very well, I feel relaxed and content rather than excited and elated...............................	1 2 3 4 5 6	75
When I do feel anxiety it is normally very strong......................................	1 2 3 4 5 6	
My negative moods are mild in intensity...........	1 2 3 4 5 6	
When I am excited over something I want to share my feelings with everyone......................	1 2 3 4 5 6	
When I feel happiness, it is a quiet type of contentment..................................	1 2 3 4 5 6	
My friends would probably say I'm a tense or "high-strung" person............................	1 2 3 4 5 6	80

Never.............. 1
Almost never....... 2
Occasionally....... 3
Usually............ 4
Almost always...... 5
Always............. 6

When I'm happy I bubble over with energy.......... 1 2 3 4 5 6

When I feel guilty, this emotion is quite strong.. 1 2 3 4 5 6

I would characterise my happy moods as closer to contentment than to joy........................ 1 2 3 4 5 6

When someone compliments me, I get so happy I could "burst"................................... 1 2 3 4 5 6

When I am nervous I get shaky all over............ 1 2 3 4 5 6

When I am happy the feeling is more like contentment and inner calm than one of exhilaration and excitement....................... 1 2 3 4 5 6

3/1

In the next set of questions we are concerned with how your health is. Please answer the following two question by circling the appropriate number.

Compared to <u>others your own age</u>, how would you rate your health at the present time?

Terrible..................... 1
Very poor.................... 2
Poor......................... 3
Fair......................... 4
Good......................... 5
Very good.................... 6
Excellent.................... 7

Compared to <u>the person in excellent health</u>, how would you rate your health at the present time?

Terrible..................... 1
Very poor.................... 2
Poor......................... 3
Fair......................... 4
Good......................... 5
Very good.................... 6
Excellent.................... 7

8

Next, please indicate how much each of the following problems have bothered or disturbed you during the last month. Circle only one number for each item. If you haven't been bothered by the problem circle 0. If the problem has been an extreme bother then circle 4 and so on.

Not at all.......... 0
A little bit........ 1
Moderately.......... 2
Quite a bit......... 3
Extremely........... 4

Sleep problems (can't fall asleep, wake up in the middle of the night or early in the morning)...... 0 1 2 3 4 ☐ 9

Weight change (gain or loss of 5 lbs or more)..... 0 1 2 3 4 ☐

Back pain.. 0 1 2 3 4 ☐

Constipation....................................... 0 1 2 3 4 ☐

Dizziness.. 0 1 2 3 4 ☐

Diarrhea... 0 1 2 3 4 ☐

Faintness.. 0 1 2 3 4 ☐ 15

Constant fatigue................................... 0 1 2 3 4 ☐

Headache... 0 1 2 3 4 ☐

Migraine headache.................................. 0 1 2 3 4 ☐

Nausea and/or vomiting............................. 0 1 2 3 4 ☐

Acid stomach or indigestion........................ 0 1 2 3 4 ☐

Stomach pain (e.g. cramp).......................... 0 1 2 3 4 ☐

Hot or cold spells................................. 0 1 2 3 4 ☐

Hands trembling.................................... 0 1 2 3 4 ☐

Heart pounding or racing........................... 0 1 2 3 4 ☐

Poor appetite...................................... 0 1 2 3 4 ☐ 25

Shortness of breath when <u>not</u> exercising or working hard.................................. 0 1 2 3 4 ☐

Numbness or tingling in parts of your body........ 0 1 2 3 4 ☐

Felt weak all over................................. 0 1 2 3 4 ☐

Pains in heart or chest............................ 0 1 2 3 4 ☐

Feeling low in energy.............................. 0 1 2 3 4 ☐ 30

Not at all.......... 0
A little bit........ 1
Moderately.......... 2
Quite a bit......... 3
Extremely........... 4

		Code
Stuffy nose or head	0 1 2 3 4	31
Blurred vision	0 1 2 3 4	
Muscle tension or soreness	0 1 2 3 4	
Muscle cramps	0 1 2 3 4	
Severe aches and pains	0 1 2 3 4	
Acne	0 1 2 3 4	
Bruises	0 1 2 3 4	
Nosebleed	0 1 2 3 4	
Pulled (strained) muscle(s)	0 1 2 3 4	
Pulled (strained) ligament(s)	0 1 2 3 4	
Cold or cough	0 1 2 3 4	41

Thank you. That is all the questions we have for the moment. We appreciate the time you have taken to complete this questionnaire. Please place it in the envelope provided and we will collect it on the day we have agreed upon. We will mail the second questionnaire to you in approximately one months time.

APPENDIX 3

Letter - Time 2

DEPARTMENT OF PSYCHOLOGY

RESEARCH PROJECT ON HEALTH OF THE ELDERLY

First, we would like to thank you most sincerely for completing the first questionnaire which we bought to your door about one month ago. Thank you.

We are now sending you the second questionnaire which you agreed to complete for us. The purpose of the second questionnaire is to see how things have been with you over the last month. This questionnaire is somewhat different to the first one and it should take you no longer than half an hour to complete.

We would like to remind you that everything you put down is completely confidential. When the study has been completed we will mail you a summary of our findings.

We would now ask you to read the instructions for the second questionnaire, complete it at the earliest convenient time for yourself, and post it back to us. Please try to do this today or tomorrow so that we can keep the time between questionnaires as constant as possible. Send the questionnaire back in the enclosed addressed envelope. Note that you do not need to put a stamp on it - just drop it in the nearest mailbox. If we have not received your questionnaire after a week or so, we will drop by to check that you are not having problems with it.

Remember that if you have any questions at all you can call us at Massey University 69-099, extension 8300 or 7694.

With much appreciation,

Richard Laird
Researcher

Kerry Chamberlain
Senior Lecturer

APPENDIX 4

Questionnaire 2

M A S S E Y   U N I V E R S I T Y

I.D.__________

Elderly Health Project

Questionnaire 2

Please read the following instructions and follow them carefully.

Remember that all the information you give us is confidential. The information gathered by this questionnaire will be used only for the purposes of this study.

This questionnaire will take about one half hour to complete. We would like you to find a time when you will not be disturbed, and to answer all the questions in one session if possible. Please do this at the earliest convenient time for you after receiving the questionnaire.

It is important that you give your own answers to the questions. Therefore, we would ask that you do not discuss the questions with others. Of course, if you need help to read the material or with the meaning of some of the questions, you should ask someone to help you.

Please try to answer all the questions, and be careful not to skip any pages. We have printed alternate pages on a different colour to help you with this.

When you have finished, please return the questionnaire to us in the enclosed envelope provided. You do not need to put a stamp on this.

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Please write in today's date: ____________________

The questions we are asking here focus on your experiences and how things have been with you. There are no right or wrong answers to these questions. An answer is correct if it is true for you.

In the first set of questions we want to ask about the hassles and uplifts you have been experiencing this last month. Hassles are irritants that can range from minor annoyances to fairly major pressures, problems, or difficulties. Uplifts are things that make you feel good; they can make you feel joyful, glad or satisfied. Hassles or uplifts can occur few or many times.

Below is a list of some things that can be considered hassles and uplifts in day-to-day life. During the course of the last month some of these things will have been only a hassle for you and some will have been only an uplift. Others will have been both a hassle and an uplift. Please think how much of a hassle and how much of an uplift each of these things was for you during the last month. Indicate on the left-hand side of the page (under "HASSLES") how much of a hassle each statement was by circling the appropriate number. Then indicate on the right-hand side of the page (under "UPLIFTS") how much of an uplift it was for you by circling the appropriate number.

How much of a hassle was this item for you this last month?	How much of an uplift was this item for you this last month?
HASSLES	UPLIFTS
0 = Not at all	0 = Not at all
1 = Somewhat	1 = Somewhat
2 = Quite a bit	2 = Quite a bit
3 = A great deal	3 = A great deal

Remember you must circle two answers for every item.

0 1 2 3 ... Your child(ren)............................ 0 1 2 3

0 1 2 3 ... Your parents or parents-in-law.............. 0 1 2 3

0 1 2 3 ... Other relative(s)........................... 0 1 2 3

0 1 2 3 ... Your spouse................................. 0 1 2 3

0 1 2 3 ... Time spent with family...................... 0 1 2 3

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0 1 2 3 ... Health or well-being of a family member..... 0 1 2 3

0 1 2 3 ... Sex... 0 1 2 3

0 1 2 3 ... Intimacy.................................... 0 1 2 3

0 1 2 3 ... Family related obligations.................. 0 1 2 3

0 1 2 3 ... Your friend(s).............................. 0 1 2 3

0 1 2 3 ... Fellow workers.............................. 0 1 2 3

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HASSLES 0 = Not at all 1 = Somewhat 2 = Quite a bit 3 = A great deal		UPLIFTS 0 = Not at all 1 = Somewhat 2 = Quite a bit 3 = A great deal		
0 1 2 3	... Clients, customers, patients etc..........	0 1 2 3	☐ ☐	70
0 1 2 3	... Your supervisor or employer...............	0 1 2 3	☐ ☐	
0 1 2 3	... The nature of your work....................	0 1 2 3	☐ ☐	
0 1 2 3	... Your work load............................	0 1 2 3	☐ ☐	
0 1 2 3	... Your job security..........................	0 1 2 3	☐ ☐	
0 1 2 3	... Meeting deadlines or goals on the job......	0 1 2 3	☐ ☐	80
0 1 2 3	... Enough money for necessities............... (e.g. food, clothing, housing, health care, taxes, insurance)	0 1 2 3	☐ ☐	4/1
0 1 2 3	... Enough money for education................	0 1 2 3	☐ ☐	
0 1 2 3	... Enough money for emergencies...............	0 1 2 3	☐ ☐	
0 1 2 3	... Enough money for extras................... (e.g. vacations, recreation, entertainment)	0 1 2 3	☐ ☐	
0 1 2 3	... Financial care for someone who doesn't..... live with you	0 1 2 3	☐ ☐	10
0 1 2 3	... Investments...............................	0 1 2 3	☐ ☐	
0 1 2 3	... Your smoking..............................	0 1 2 3	☐ ☐	
0 1 2 3	... Your drinking.............................	0 1 2 3	☐ ☐	
0 1 2 3	... Mood-altering drugs.......................	0 1 2 3	☐ ☐	
0 1 2 3	... Your physical appearance..................	0 1 2 3	☐ ☐	20
0 1 2 3	... Contraception.............................	0 1 2 3	☐ ☐	
0 1 2 3	... Exercise(s)...............................	0 1 2 3	☐ ☐	
0 1 2 3	... Your medical care.........................	0 1 2 3	☐ ☐	
0 1 2 3	... Your health...............................	0 1 2 3	☐ ☐	
0 1 2 3	... Your physical abilities...................	0 1 2 3	☐ ☐	
0 1 2 3	... The weather...............................	0 1 2 3	☐ ☐	32

HASSLES		UPLIFTS
0 = Not at all 1 = Somewhat 2 = Quite a bit 3 = A great deal		0 = Not at all 1 = Somewhat 2 = Quite a bit 3 = A great deal
0 1 2 3	News events	0 1 2 3
0 1 2 3	Your environment (e.g. quality of air, noise level, trees and greenery)	0 1 2 3
0 1 2 3	Political or social issues	0 1 2 3
0 1 2 3	Your neighbourhood (e.g. neighbours, the area you live in)	0 1 2 3
0 1 2 3	Conserving (gas, electricity, water petrol, etc)	0 1 2 3
0 1 2 3	Pets	0 1 2 3
0 1 2 3	Cooking	0 1 2 3
0 1 2 3	Housework	0 1 2 3
0 1 2 3	Home repairs	0 1 2 3
0 1 2 3	Yardwork	0 1 2 3
0 1 2 3	Car maintenance	0 1 2 3
0 1 2 3	Taking care of paperwork (e.g. paying bills, filling out forms)	0 1 2 3
0 1 2 3	Home entertainment (e.g. T.V., music, reading)	0 1 2 3
0 1 2 3	Amount of free time	0 1 2 3
0 1 2 3	Recreation and entertainment outside the home (e.g. movies, sport, eating out, walking)	0 1 2 3
0 1 2 3	Eating (at home)	0 1 2 3
0 1 2 3	Church and community organizations	0 1 2 3
0 1 2 3	Legal matters	0 1 2 3
0 1 2 3	Being organized	0 1 2 3
0 1 2 3	Social commitments	0 1 2 3

34

50

72

The next group of questions are concerned with how your mood has been at this time. For each of the following, please circle a number for the one answer that comes closest to the way you have been feeling at this time. Please use the scale provided.

Not at all.......... 1
Very slightly....... 2
Somewhat............ 3
Moderately.......... 4
Very much........... 5
Extremely........... 6

Depressed.................................... 1 2 3 4 5 6 ☐ 73

Happy.. 1 2 3 4 5 6 ☐

Frustrated................................... 1 2 3 4 5 6 ☐

Joyful....................................... 1 2 3 4 5 6 ☐

Unhappy...................................... 1 2 3 4 5 6 ☐

Pleased...................................... 1 2 3 4 5 6 ☐

Angry.. 1 2 3 4 5 6 ☐

Enjoyment/fun................................ 1 2 3 4 5 6 ☐

Worried...................................... 1 2 3 4 5 6 ☐ 5/1

In the next set of questions we are concerned with how your health is. Please answer the following two question by circling the appropriate number.

Compared to <u>others your own age</u>, how would you rate your health at the present time?

Terrible.................... 1
Very poor................... 2
Poor........................ 3
Fair........................ 4
Good........................ 5
Very good................... 6
Excellent................... 7

☐

Compared to <u>the person in excellent health</u>, how would you rate your health at the present time?

Terrible.................... 1
Very poor................... 2
Poor........................ 3
Fair........................ 4
Good........................ 5
Very good................... 6
Excellent................... 7

☐ 3

Next, please indicate how much each of the following problems have bothered or disturbed you during the last month. Circle only one number for each item. If you haven't been bothered by the problem circle 0. If the problem has been an extreme bother then circle 4 and so on.

Not at all.......... 0
A little bit........ 1
Moderately.......... 2
Quite a bit......... 3
Extremely........... 4

Item		
Sleep problems (can't fall asleep, wake up in the middle of the night or early in the morning)......	0 1 2 3 4	4
Weight change (gain or loss of 5 lbs or more).....	0 1 2 3 4	
Back pain....................................	0 1 2 3 4	
Constipation.................................	0 1 2 3 4	
Dizziness....................................	0 1 2 3 4	
Diarrhea.....................................	0 1 2 3 4	
Faintness....................................	0 1 2 3 4	
Constant fatigue.............................	0 1 2 3 4	
Headache.....................................	0 1 2 3 4	
Migraine headache............................	0 1 2 3 4	
Nausea and/or vomiting.......................	0 1 2 3 4	
Acid stomach or indigestion..................	0 1 2 3 4	15
Stomach pain (e.g. cramp)....................	0 1 2 3 4	
Hot or cold spells...........................	0 1 2 3 4	
Hands trembling..............................	0 1 2 3 4	
Heart pounding or racing.....................	0 1 2 3 4	
Poor appetite................................	0 1 2 3 4	
Shortness of breath when _not_ exercising or working hard................................	0 1 2 3 4	
Numbness or tingling in parts of your body........	0 1 2 3 4	
Felt weak all over...........................	0 1 2 3 4	
Pains in heart or chest......................	0 1 2 3 4	
Feeling low in energy........................	0 1 2 3 4	25

Not at all.......... 0
A little bit........ 1
Moderately.......... 2
Quite a bit......... 3
Extremely........... 4

Stuffy nose or head	0	1	2	3	4	☐	26
Blurred vision	0	1	2	3	4	☐	
Muscle tension or soreness	0	1	2	3	4	☐	
Muscle cramps	0	1	2	3	4	☐	
Severe aches and pains	0	1	2	3	4	☐	
Acne	0	1	2	3	4	☐	
Bruises	0	1	2	3	4	☐	
Nosebleed	0	1	2	3	4	☐	
Pulled (strained) muscle(s)	0	1	2	3	4	☐	
Pulled (strained) ligament(s)	0	1	2	3	4	☐	35
Cold or cough	0	1	2	3	4	☐	

We would now like you to answer either Yes or No to the following questions concerning your health. Please circle the answer that is correct for you.

Can you do hard activities at home like scrubbing floors or moving heavy furniture?	Yes	No	☐	
If you wanted to could you participate in active sports such as swimming, tennis or rowing a boat?	Yes	No	☐	
If you wanted to, could you run a short distance?	Yes	No	☐	
Can you walk uphill or upstairs?	Yes	No	☐	
Can you do moderate work at home like moving a chair or pushing a vacuum cleaner?	Yes	No	☐	
Can you do light work like dusting or washing dishes?	Yes	No	☐	
Can you walk around inside the house?	Yes	No	☐	
Do you need help with eating, dressing, or using the toilet?	Yes	No	☐	44

We now turn our attention to some of the more severe health problems that usually last for some period of time. Please indicate by circling the appropriate answer if you suffer from any of the following complaints.

High blood pressure.................................. Yes No ☐ 45

Heart trouble.. Yes No ☐

Stroke... Yes No ☐

Chronic bronchitis................................... Yes No ☐

Asthma... Yes No ☐

Arthritis or rheumatism.............................. Yes No ☐

Epilepsy... Yes No ☐

Diabetes... Yes No ☐

Cancer... Yes No ☐

Tuberculosis... Yes No ☐

Stomach ulcer or duodenal ulcer...................... Yes No ☐ 55

Chronic gallbladder trouble.......................... Yes No ☐

Chronic liver trouble................................ Yes No ☐

Hernia or rupture.................................... Yes No ☐

Could you now please tell us if you have any of the following physical impairments.

Trouble with seeing (even with glasses)............ Yes No ☐

Trouble with hearing (even with a hearing aid)...... Yes No ☐

We would now like to know if you have any other medical condition, ailment or impairment that hasn't been listed so far? Please name it or describe it in the space provided.

____ ☐

____ ☐

____ ☐ 63

We are now interested in gathering some information on your general circumstances. Please circle one number for each of the following questions.

In what year were you born? ____________ 65

Are you:

- Male.................................. 1
- Female................................ 2

Would you say you are:

- European.............................. 1
- Maori................................. 2
- Polynesian............................ 3
- Other (please specify)__________________.. 4

How much education have you had?

- No high school........................ 1
- Some high school...................... 2
- Completed high school................. 3
- More than high school................. 4

Are you:

- Employed full-time.................... 1
- Employed part-time.................... 2
- Out-of-work........................... 3
- Retired............................... 4
- Keeping house......................... 5
- Other (please specify)______________..... 6

Are you:

- Single................................ 1
- Married or de-facto................... 2
- Separated............................. 3
- Divorced.............................. 4
- Widowed............................... 5

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How do you live?

I live alone, I do not know my neighbours well.... 1
I live alone, I know my neighbours well........... 2
I live with other people who are unrelated to me.. 3
I live with other people who are related to me.... 4

Finally, we would be very interested in any comments you would like to make about this or the first questionnaire you filled out. Any comments of a more general nature would also be appreciated. Please use the space provided.

____

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Thank you for your help with this project. Please place the questionnaire in the enclosed envelope provided and post it back to us.