

**Subjective Quality of Life, Perceived Control, and
Dispositional Optimism among Older People**

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We the undersigned declare that the above named research project has been completed as described in the Application for Ethics Approval and in accordance with the ethics guidelines of Deakin University.

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Abstract

Although older people are currently engaging in healthier, more active, independent and productive lives than previous generations, research has tended to focus on pathological aging as the normative reference point. This research has emphasised that older people are confronted with physical and cognitive deterioration, and an increased exposure to uncontrollable situations (i.e., death of close friends, health difficulties). The strategies employed to manage such uncontrollable situations, namely primary control (i.e., perception of altering the environment to equate with the self) and secondary control (i.e., altering the self to equate with the environment) are fundamental to older people's subjective Quality of Life. Although primary control strategies increasingly result in failure and a loss of control for older people, they can maintain their perceptions of primary control through increasing their reliance on secondary control strategies. This review, guided by the Life-span Theory of Control, demonstrates that the relationship between coping strategies and subjective QOL differs depending on the individual's age, and that through increasingly relying on secondary control strategies, older people can maintain, or even increase, their subjective QOL.

Introduction

Early perceptions of Australia's senior citizens as being burdensome to society are now challenged by the engaging notion that this cohort can contribute substantially to our social, cultural and economic development (Bulletin on Aging, 1992). This contribution is reflective of the increasing number of older people remaining healthy and involved in life activities (Bass, 1995). Although these older people increasingly challenge the stereotypical perceptions of aging as a period of inevitable decline in Subjective Quality of Life (QOL) (Browne et al., 1994; Meddin & Vaux, 1988), researchers have tended to focus on pathological aging as the normative reference point (Browne et al., 1994). These researchers have assumed that the older populations' subjective QOL remains stable or decreases, rather than recognising that older people can maintain, or even increase their subjective QOL.

The ability to sustain an elevated level of subjective QOL may be constrained by older people's physical decline, and their increased exposure to uncontrollable situations (i.e., health problems, death of close friends) (Schulz, Heckhausen & Locher, 1991). Older people can manage such uncontrollable situations by employing control strategies, namely primary control (i.e., perception of altering the environment to equate with the self) and secondary control (i.e., altering the self to equate with the environment) (Rothbaum, Weisz & Synder, 1982). The types of control strategies employed by older people to manage such situations are fundamental to their level of QOL and their ability to age successfully (Heckhausen & Schulz, 1995).

Researchers investigating the relationship between the control strategies implemented to manage uncontrollable situations and subjective QOL, have often failed to examine the influence of age, and have utilised inadequate and inconsistent definitions of the variables involved. This review, based on the Life-Span Theory of Control (Heckhausen & Schulz, 1995) demonstrates that older people can maintain their perceptions of control, and thereby maintain or increase their subjective QOL, through altering the emphasis placed on their control strategies.

1.1.0. Older People

1.1.1 Overcoming Deterioration and Uncontrollable Situations

Older people, defined as those aged 65 years and over, are engaging in healthier, more independent, productive and active lives than previous generations (Year Book Australia, 1999). Their increasing involvement in life may be attributed to their increasing life expectancy (Butler, 1994). The number of healthy years experienced has increased, where a healthy man aged 65 can expect to live 15 more years, with good health for 13 of those years (Suzman, Willis & Manton, 1992). Furthermore, a healthy woman aged 65 can expect to live 20 more years, experiencing good health for 16 of them. This enhanced life expectancy has resulted in 2.2 million Australians being aged over 65 years, with that figure expecting to exceed 6 million (22% of males and 26% of females) by the year 2051 (Year Book Australia, 1999).

Despite remaining active for several more years, older people generally experience physical deterioration, and are increasingly confronted with uncontrollable situations (e.g. death of close friends) (Schulz et al., 1991). As their physical abilities decrease, their attempts to actively alter uncontrollable situations using primary control strategies, increasingly results in failure and a loss of control (Heckhausen & Schulz, 1995). For example, an older person experiencing physical decline may experience a loss of control when attempting to increase their exercise levels to improve their health. Older people can maintain their perceptions of control however, through increasing their reliance on secondary control strategies that compensate for this failure. These perceptions of control are positively related to subjective QOL, enhancing physical and mental well-being (Abeles, 1991; Herzog, Rodgers & Woodworth, 1982; Perlmutter & Eads, 1998).

1.2.0. Quality of Life

1.2.1. Conceptualisation of Quality of Life

Researchers investigating the older populations' QOL have broadly measured constructs such as health, happiness, self-esteem and life satisfaction (George & Bearon, 1980). Several definitions and models of QOL have been postulated, defining QOL as the "goodness of life" (Zautra & Goodhart, 1979, p. 2), or as including happiness, morale and life satisfaction (Okun, Olding & Cohn, 1990). A multi-dimensional definition of QOL, employed extensively in gerontology research, differentiates the objective and subjective dimensions of QOL. This definition includes objectively-defined health status and socioeconomic status, and subjectively-defined life satisfaction and self-esteem (George & Bearon, 1980).

1.2.2. Objective and Subjective Dimensions of Quality of Life

Early researchers inferred QOL through objective indicators such as the percentage of the unemployed labour force and crime rates (Land, 1999). These indicators assess living conditions (Browne et al., 1994; Diener & Suh, 1997), and are normative to a population or group (Cummins, 1997a). Objective indicators are unlikely to be contaminated by socially desirable responses, as they are not contingent on an individuals' perceptions of their QOL (Farquhar, 1995). These indicators may be risky however, for populations such as the older population who may be objectively disadvantaged (i.e., health difficulties), yet report happiness and satisfaction (Stewart & King, 1994).

Subsequently, researchers investigated QOL at the level of the individual, focussing on their perceptions of their living conditions (Flanagan, 1978). These perceptions such as satisfaction with health and satisfaction with material well-being, constitute the subjective dimension of QOL (Browne et al., 1994; Cummins, 1997a). As individuals' levels of subjective QOL may diverge from their level of objective QOL (Cummins, in press-b) both dimensions may be essential to obtain insight into an individuals' QOL (Lawton, 1991; Romney, Brown & Fry, 1994).

1.2.3. Measurement of Subjective QOL

Subjective QOL can be measured as a single entity or as consisting of several domains. A single-item measure assesses QOL through administering the question “how do you feel about your life as a whole?” (Andrews & Withey, 1976). Although single-item questions are brief and simple, they are contingent on an individual's integration of the domains that form their QOL (Diener, 1984). Hence, whereas one individual may assess their life as a whole by focussing on their employment status, another individual may focus on their relationships with their family and friends. It cannot be ascertained however, which domains of QOL have been considered in their evaluation, and whether their level of subjective QOL would change if they considered other domains (Diener, 1984).

To reduce the influence of individual differences in the conceptualisation of QOL, researchers have attempted to identify the constituent domains of QOL. Although the domains have been given various labels, there are similarities among them (Felce & Perry, 1995). Cummins (1996) reviewed 27 definitions of QOL identifying emotional well-being in 85% of the definitions, health (70%), intimacy (70%), material well-being (59%), productivity (56%), safety (22%), and community (30%). These domains are also mentioned by older people when they define their QOL (Farquhar, 1995). Specifically, in response to the question “what things give your life quality?” older people referred to their emotional well-being, health and functional ability, social contact and activities, adequacy of material circumstances, and suitability of the environment.

The empirical support provided for these domains has facilitated a definition of QOL as:

“both objective and subjective, each axis being the aggregate of 7 domains: material well-being, health, productivity, intimacy, safety, community and emotional well-being. Objective dimensions comprise culturally relevant measures of objective well-being. Subjective dimensions comprise domain satisfaction weighted by their importance to the individual” (Cummins, 1997b, p. 5).

1.2.4. General Population's Level of Subjective QOL

Research investigating the general population's level of subjective QOL data have demonstrated a remarkable degree of consistency (Cummins, 1995; Cummins, 1998). Inter-study comparisons have been conducted by converting Likert scale scores to a percentage of scale maximum (%SM), ranging from 0-100 (Cummins, 1995). A between-population comparison using population mean values of life satisfaction as data, demonstrated that Western populations' subjective QOL data have a mean and standard deviation of $75 + 2.5 \% SM$ (Cummins, 1995). Hence, 95% of the Western populations' subjective QOL means are expected to range between 70-80%SM.

A restricted range is also evident in the within-population data, where data from the individual Western population have a mean of 75% and a standard deviation of $18 + 1 \% SM$ (Cummins, in press-b). This research demonstrates that subjective QOL within-sample data ranges from 40-100%SM in Western countries.

1.2.5. Homeostatic Mechanism

As subjective QOL data does not range from 0-100%SM, it has been proposed that subjective QOL may behave as a variable held under homeostatic control (Cummins, in press-a). It may have a limited range to ensure that populations, on average, have a positive view of their lives (Cummins, in press-b). This homeostatic mechanism may be evolutionally adaptive, protecting against negative affect, and facilitating social interaction (Cummins, in press-b). The ability to maintain positive feelings about life may also be sustained during negative environmental conditions (Cummins, in press-b). Although objective QOL may decrease during these conditions, the homeostatic mechanism allows subjective QOL to remain independent.

The homeostasis of subjective QOL can be defeated however, when chronic objective conditions prevent adaptation from occurring (Cummins, in press-b). For example, caregivers of a severely disabled family members report a level of subjective QOL below the average population value of 75%SM (i.e., $54.5 + 11.3 \% SM$) (Christensen, Parris Stephens & Townsend, 1998). In these circumstances, low levels of objective QOL defeat the homeostatic mechanism.

This research suggests that younger and older people's subjective QOL is held under homeostatic control. As such, the subjective QOL of younger and older people is expected to remain at a relatively high level, unless chronic objective conditions prevent adaptation from occurring. This high level of subjective QOL may be maintained by several cognitive devices, such as a sense of perceived control (Thompson et al., 1998)

1.2.6. Perceived Control and Quality of Life

A sense of control, particularly in older people, is intimately interrelated with subjective QOL (Abeles, 1991). The perceived ability to change a situation influences behaviour, and physical and mental well-being (Abeles, 1991). Individuals maintaining a higher perception of control tend to have fewer health problems, better memories, and higher intellectual functioning (Rodin, Timko & Harris, 1985).

Social comparisons may facilitate perceptions of primary control through enhancing emotional well-being, and self-esteem (Heckhausen & Schulz, 1995). Festinger's (1954) social comparison theory proposes that individuals compare themselves to others when objective standards are lacking. In a downward comparison, an individual compares themselves to people known to be inferior to the self (Heckhausen & Brim, 1997). Downward comparisons are utilised when an individual's well-being is threatened, such as when experiencing a severe illness (Taylor, Wood & Lichtman, 1984). These comparisons provide the motivational resources required for primary control, enhancing self-esteem and emotional well-being. As perceptions of primary control are positively related to subjective QOL, social comparisons may enhance older people's subjective QOL (Heckhausen & Brim, 1997).

Older people demonstrate a greater tendency to utilise downward comparisons (Heckhausen & Brim, 1997) and report larger favourable discrepancies between the self and others, than younger people (Heckhausen & Krueger, 1993). Downward comparisons may be easier for older people however, as they can rely on the negative stereotypical perceptions of aging. Stereotypical beliefs suggesting that older people are poor, frail, and socially isolated are prevalent, being identified in the younger population

(Harris et al., 1981) and underlying many public policies (Lubomudrov, 1987). As older people may accept these stereotypical beliefs (Stagner, 1985), they can enhance their self-esteem and emotional well-being in a stressful situation by comparing themselves with those stereotypical disadvantaged others. An enhanced level of emotional well-being is beneficial, allowing older people to maintain perceptions of primary control, and thus increasing their subjective QOL.

1.2.7. Empirical Studies of Subjective Quality of Life and Age

Although the research on social comparisons and homeostatic mechanisms suggests that older people can maintain their subjective QOL, empirical studies investigating the relationship between subjective QOL and age are inconsistent (Diener, 1984; Horley & Lavery, 1995). As the older population is a heterogeneous group (Meddin & Vaux, 1988), it is difficult to characterise the typical older person (Rodin, 1986). Although some researchers propose older people have a higher subjective QOL than younger people (Diener, 1984; Browne et al., 1994; Herzog et al., 1982; Horley & Lavery, 1995), others report older people and younger people to have similar levels of subjective QOL (Stock, Okun, Haring & Witter, 1983), whilst still others report that older people maintain a lower subjective QOL than younger people (Bradburn & Caplovitz, 1965; Larson, 1978; Wilson, 1967).

This inconsistency may result from variability in the construction and content of the subjective QOL scales (Farquhar, 1995). Many geriatric scales of subjective QOL have been developed, the most extensively researched being the Philadelphia Geriatric Center Morale Scale (Lawton, 1975), and the Life Satisfaction Index (Neugarten, Havighurst & Tobin, 1961) (Shmotkin & Hadari, 1996). These scales explore issues specifically relevant to older people including items such as “I am as happy now as when I was younger” (Lawton, 1975), and “I feel old and somewhat tired” (Neugarten et al., 1961), preventing inter-age comparisons.

Additionally, these scales often assume that physical, cognitive, social and sexual functioning inevitably decrease with age and include items such as “I have a lot to be sad about” and “Things keep getting worse as I get older” (Lawton, 1975). Immediate

deterioration is not inevitable however (Browne et al., 1994), and even when deterioration does occur, the homeostasis of subjective QOL may be maintained by a sense of perceived control.

1.3.0. Primary and Secondary Control

Coping refers to the “constantly changing cognitive and behavioral efforts to manage specific external and/ or internal demands that are appraised as taxing or exceeding the resources of the person”(Lazarus & Folkman, 1984, p. 141). Coping strategies are employed to manage the problem causing the distress (i.e., problem-focussed coping) and to regulate the accompanying emotions (i.e., emotion-focussed coping) (Folkman & Lazarus, 1980).

The theory underlying problem-focussed and emotion-focussed coping and the questionnaire designed to assess these strategies (i.e., ‘Ways of Coping Questionnaire’)(WCQ) is shrouded in methodological limitations (Edwards & O’Neill, 1998). Firstly, although the definition of coping suggests that coping strategies should be used to manage demands and to enhance personal resources to meet these demands, the WCQ assesses more general coping dimensions. These coping dimensions demonstrate how an individual can cope with a situation by changing the environment or the self, however it is not specified how these strategies manage demands or enhance personal resources. Secondly, there is often a great deal of overlap among the coping dimensions, where some problem-focussed coping strategies resemble emotion-focussed coping strategies (Edwards & O’Neill, 1998). For example, the problem-focussed strategy of reducing ego involvement (i.e., reducing the significance of the situation to oneself) is similar to the emotion-focussed strategy of minimisation (i.e., deciding the problem is not as important as one once believed) (Edwards & O’Neill, 1998).

Control as a coping process refers to the cognitive and behavioural strategies exerted to obtain control in a situation (Folkman, 1984). Primary control, similar to problem-focussed coping, involves the perception of altering the environment to equate with the self, whilst secondary control, similar to emotion-focussed coping, involves altering the self to equate with the environment (Rothbaum et al., 1982). A primary control strategy for coping with an illness may be to adhere to medical regimes, whereas

a secondary control strategy may be to relinquish control to a higher power, such as God (Weisz, McCabe & Dennig, 1994).

Although primary control strategies are generally characterised by active efforts to change the environment, several different secondary control strategies have been identified. These strategies demonstrate how an individual can alter their cognitions or behaviours in a stressful situation to enhance their feelings of control (Rothbaum et al., 1982). Examples include predictive control (i.e., “I don’t feel disappointed because I knew it might happen”), downward social comparison (i.e., “I remember I am better off than many other people”), positive reinterpretation (i.e., I can see that something good will come of it”) and goal disengagement (“I tell myself it doesn’t matter”) (Heckhausen, Schulz & Wrosch, in press).

Both primary and secondary control strategies are employed to varying degrees in most stressful situations (Weisz, Rothbaum & Blackburn, 1984). The optimal combination of primary and secondary control strategies is fundamental to subjective QOL and the development and aging process (Heckhausen & Schulz, 1995). The optimal ratio of primary control strategies to secondary control strategies may change however, throughout the life-span.

1.3.1. Optimal Combination of Primary and Secondary Control

The Life Span Theory of control postulates that primary control strategies are preferred over secondary control strategies (Heckhausen & Schulz, 1995). Primary control strategies are attempted first and they yield outcomes which complement the individual’s needs. Additionally, primary control strategies are associated with positive adaptation throughout young adulthood (Compas, Malcarne & Fondacaro, 1988; Endler & Parker, 1990; Vitaliano, De Wolfe, Maiuro, Russo & Katon, 1990), whereas secondary control strategies are associated with negative adaptation (Forsythe & Compas, 1987; Lobel, Gilat & Endler, 1993; Mitchell, Cronkite & Moos, 1983).

In older age however, primary control strategies are increasingly associated with failure and frustration (Heckhausen & Schulz, 1995). Older people’s physical deterioration may affect their ability to exert primary control strategies (Schulz et al.,

1991). For example, older people experiencing biological decline may fail when attempting to seek employment that requires physical endurance. Repeated failure reduces their self-esteem (Heckhausen et al., in press), generates pessimistic expectations of control and reduces the motivational resources required for primary control, to the extent that an individual may experience helplessness (Seligman, 1975). However, through employing secondary control strategies that compensate for this failure, older people can maintain their perceptions of primary control (Heckhausen & Schulz, 1995).

1.3.2. Protective and Motivational Role of Secondary Control for Older people

Secondary control strategies enable older people to move from experiencing a loss of control to maintaining perceptions of primary control, by providing the motivational resources required for primary control (Heckhausen & Schulz, 1995; Schulz & Heckhausen, 1996). Specifically, secondary control strategies enhance older people's self-esteem and emotional well-being, and enhance their commitment to a chosen goal (Heckhausen et al., in press). This is best demonstrated by an example of an older individual with restricted mobility who experiences failure when working hard to maintain his garden (i.e., primary control). Although this experience of failure may generate pessimistic expectations of control, secondary control strategies can provide the motivational resources required for primary control. Through employing secondary control strategies, such as downward comparison (i.e., "I am better off than others my age"), he can enhance his self-esteem and emotional well-being. Furthermore, he can enhance his commitment to goals that expand primary control and disengage from goals that do not enhance primary control (i.e., "It doesn't matter that I can't garden anymore"). Through implementing these secondary control strategies, older people can enhance their perceptions of primary control. These perceptions of primary control are positively related to subjective QOL, enhancing physical and mental well-being (Abeles, 1991). The adaptiveness of secondary control strategies may differ however, depending on the controllability of the situation.

1.3.3. Optimal Control Strategies in Uncontrollable Situations

As older people confront various low-control or uncontrollable situations, such as health difficulties and the death of close friends, research investigating the optimal combination of control strategies in these situations is required (Heckhausen et al., in press). Daily hassles exemplify such uncontrollable situations, in that the individuals' actions do not influence the situation. As daily hassles play a greater role in stress and dysfunction and predict psychological symptoms better than major life events (Chamberlain & Zika, 1990; Kanner, Coyne, Schaefer & Lazarus, 1981; Ruffin, 1993; Weinberger, Hiner & Tierney, 1987), research is required to determine how older people should manage daily hassles.

Two models have been developed which demonstrate how primary and secondary control strategies interact with the controllability of a situation (Thompson et al., 1998). The discrimination model proposes that perceptions of primary control are adaptive in controllable situations, whereas acceptance (i.e., secondary control) is adaptive in low-control situations. The primacy/back-up model proposes that perceptions of primary control are adaptive in both controllable and uncontrollable situations. This model proposes that primary control is a more adaptive belief throughout the lifespan, and that secondary control is only beneficial when perceptions of primary control are low.

Researchers supporting the discrimination model have demonstrated that individuals in low-control situations experience harm from implementing primary control strategies and benefit from implementing secondary control strategies (Affleck, Tennen & Gershman, 1985; Affleck, Tennen, Pfeiffer & Fifields, 1987; Folkman, 1984; Lazarus & Folkman, 1984). Individuals afflicted with an unpredictable disease, such as arthritis, exhibited greater mood disturbance and less positive psychosocial adjustment when they perceived they had control over the course of their disease (Affleck et al., 1987). Additionally, the majority of mothers interviewed after the discharge of their newborn infant from a newborn intensive care unit, reported using secondary control strategies, such as positive reinterpretation (i.e., construing a negative event in terms of its benefits)

(Affleck et al., 1985). Specifically, the mothers reported that the event allowed them to gain a better perspective on life, and expanded their emotional and spiritual development.

Research supporting the primacy/back-up model has proposed that perceptions of primary control are adaptive in low-control situations, and that secondary control strategies are only beneficial if perceptions of primary control are low (Taylor, Helgeson, Reed & Skokan, 1991; Thompson, Collins, Newcomb & Hunt, 1996; Thompson, Nanni & Levine, 1994; Thompson, Sobolew-Shubin, Galbraith, Schwankovsky & Cruzen, 1993). HIV infected men exhibited less distress when they had perceived control over various aspects of their lives (i.e., relationships with family, HIV related symptoms), and those with low perceptions of primary control reported less depression if they relied on secondary control strategies (Thompson et al., 1994). Cancer patients were also less depressed and anxious when they reported greater perceptions of control over the domains of their life (i.e., medical information, progression of disease) (Thompson et al., 1993). Furthermore, exploratory research conducted on uncontrollable daily hassles demonstrates that problem-focussed coping (i.e., primary control) strategies do not reduce psychological well-being (Kohn, Hay & Legere, 1994; Roberts, 1995).

Although a substantial amount of this research suggests that perceptions of primary control are adaptive in uncontrollable situations (Thompson et al., 1998), these findings may reflect the inadequate measurement of secondary control strategies. Several researchers have failed to recognise the diversity of secondary control strategies, utilising a one or two-item measure of secondary control (Thompson et al, 1996). For example, secondary control has been assessed using the question “To what extent do you get a sense of control from accepting whatever happens relevant to the outcome?” (Thompson et al., 1996; Thompson et al., 1994). However, an individual responding to this question may consider acceptance as ‘giving up’, and fail to acknowledge many other secondary control strategies that they use. They may not recognise that they can accept a situation through disengaging from a goal, or through comparing themselves to disadvantaged others. Other researchers have assessed secondary control through investigating the perceived benefits of the situation (Affleck et al.,1985). Once again, this question only

assesses one secondary control strategy, namely positive reinterpretation (i.e., construing negative events in terms of their benefits).

Further research investigating the relationship between the coping strategies implemented to manage uncontrollable situations and subjective QOL, needs to assess a broader range of secondary control strategies. Additionally, as this relationship may become increasingly complex when age is considered, further research needs to examine older people. Although the primacy/back-up model may be adaptive for younger people, older people's subjective QOL may be enhanced if they rely on secondary control strategies when managing uncontrollable situations such as daily hassles.

1.4.0. Hassles

1.4.1. Hassles and Subjective QOL

Daily hassles are the “irritating, frustrating demands that are to some extent, characteristic of everyday transactions with the environment” (Kanner et al., 1981, p.3). Hassles are negatively related to subjective QOL, where individuals' reporting greater hassles report a lower subjective QOL (Chamberlain & Zika, 1990; Zika & Chamberlain, 1987). The culmative impact of hassles is stressful, particularly if compensatory positive experiences are lacking (Stahl, Grim, Donald & Neikirk, 1975). These positive experiences, or ‘uplifts’ include activities such as spending time with family, or having a good night's sleep (Kanner et al., 1981). Uplifts may act as an emotional buffer against stress by acting as a ‘breather’ from stressful situations, and thereby allowing the individual to maintain their coping strategies (Lazarus, Kanner & Folkman, 1980). Although previous research investigating the effects of hassles on subjective QOL has excluded uplifts, more insightful results may be obtained by examining the influence of uplifts (Kanner et al., 1981). Additionally, some previous research investigating the relationship between hassles and subjective QOL has utilised a confounded hassles scale (Kohn & MacDonald, 1992).

1.4.2. Confounding in the Hassles and Uplifts Scale

Daily hassles are commonly assessed through the Hassles and Uplifts Scale (Kanner et al., 1981). This scale, which requires individuals to nominate the severity of 117 hassles, is confounded with QOL. Well-being is measured rather than predicted, through items assessing health, drugs and sexual difficulties (eg. “how severe are the following hassles- sexual problems, thoughts about death, side-effects of medication”) (Dohrenwend, Raphael, Schwartz, Stvefve & Skodal, 1993; Dohrenwend & Shrout, 1985; Kohn & MacDonald, 1992; Majella de Jong, Timmerman & Emmelkamp, 1996). Although, researchers developed a revised ‘decontaminated’ Hassles scale (DeLongis, Folkman & Lazarus, 1988) that eliminated some items that measured well being (e.g. thoughts about death, side effects of medications), many questionable items referring to smoking, drinking, mood-altering drugs and health were retained (Kohn & MacDonald, 1992).

1.5.0. Dispositional Optimism

The control strategies selected to manage uncontrollable situations, such as daily hassles, may also be influenced by an individual’s level of dispositional optimism. Optimism, defined as a “generalized expectancy for positive outcomes”, may affect an individual’s behaviour (Scheier & Carver, 1985, p. 219). Based on a model of behavioural self-regulation, an individual will persist at obtaining an outcome as long as the outcome is perceived to be achievable (Scheier & Carver, 1985). As optimistic people expect positive outcomes in ambiguous situations (Lai, 1995) they are less likely than pessimists to withdraw from a situation.

1.5.1. Influence of Dispositional Optimism on Control Strategies

Optimism is positively related to psychological well-being (Taylor, 1989) and lower levels of depression than pessimism (Cutrona, 1982; Taylor et al., 1992). Optimistic people’s ability to maintain greater psychological well-being than pessimistic people may be attributed to, in part, the control strategies that they implement (Carver et

al., 1993). Specifically, optimistic individuals are inclined to implement problem-focussed coping strategies (i.e., primary control) whereas pessimistic individuals tend to implement avoidance coping strategies (i.e., secondary control) (Aspinwall & Taylor, 1992; Friedman et al., 1992; Scheier, Weintraub & Carver, 1986). As such, optimistic people's higher subjective QOL may reflect their emphasis on primary control strategies, as they are associated with positive adaptation (Endler & Parker, 1990; Vitaliano et al., 1990). This positive relationship between optimism and subjective QOL is expected to occur in both younger and older age groups. Perceptions of primary control are associated with enhanced physical and emotional well-being for both younger (Endler & Parker, 1990) and older people (Abeles, 1991).

Conversely, pessimistic people's lower QOL may reflect their reliance on secondary control strategies. As younger pessimistic people may experience distress from implementing secondary control strategies (Mitchell et al., 1983), their psychological well-being may be reduced. Older pessimistic people however, may benefit from implementing secondary control strategies. These secondary control strategies enhance emotional well-being and self-esteem (Heckhausen et al., 1998). As such, the relationship between the control strategies selected by pessimists and subjective QOL may be more positive for older people.

1.6.0. Hypotheses

This review has demonstrated how the relationship between control strategies and subjective QOL may differ depending on age, and that through increasingly relying on secondary control strategies, older people can maintain or increase their subjective QOL. It has attributed many of the contradictory findings to the inadequate operationalisation of the variables, and demonstrated how physical abilities and dispositional optimism influence the emphasis placed on primary and secondary control strategies. In summary, this project aims to compare the relationship between subjective QOL and the control strategies implemented to confront daily hassles, between a young and an older sample of people.

The hypotheses are as follows:

1) Older people will report a higher subjective QOL than younger people.

This hypothesis rests on the proposition that the older populations' subjective QOL is strongly maintained by social comparisons. Downward social comparisons enhance perceived control, and are thus beneficial in improving subjective QOL. As older people utilise more social comparisons than younger people, and as their comparisons may be more accessible (i.e., negative stereotypical perceptions of older people), their subjective QOL is expected to exceed that of younger people.

2) Secondary control strategies will be more positively related to subjective QOL for older people than for younger people.

Research demonstrates that secondary control strategies are associated with negative adaptation for younger people. Additionally, the Life Span Theory of Control postulates that secondary control has a greater motivational and protective role for older people than younger people. Older people are more likely than younger people to experience failure and a loss of control when implementing primary control strategies. Secondary control strategies enable older people to move from experiencing a loss of control to maintaining perceptions of primary control, through enhancing their emotional well-being. These perceptions of primary control are positively related to subjective QOL.

3) The relationship between daily hassles and subjective QOL will be mediated by daily uplifts.

In considering the relationship between subjective QOL and hassles, it is necessary to consider the role of positive events in preventing stress. Hence, if people who experience severe hassles also experience intense uplifts, the effects of the hassles on their subjective QOL may be reduced.

4) Pessimistic older people will have a higher subjective QOL than pessimistic younger people.

Pessimistic people tend to implement secondary control strategies (Aspinwall & Taylor, 1992). Although secondary control strategies are predictive of negative adaptation for younger people, they have a protective and motivating role for older people.

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Abstract

Although older people are currently engaging in healthier, more active, independent and productive lives than previous generations, research has tended to focus on pathological aging as the normative reference point. This cross-sectional study, based on the Life Span Theory of Control (Heckhausen & Schulz, 1995), demonstrated how older people can maintain their perceptions of Quality of Life (QOL) through altering the emphasis they place on the control strategies implemented during uncontrollable situations. Dispositional optimism and daily hassles may influence older people's subjective QOL through these control strategies. The influence that these control strategies, dispositional optimism, daily hassles and daily uplifts have on older people's subjective QOL was investigated. Younger people (n= 107, age range 18-25 years) and older people (n= 100, age range 65-89 years) completed self-report measures concerning subjective QOL, control strategies, daily hassles and daily uplifts and dispositional optimism. As predicted, older people reported a higher subjective QOL, equal perceptions of primary control, and more secondary control strategies than younger people, however secondary control strategies were not positively related to subjective QOL. Dispositional optimism and daily uplifts were both significant predictors of subjective QOL, accounting for more variance than the control strategies. Interventions designed to facilitate a high level of subjective QOL through enhancing older people's perceptions of primary control, and their level of dispositional optimism, are discussed.

Australian older people, defined as those aged 65 years and over, are engaging in healthier, more independent, productive and active lives than previous generations (Year Book Australia, 1999). Their increasing involvement in life may be attributed to a 25 year increase in their life expectancy over the last century (Butler, 1994). This enhanced life expectancy has resulted in 2 million Australians being aged over 65 years, with that figure expected to exceed 6 million (22% of males and 26% of females) by the year 2051 (Year Book Australia, 1999). Although older people are increasingly challenging the stereotypical perceptions of aging as a period of inevitable decline in subjective Quality Of Life (QOL), researchers still tend to focus on the pathology of aging as the normative reference point for subjective QOL (Browne et al., 1994; Schaie, 1993). Although the ability to sustain an elevated level of subjective QOL may indeed be constrained by older people's physical deterioration and their increased exposure to uncontrollable situations (i.e., health difficulties, death of close friends; Schulz, Heckhausen & Locher, 1991), older people can manage these uncontrollable situations by employing control strategies. Primary control is the perception of altering the environment to equate with the self, whilst secondary control is altering the self to equate with the environment (Rothbaum, Weisz & Synder, 1982). The type of control strategies employed by older people to manage such situations may be fundamental to their level of subjective QOL and their ability to age successfully (Heckhausen & Schulz, 1995). In addition to age, the type of control strategies selected by older people may be influenced by their level of dispositional optimism. This research aims to investigate the optimal control strategies for older people, and examine how daily hassles, daily uplifts, and level of dispositional optimism influence older people's subjective QOL.

2.1.0. Quality of Life

2.1.1. Conceptualisation of Quality of Life

Although several varying definitions and models of QOL have been proposed, there is substantial overlap among researchers on the constituent domains of QOL. Empirical support has been provided for several domains including emotional well-being, health, intimacy, material well-being, productivity, safety, and community (Cummins, 1996; Farquhar, 1995; Felce & Perry, 1995). This support has facilitated a definition of QOL as being:

“both objective and subjective, each axis being the aggregate of 7 domains: material well-being, health, productivity, intimacy, safety, community and emotional well-being. Objective dimensions comprise culturally relevant measures of objective well-being. Subjective dimensions comprise domain satisfaction weighted by their importance to the individual” (Cummins, 1997, p.5).

Research investigating the general population’s level of subjective QOL utilising a questionnaire based on this definition (i.e., Comprehensive Quality of Life Scale; ComQOL) has demonstrated a remarkable degree of consistency (Cummins, 1995; Cummins, 1998). Inter-study comparisons of subjective QOL data have also been conducted by converting Likert scale scores to a percentage of scale maximum (%SM) ranging from 0 to 100. A between-population comparison using population mean values of life satisfaction as data, demonstrated that Western population’s subjective QOL data have a mean and standard deviation of $75 + 2.5\%SM$ (Cummins, 1995).

2.1.2. Empirical Studies of Subjective QOL of Older People

Empirical studies investigating the relationship between subjective QOL and age are inconsistent (Horley & Lavery, 1995), with researchers demonstrating that subjective QOL can increase (Diener, 1984; Herzog, Rodgers & Woodworth, 1982; Horley & Lavery, 1995), remain stable (Stock, Okun, Haring & Witter, 1983), or decrease from

younger (18-25years) to older (65years and over) age groups (Edwards & Klemmack, 1973; Harris et al., 1975).

This inconsistency may reflect that early QOL measures for older people, such as the Philadelphia Geriatric Center Morale Scale (Lawton, 1975), and the Life Satisfaction Index (Neugarten, Havighurst & Tobin, 1961) which focused on deterioration according to a pre-determined model of QOL. These scales included statements such as “I feel old and somewhat tired” as representing dissatisfaction (Thomas, 1981). Statements such as these focus on deterioration and are based on the questionable assumption that feeling old is bad. Deterioration is not inevitable (Browne et al., 1994), and even if deterioration does occur, older people can maintain their perceptions of subjective QOL through altering their expectations of their wants.

2.1.3. Multiple Discrepancies Theory

Older people may maintain their level of subjective QOL through lowering their expectations (Shmotkin, 1998). The gap between what they expect and what they perceive as happening, is reduced. This expectation gap is related to well-being, whereby an individual may experience feelings of disappointment and frustration if their expectations are incongruent with what is happening (Thomas, 1981). The Multiple Discrepancies Theory (Michalos, 1985) explicates this, proposing that:

“Reported net satisfaction is a function of perceived discrepancies between what one has and wants, relevant others have, the best one has had in the past, expected to have 3 years ago, expects to have after 5 years, deserves and needs” (Michalos, 1985, p.347).

The discrepancy between what one has and what one wants is the mediating variable between all the other discrepancies and satisfaction. The proposition that the discrepancy between what one has and wants decreases with age, has been implicated in the explanation of the Harris et al. (1976) survey findings. This survey demonstrated that both younger and older people perceived that most older people experienced very serious problems, however few of the older group perceived the problems to be serious for themselves. For example, 63% of the people aged under 65 years, and 59% of the people

aged over 65 years perceived that not having enough money was a ‘very serious problem’ for older people, however only 15% of the older people perceived that not having enough money was a problem that they personally experienced. Hence, older people recognise that other older people generally experience a reduced subjective QOL, however they do not identify themselves with that life.

This suggests not only the gap between what is expected and what is happening is small, but also that the gap between others and themselves is large. Comparisons between the self and less advantaged others are known as downward comparisons. Older people demonstrate a greater tendency to utilise downward comparisons (Heckhausen & Brim, 1997) and report larger favourable discrepancies between the self and others, than younger people (Heckhausen & Krueger, 1993). Older people may accept the stereotypical perceptions that older people are generally poor, frail, and socially isolated (Harris et al., 1981; Lubomudrov, 1987), and enhance their self-esteem and emotional well-being in a stressful situation by comparing themselves with those stereotypical disadvantaged others. Through enhancing their self-esteem and emotional well-being, downward comparisons may facilitate perceptions of primary control (Heckhausen, Schulz & Wrosch, in press).

2.2.0. Primary and Secondary Control

Perceptions of control are intimately interrelated with subjective QOL (Abeles, 1991). The perceived ability to change a situation influences behaviour, and physical and mental well-being (Abeles, 1991). Control strategies are the cognitive and behavioural efforts exerted to obtain control in a situation (Folkman, 1984). Primary control involves the perception of altering the environment to equate with the self, whilst secondary control involves altering the self to equate with the environment (Rothbaum et al., 1982). Although primary control strategies are generally characterised by active efforts to change the environment, several different secondary control strategies have been identified. Examples include downward social comparison (e.g. “I remember I am better off than many other people”), and goal disengagement (e.g. “I tell myself it doesn’t matter”) (Heckhausen et al., in press). Although both primary and secondary control

strategies are employed to varying degrees in most stressful situations (Weisz, Rothbaum & Blackburn, 1984), the ratio of primary to secondary control strategies may be fundamental to an individual's subjective QOL (Heckhausen & Schulz, 1995).

The optimal ratio of primary to secondary control strategies may change throughout the life-span (Heckhausen & Schulz, 1995). In young adulthood, primary control strategies are associated with positive adaptation (Compas, Malcarne & Fondacaro, 1988; Endler & Parker, 1990; Vitaliano, De Wolfe, Maiuro, Russo & Katon, 1990) and excessive reliance on secondary control strategies is associated with negative adaptation (Forsythe & Compas, 1987; Lobel, Gilat & Endler, 1993; Mitchell, Cronkite & Moos, 1983). In older age, however, the Life Span Theory of Control proposes that the probability of primary control failure increases with increasing physical deterioration. Repeated primary control failure generates pessimistic expectations of control and reduces the motivational resources required for primary control (Heckhausen et al., in press), to the extent that an individual may experience helplessness (Seligman, 1975).

Secondary control strategies enable people to move from experiencing a loss of control to maintaining perceptions of primary control by providing the motivational resources required for primary control (Heckhausen & Schulz, 1995; Schulz & Heckhausen, 1996). This is best demonstrated by an example of an older individual with restricted mobility who experiences failure when working hard to maintain their garden (i.e., primary control). Through employing secondary control strategies, such as downward comparison (e.g. "I am better off than others my age"), they can enhance their self-esteem and emotional well-being. Furthermore, through disengaging from goals that may result in primary control failure (e.g., "It doesn't matter that I can't garden anymore"), they can reduce the amount of primary control failure that they experience.

2.2.1. Relationship between Control Strategies and Subjective QOL

As older people confront various low-control or uncontrollable situations, such as health difficulties and the death of close friends, research investigating the optimal combination of control strategies in these situations is required (Heckhausen et al., in press). Two models have been developed which demonstrate how primary control and

secondary control strategies are adaptive in low-control situations (Thompson et al., 1998). The Discrimination model proposes that individual's benefit from implementing secondary control strategies in uncontrollable situations, whilst the Primacy/Back-up model proposes that primary control is a more adaptive belief throughout the life-span and that secondary control is only beneficial when perceptions of primary control are low. Researchers supporting the Discrimination model have demonstrated that people using secondary control strategies to manage a nuclear accident reported fewer psychological symptoms than those using primary control strategies (Collins, Baum & Singer, 1983). Researchers supporting the Primacy/Back-up model however, have demonstrated that cancer patients were less depressed and anxious when they reported greater perceptions of primary control over the domains of their life (Thompson, Sobolew-Shubin, Galbraith, Schwankovsky & Cruzen, 1993).

Inconsistencies in this research may reflect the inadequate measurement of primary control and secondary control strategies. Researchers often failure to differentiate actual control from perceptions of control. Primary control is an individuals 'perceived' ability to achieve a desired outcome, however this perceived ability may not match an individual's actual ability (Thompson et al., 1998). Schulz and Heckhausen (1996) have failed to recognise the independence of actual and perceived primary control strategies, assuming that physical deterioration reduces perceptions of primary control. Rather, it is proposed here that physical deterioration may increase the probability of primary control failure, but that older people can maintain their perceptions of primary control through increasing their reliance on secondary control strategies.

Several researchers have also failed to recognise the diversity of secondary control strategies, utilising a one or two-item measure of secondary control. For example, secondary control has been assessed using the single question "To what extent do you get a sense of control from accepting whatever happens relevant to the outcome?" (Thompson, Collins, Newcomb & Hunt, 1996; Thompson, Nanni & Levine, 1994). An individual responding to this question may consider acceptance as 'giving up' however, and fail to recognise that they can accept a situation through disengaging from a goal, or through comparing themselves to disadvantaged others. Further research that utilises a

broader definition of secondary control and examines how age influences the adaptiveness of secondary control in uncontrollable situations is required.

2.3.0. Dispositional Optimism

2.3.1. Relationship Between Dispositional Optimism and Subjective QOL

In addition to age, the type of control strategies selected by people may be influenced by an individual's level of dispositional optimism. Optimism, defined as a "generalized expectancy for positive outcomes" (Scheier & Carver, 1985, p. 219), is positively related to subjective QOL (Taylor, 1989) and to lower levels of depression (Cutrona, 1982; Taylor et al., 1992). Optimistic people's ability to maintain greater psychological well-being than pessimistic people may be attributed to, in part, the control strategies that they implement (Carver et al., 1993). Specifically, whereas optimistic individuals tend to implement the preferred primary control strategies, pessimistic people tend to implement the less preferred secondary control strategies (Aspinwall & Taylor, 1992; Friedman et al., 1992; Scheier, Weintraub & Carver, 1986). Primary control strategies are preferred as they are attempted first, and they allow the individual to fulfill their own needs, whereas secondary control strategies involve adjusting oneself to less desirable outcomes (Heckhausen & Schulz, 1995).

2.4.0. Daily Hassles and Daily Uplifts

2.4.1. Relationship Between Daily Hassles, Daily Uplifts, and Subjective QOL

The type of control strategies implemented to manage daily hassles influences subjective QOL. Daily hassles are the "irritating, frustrating demands that are to some extent, characteristic of everyday transactions with the environment" (Kanner, Coyne, Schaefer & Lazarus, 1981, p.3). Daily hassles may also directly reduce subjective QOL (Chamberlain & Zika, 1990; Zika & Chamberlain, 1987), particularly if compensatory positive experiences are lacking (Stahl, Grim, Donald & Neikirk, 1975). These positive experiences, or 'uplifts' include activities such as spending time with family, or having a

good nights sleep (Kanner et al., 1981). Uplifts may act as an emotional buffer against stress by acting as a 'breather' from stressful situations, and allowing the individual to maintain their control strategies (Lazarus, Kanner & Folkman, 1980). Although previous research investigating the effects of hassles on subjective QOL has excluded uplifts, more insightful results may be obtained by examining the influence of uplifts (Kanner et al., 1981).

2.5.0 Summary

Contrary to the stereotypical perceptions of aging, older people's subjective QOL and perceptions of control may not necessarily deteriorate with age. Older people can maintain their subjective QOL and perceptions of control through altering the emphasis they place on their control strategies when experiencing uncontrollable situations, such as daily hassles. Dispositional optimism and daily hassles may not only influence subjective QOL through primary control and secondary control, but may be directly related to subjective QOL. This research aims to compare the relationship between subjective QOL and the control strategies implemented to confront uncontrollable situations, such as daily hassles, between a younger and an older sample of people.

2.6.0. Hypotheses

The hypotheses are as follows:

1) Older people will report a higher subjective QOL than younger people.

This hypothesis rests on the proposition that the older populations' subjective QOL is strongly maintained by the discrepancy between what one has and what one wants. Older people may lower their expectations for themselves by relying on the stereotypical perceptions of aging.

2) Secondary control strategies will be more positively related to subjective QOL for older people than for younger people.

Older people are more likely than younger people to experience primary control failure. Secondary control strategies protect and restore older people's self-esteem and emotional

well-being through enhancing their commitment to a chosen achievable goal, and allowing them to disengage from goals that may result in primary control failure.

3) Low optimism will reduce subjective QOL for both the younger and older age groups. The negative relationship between low optimism and subjective QOL may be attributed to the control strategies that they implement. Optimistic people tend to implement the preferred primary control strategies, whereas pessimistic people tend to implement secondary control strategies.

4) Daily uplifts will influence subjective QOL beyond the influence of daily hassles. Although previous research examining influences on subjective QOL has excluded uplifts, they may buffer against stress.

Method

2.7.1. Participants

One hundred and seven younger people aged from 18 to 25 years ($M=20.1$ years), and 100 older people aged from 65 to 89 years ($M=75.6$ years) volunteered to participate in the study. The younger group obtained from Deakin University (92%) and through convenience sampling (8%), consisted of 86 (80%) females. The older group obtained from six retirement villages (67%), a senior citizens club (6%) and through convenience sampling (27%), consisted of 68 (68%) females.

2.7.2. Materials

Subjective Quality of Life

The subjective dimension of the Comprehensive Quality of Life Scale (Com-QOL) developed by Cummins (1997) assesses the importance of, and satisfaction with, seven domains of QOL, namely material well-being, health, productivity, intimacy, safety, community and emotional well-being (refer to appendix 1). A 10-point scale was utilised, ranging from 1= not important/satisfied at all, to 10= could not be more important/satisfied. The importance score was weighted by the satisfaction score, and converted to a percentage of scale maximum, ranging from 0 to 100. The subjective dimension of the scale has been administered to both younger (Cummins, McCabe, Romeo & Gullone, 1994) and older age groups (Cummins, Fogarty, McCabe & Hammond, 1995; Ferris & Bramston, 1994). The scale is psychometrically sound, with internal reliability ranging from 0.5 to 0.8 (Cummins, 1997a) and validity has been established using data from a review of the QOL domains (Cummins, 1996).

Primary and Secondary Control

The Cognitive-Behavioural Control Questionnaire developed by Heeps (1998), assesses seven primary control strategies and 13 secondary control strategies, including goal disengagement, downward comparisons, and denial (refer to appendix 2). Downward

social comparisons were assessed using the question “When something bad happens that I cannot change, I remember I am better off than many other people”. A 10-point scale was utilised, ranging from 1= never true to 10= always true. Although the psychometric properties of the scale have not yet been established, the secondary control strategies in the questionnaire include those proposed by Rothbaum et al., (1982) and Heckhausen et al., (1998).

Hassles and Uplifts

The Hassles and Uplifts Scale required participants to nominate their top five hassles and uplifts, and rate their severity on a 10-point scale (refer to appendix 3). The scale ranged from 1= not at all severe/intense to 10= could not be more severe/intense. As the scale was developed for this research, the psychometric properties have not been assessed. Clearly however, the scale has face validity.

Dispositional Optimism

The Life Orientation Test (LOT) consists of four positively worded items, four negatively worded items and four filler items (Scheier & Carver, 1985). Research conducted on the psychometric properties of the scale is adequate with Cronbach’s alpha equaling 0.76, test-retest reliability equaling 0.79, and convergent and discriminant validity being demonstrated. However, when a factor analysis was conducted, the positive and negative items of the LOT loaded onto two different factors, suggesting that the items are measuring different constructs (Lai, 1994). As such, the four positively worded items were utilised and the four negatively worded items were changed to positively worded items. The filler items were deemed unnecessary and deleted (refer to appendix 4). The eight items were rated on a 10-point scale, ranging from 1=not at all true to 10= could not be more true.

2.7.3. Procedure

Ethics approval was obtained from Deakin University, the retirement villages and the senior citizens club. For the younger group, students were approached at the cafeteria, provided with a plain language statement and requested to participate. The questionnaire was completed anonymously and posted to Deakin University using a reply-paid envelope. For the older group, the retirement villages and the senior citizens club advertised the research, and requested that interested individuals attend a meeting. At the meeting, the older people were informed of the nature of the research, and either completed the questionnaire immediately or took it away to complete at a later time. If they completed the questionnaire at a later time, it was posted to Deakin University using a reply-paid envelope. Both the younger and older groups were informed where the results of the study could be accessed, and when requested, an oral presentation of the results was provided to the residents of the retirement villages.

Results

Statistical analyses were conducted to determine the optimal control strategies for older people and to examine the influence of dispositional optimism, daily hassles and daily uplifts on older people's subjective QOL. A multivariate analysis of variance was conducted to investigate how age and dispositional optimism influence people's level of subjective QOL, and their use of primary control and secondary control strategies. Multiple regressions were conducted to predict subjective QOL from primary control, secondary control, dispositional optimism, daily hassles and daily uplifts. An alpha level of 0.05 was used for all statistical tests.

2.8.1. Age Differences in Subjective QOL, Primary Control, Secondary Control and Dispositional Optimism

In evaluating the first hypothesis, proposing that older people have a higher subjective QOL than younger people, a multivariate analysis of variance was employed. Prior to the analyses, the variables were inspected for accuracy of data entry and missing values. Less than 5% of the values for older people and 2% of the values for younger people were missing. As there was no pattern to these missing values, they were replaced with the group mean. Although this reduces the variance of the variables, and the degree of correlation the variable has with other variables (Tabachnick & Fidell, 1996), the replacement is a conservative estimate.

Procedures for data screening and checking of assumptions for subjective QOL, primary control, secondary control and dispositional optimism followed those appropriate for group data. Normality was assessed using the criteria skew/ standard error <3, Kolmogorov-Smirnov values, frequency histograms, and normal probability plots. As transformations are not recommended for data that are naturally skewed (Tabachnick & Fidell, 1996), and as MANOVA is robust to violations of normality if the violation is created by skewness, only gross violations were attended to. Although two univariate and three multivariate outliers were recoded to three standard deviations from the mean, there were no gross violations of normality. Linearity and homoscedasticity of subjective

QOL, primary control, secondary control and dispositional optimism was assessed through bivariate scatterplots. Reasonably linear relationships were demonstrated among the variables, and there was no evidence of multicollinearity.

Univariate homogeneity of variance and multivariate homogeneity of variance-covariance matrices was assessed using Levene's test and Box's M test, respectively. Equality of error variance was evident for subjective QOL, $F(1, 205) = 1.50, p > 0.05$, primary control, $F(1, 205) = 3.24, p > 0.05$, and dispositional optimism, $F(1, 205) = 0.28, p > 0.05$, however not for secondary control, $F(1, 205) = 6.70, p < 0.05$. As Levene's test is sensitive to non-normality, it can lead to overly conservative rejection (Tabachnick & Fidell, 1996). To correct for this, secondary control can be evaluated using a more stringent alpha level (0.01 for severe violation). Multivariate homogeneity of variance-covariance matrices was evident, $F(10, 198816) = 2.01, p > 0.001$. As such, the assumptions of MANOVA were adequately met.

The multivariate test of significance was tested using Pillai's criterion, as it is particularly robust if the sample sizes are unequal (Tabachnick & Fidell, 1996). The dependent variables were significantly affected by age, $F(4, 202) = 5.32, p < 0.01, \eta^2 = 0.095$. An examination of the univariate F-tests for each dependent variable indicates that the older group reported significantly higher subjective QOL, $F(1, 205) = 13.54, p < 0.01, \eta^2 = 0.062$, secondary control, $F(1, 205) = 6.99, p < 0.01, \eta^2 = 0.033$, and dispositional optimism, $F(1, 205) = 3.89, p < 0.05, \eta^2 = 0.019$, than the younger group. However younger people and older people did not differ on primary control strategies, $F(1, 205) = 0.16, p > 0.05$. Therefore, the first hypothesis proposing that the older group would have a higher subjective QOL, was supported. Table 1 displays the estimated marginal means and standard deviation for the younger and older groups.

Table 1

Means and Standard Deviation of Subjective QOL, Primary Control, Secondary Control, and Dispositional Optimism for Younger (n=100) and Older People (n=107)

Group	SQOL	PC	SC	DO
Younger				
<u>M</u>	71.35	7.45	5.74	6.26
<u>SD</u>	11.59	1.12	1.04	1.45
Older				
<u>M</u>	76.82	7.40	6.19	6.64
<u>SD</u>	9.63	1.36	1.42	1.34

Note- All SQOL scores have been converted to a percentage of scale maximum (%SM) score, as if the scoring was from 0-100. The formula is (mean score for the original domain-1)* 100/(number of scale points-1). Scoring for PC, SC and DO, range from 1-10.

2.8.2. Age Differences in the Seven Domains of Subjective QOL

In order to further explore the nature of the subjective QOL differences, a multivariate analysis of variance was applied to the younger and older groups to determine which domains were affected by age. Pillai's criterion was significant, $F(7, 199)=4.37, p<0.01, \eta^2=0.13$. An examination of the univariate F-tests for each domain demonstrated that older people reported significantly higher subjective material well-being, $F(1, 205)=25.34, p<0.01$, emotional well-being, $F(1, 205)=5.92, p<0.05$, and community, $F(1, 205)=11.35, p<0.01$. The estimated marginal means and standard deviations for the seven domains of subjective QOL are presented in Table 2.

Table 2

Means and Standard Deviation of the 7 Domains of Subjective QOL for Younger (n=100) and Older People (n=107)

Group	Mat	Healt	Prod	Intim	Safe	Comm	Emot
Younger							
<u>M</u>	66.35	68.41	67.93	80.64	77.02	65.67	73.80
<u>SD</u>	14.68	18.33	16.96	18.39	13.80	16.63	16.66
Older							
<u>M</u>	76.36	72.49	71.84	84.69	80.20	73.53	78.94
<u>SD</u>	13.88	22.72	13.38	14.91	14.67	16.99	13.46

2.8.3 Age Differences in Downward Social Comparisons

As older people's level of subjective QOL was expected to be maintained by an increasing reliance on secondary control strategies such as downward comparisons, an analysis of variance was applied to the younger and older sample to determine if there were age differences in downward social comparisons. Older people (\underline{M} =8.32, \underline{SD} =1.77) reported significantly more downward social comparison than younger people (\underline{M} =6.82, \underline{SD} =2.29), $F(1, 205)=27.63$, $p<0.01$. It should be noted however, that older people reported more secondary control strategies overall, and that downward comparisons is simply consistent with this trend.

In summary, older people reported a significantly higher level of subjective QOL, dispositional optimism, and secondary control strategies than younger people. However, younger and older people reported similar perceptions of primary control.

2.8.4. Predicting Subjective QOL from Primary Control and Secondary Control

To examine the second hypothesis, proposing that secondary control strategies would be more positively related to subjective QOL for older than for younger people, two standard multiple regressions were conducted. Two univariate and three multivariate outliers were recoded to three standard deviations from the mean. The assumptions of

normality, linearity and homoscedasticity of the residuals were met, and there was no evidence of multicollinearity.

Table 3 displays the correlations between the variables, the unstandardised regression coefficient (B), and intercept, the standardised regression coefficient (β), the semi-partial correlation (sr^2), \underline{R} , \underline{R}^2 , and Adjusted \underline{R}^2 for the younger and the older group. \underline{R} was significantly different from zero for both the younger, $F(2, 104)=7.31$, $p<0.01$, and older groups, $F(2, 97)=7.16$, $p<0.01$. In the younger group, primary control and secondary control were positively related to subjective QOL, accounting for three and almost four percent of the variance, respectively. In the older group, only primary control was positively related to subjective QOL, accounting for almost five percent of the variance. Hence, the second hypothesis, proposing that secondary control strategies will be more positively related to subjective QOL for older than younger people was not supported.

Table 3

Standard Multiple Regression of Primary Control and Secondary Control on Subjective QOL for Younger (n=107) and Older (n=100) people.

Group	Variables	SQOL	PC	SC	B	β	sr^2
Younger	PC	0.29			2.11*	0.20	0.034
	SC	0.30	0.43		2.41*	0.21	0.036
	Intercept				41.79		
							R= 0.35*
							R ² = 0.12
							Adjusted R ² =0.10
Older	PC	0.32			1.71*	0.24	0.048
	SC	0.28	0.42		1.24	0.18	0.028
	Intercept				56.54		
							R=0.36*
							R ² =0.13
							Adjusted R ² =0.11

* $p<0.05$

2.8.5. Difference between Secondary Control Strategies and Subjective QOL of Older People Low in Primary Control (n=16) and High in Primary Control (n=16)

As postulated by the Primacy/Back-up model, secondary control strategies may not have been related to subjective QOL because the older people reported, on average, high perceptions of primary control. To determine whether secondary control strategies are utilised more when perceptions of primary control are low, an exploratory multiple analysis of variance was conducted on older people low in primary control (n=16) and older people high in primary control (n=16). As very few of the older group reported low perceptions of primary control, the sample size was very small. Secondary control strategies and subjective QOL were significantly affected by level of primary control, $F(2, 29)=7.81, p<0.01, \eta^2=0.35$. The univariate tests demonstrated that older people with low primary control reported significantly less secondary control strategies ($M=5.04, SD=0.97$) than older people with high primary control ($M=6.76, SD=2.06$), $F(1,30)=9.03, p<0.01$. Furthermore, older people with low perceptions of primary control reported a significantly lower level of subjective QOL ($M=73.77, SD=9.82$) than older people with high primary control ($M=84.21, SD=8.01$), $F(1, 30)=10.86, p<0.01$.

2.8.6. Predicting Subjective QOL from Primary Control, Secondary Control and Dispositional Optimism

Although dispositional optimism is expected to exert its influence on subjective QOL through control strategies, in Table 3 it is demonstrated that primary control and secondary control accounted for little of the variance in people's subjective QOL. In order to determine whether optimism influenced subjective QOL beyond the influence on primary control and secondary control strategies, a hierarchical multiple regression was conducted on both the younger and older age groups. As indicated in Table 4, primary control and secondary control were entered as the first step, followed by dispositional optimism as the second step. R was significantly different from zero at the end of the first step for both the younger, $R=0.35, F(2, 104)=7.17, p<0.01$, and older group, $R=0.36, F(2, 97)=7.14, p<0.01$. The addition of dispositional optimism in step 2 resulted

in a significant increment in R^2 for both the younger, $F_{inc}(1, 103)=17.69, p>0.01$, and older group, $F_{inc}(1, 96)=17.02, p>0.01$, with dispositional optimism accounting for 13% of the variance in subjective QOL. However, when optimism was included in the equation, primary control and secondary control strategies were no longer significant. This suggests that dispositional optimism subsumes primary control and secondary control, and that the effects of dispositional optimism on subjective QOL may be mediated by primary control and secondary control.

Table 4
Hierarchical Regression of Dispositional Optimism, Primary Control, and Secondary
Control on Subjective QOL for Younger (n=107) and Older Groups (n=100)

Group	Variable	SQOL (DV)	PC	SC	DO	B	β	sr^2
Young								
Step 1	PC	0.30				2.17*	0.21	0.036
	SC	0.29	0.43			2.26*	0.20	0.034
Step 2	PC					1.06	0.10	0.008
	SC					0.87	0.08	0.004
	DO	0.48	0.39	0.42		3.27*	0.41	0.13
				Intercept		38.04		
								R=0.50*
								R ² =0.25
								Adjusted R ² =0.23
Older								
Step 1	PC	0.32				1.71*	0.24	0.048
	SC	0.28	0.42			1.24	0.18	0.028
Step 2	PC					0.96	0.14	0.014
	SC					0.34	0.05	0.002
	DO	0.49	0.39	0.43		2.99*	0.41	0.13
				Intercept		47.82		
								R= 0.51*
								R ² =0.26
								Adjusted R ² =0.24

*p<0.05

2.8.7 Difference Between the Subjective QOL, Primary Control, and Secondary Control Strategies of Younger (n=30) and Older (n=30) People Low in Dispositional Optimism

In evaluating the third hypothesis, proposing that low optimism reduces younger and older people's level of subjective QOL, an analysis of variance was applied to both groups. Thirty older people with low optimism scores were matched, on the basis of these optimism scores, with 30 young people low in optimism. Additionally, 30 older people with high optimism were matched with 30 younger people high in optimism. The assumptions of normality and homogeneity of variance were met for an analysis of variance. Younger people high in dispositional optimism reported a significantly higher subjective QOL than younger people low in dispositional optimism, $F(1, 58)=13.23$, $p<0.01$. Older people high in dispositional optimism reported a significantly higher subjective QOL than older people low in dispositional optimism, $F(1, 58)=8.66$, $p<0.05$. Hence, consistent with the third hypothesis, low levels of dispositional optimism reduced subjective QOL for both the younger and older group

Through examining the means in Table 5, it was noted that although the younger and older groups low in optimism reported similar levels of dispositional optimism, older people reported a higher subjective QOL than the younger people, $F(1, 58)=4.04$, $p<0.05$, $\eta^2=0.065$. The older group high in optimism however, reported a similar level of subjective QOL to the younger group high in optimism, $F(1, 58)=1.11$, $p>0.05$. As such, there were no age differences in the subjective QOL for people high in optimism, however, older people low in optimism reported a higher subjective QOL than their younger counterparts.

Table 5

Means and Standard Deviations of Dispositional Optimism and Subjective QOL for Younger (n=30) and Older (n=30) People Low in Optimism.

Group	Low Optimism		High Optimism	
	DO	SQOL	DO	SQOL
Younger				
<u>M</u>	5.11	67.11	7.79	77.38
<u>SD</u>	0.95	11.41	0.59	10.44
Older				
<u>M</u>	5.12	72.75	7.70	80.0
<u>SD</u>	0.93	10.29	0.59	8.75

2.8.8 Predicting Subjective QOL from Daily Hassles and Daily Uplifts

To evaluate the fourth hypothesis, proposing that daily uplifts predict subjective QOL beyond that of daily hassles, a hierarchical multiple regression was conducted. Although previous research investigating the predictors of subjective QOL have excluded uplifts, it is proposed that they act as an emotional buffer against stress. As there was a large amount of missing data for the second to fifth hassles and uplifts, only the top hassle and uplift were utilised (missing values < 5%). The assumptions of normality, linearity and homoscedasticity of the residuals were met, and there was no evidence of multicollinearity. As demonstrated in Table 6, daily hassles were entered in the first step, followed by daily uplifts. After step 1 (with hassles in the equation), $R=0.15$, $F(1, 205)=4.82$, $p<0.05$. After step 2 (with hassles and uplifts in the equation), $R=0.32$, $F(2, 204)=11.59$, $p<0.01$, hassles were negatively related to subjective QOL and uplifts were positively related to subjective QOL. Specifically, 2% of the variance in subjective QOL was predicted by daily hassles, and 8% was predicted by daily uplifts.

Table 6

Hierarchical Multiple Regression of Daily Hassles and Daily Uplifts on Subjective QOL

Variables	SQOL	Hassles	Uplifts	B	β	sr^2
Step 1 Hassles	-0.15			-0.72	-0.15	0.02*
Step 2 Hassles				-0.72	-0.15	0.02*
Uplifts	0.28	-0.004		2.68	0.28	0.08*
			Intercept	54.73		
<u>M</u>	73.99	6.74	8.99			
<u>SD</u>	11.01	2.29	1.15			
						R=0.32*
						R ² =0.10
						Adjusted R ² =0.09

*p<0.05

2.8.9. Summary

These statistical analyses demonstrate that older people report a higher level of subjective QOL, dispositional optimism, and secondary control, and similar perceptions of primary control, than younger people. Primary control and secondary control predicted subjective QOL for the younger group, whilst only primary control predicted subjective QOL for the older group. Dispositional optimism and daily uplifts accounted for more variance in subjective QOL than primary control and secondary control, and were positively related to subjective QOL. The implications of these findings will now be discussed.

Discussion

The findings of this paper challenge the stereotypical perceptions of aging as a period of inevitable decline in subjective QOL and control. Older people reported a significantly higher level of subjective QOL, equally high perceptions of primary control and more secondary control strategies, than younger people. Older people's high level of subjective QOL may reflect, in part, that they maintain the perception that they can actively influence the environment to equate with themselves, and that they lower their expectations. The Life Span Theory of Control is given partial support, proposing that these perceptions of primary control are maintained by an increasing reliance on secondary control strategies. The optimal combination of control strategies for older people will be discussed, as will the influence that dispositional optimism, daily hassles and daily uplifts, have on subjective QOL.

2.9.1. Age Differences in Subjective QOL

Consistent with the first hypothesis, the older group's subjective QOL (\underline{M} =76.8%SM) was significantly higher than the younger (\underline{M} =71.4%SM) group's. Although this finding supports Horley and Lavery's (1995) and Herzog et al., (1982) research, it is inconsistent with early research conducted by Edwards and Klemmack (1973) and Harris et al., (1976). This inconsistency may be attributed to the current generation's increasing involvement in life, or reflect these earlier studies reliance on inadequate QOL scales. Both of these studies assessed QOL using the Philadelphia Geriatric Center Morale Scale (PCGMS; Lawton, 1975), which as previously discussed, focuses on deterioration according to a pre-determined model of QOL in older age.

The differences between younger and older people's subjective QOL were evident in three domains, namely material well-being, emotional well-being and community. The Multiple Discrepancies theory and the Social Comparison theory may, in part, explain these findings. In terms of the former (Michalos, 1985), the findings suggest that the older group perceives a smaller discrepancy between what they have and what they

expect, than younger people. Older people may lower their expectations by referring to the stereotypical perceptions that older people are generally poor, frail, and socially isolated (Lubomudrov, 1987). Through accepting these stereotypical perceptions (Harris et al., 1976; Stagner, 1985), older people may adjust their expectations of older age.

These stereotypical perceptions may also increase the effectiveness of downward comparisons for older people. Consistent with Heckhausen and Brim's (1997) findings, older people reported using significantly more downward comparisons than younger people. It must be noted however, that older people generally reported more secondary control strategies and that downward comparisons simply follow this trend. Downward comparisons may be implemented more by older people than younger people, as older people can rely on the negative stereotypical perceptions of aging. Hence, disadvantaged others may be more accessible for older people. For example, an older person assessing their satisfaction with their health status may compare themselves to a stereotypical frail older person, perceive minor health problems as normative, and report satisfaction. A younger person however, may perceive their minor illnesses to be incongruent with a typical healthy, active younger person and report dissatisfaction. By comparing themselves to the stereotypical perceptions of aging, older people can restore their self-esteem and emotional well-being, and thereby maintain the motivational resources required for primary control. These perceptions of primary control are positively related to subjective QOL.

Alternatively, the age differences in subjective QOL may not be a function of lowered expectations, but rather reflect a cohort effect. Cross-sectional studies such as the present research cannot separate age effects from cohort effects (Diener, Suh, Lucas & Smith, in press). Other factors apart from chronological age such as health, availability of social and physical resources, and duration of retirement, may determine subjective QOL (Schaie, 1993). Indeed, the older group living in the retirement village had adequate social and physical resources, whereas the student's financial and social resources may have been less secure. Furthermore, age differences cannot be labeled as increase or decline as there is no evidence that the older group ever performed at the level

of the younger group (Schaie, 1993). As such, longitudinal studies investigating age and subjective QOL are required.

2.9.2. Younger and Older Groups' Level of Subjective QOL

Although the finding that older people's subjective QOL exceeds that of younger people has empirical and theoretical support, the level of subjective QOL reported by both the younger and older groups exceeded that of previous research. Generally, there is remarkable stability in population's level of subjective QOL, where Western populations' subjective QOL data have a mean and standard deviation of $75 + 2.5\%SM$ (Cummins, 1995). Although the older group's level of subjective QOL was within this normative range, it exceeded that reported by Bowling (66.5%SM) (1990), Adams (62.5%SM) (1969) and Bowling, Farquhar and Browne (56-69%SM) (1991). The older population is a heterogeneous group (Meddin & Vaux, 1988) and it is difficult to characterise the typical older person (Rodin, 1986), however there are three explanations for these inconsistent findings.

Firstly, the majority of the sample in the present study resided in retirement villages, whereas the other studies have often investigated older people living independently in socially deprived areas (e.g. Bowling, 1990; Bowling et al., 1991). Exploratory research conducted by Ferris and Bramston (1994) demonstrated that older people sampled from a retirement village had a significantly higher subjective QOL than those sampled from a nursing home, hostel, or from their own home. The retirement village may facilitate social interaction, and foster independence. Secondly, these studies have relied on the Life Satisfaction Index (LSI; Neugarten et al., 1961), which includes agreement with statements such as "I feel old and somewhat tired" as representing dissatisfaction. Thirdly, some of these studies have only investigated older people aged over 85 years (Bowling, 1990). The difference between those aged in their 60s and 80s is often greater than the difference between those aged in their 20s and 60s (Schaie, 1993). Although the majority of the sample were females, gender was not thought to account for the higher level of subjective QOL, as a review of the research has demonstrated that female subjective QOL lies within the normative range (Cummins, 1995).

The younger group's average level of subjective QOL exceeded that reported for students by Veenhoven (1993) and Diener and Diener (1995), which averaged at 63.18%SM. These studies' findings may have been particularly low however, as they utilised a 7-point scale rather than a 10-point scale, which yields lower scores (Cummins, 1995). Consistently however, the younger group's level of subjective QOL fell within the normal range of 70-80%SM, and it concurred with research conducted on Australian students (73%SM) (Mellor, Cummins & Loquet, 1999). As the majority of the younger group were students, however, their level of subjective QOL may be lower than younger non-students. Although students are, on average, better educated and come from more privileged backgrounds than non-students, they may experience a delayed transition to autonomous adulthood (Cummins, in press). Students often experience financial difficulties, and tend to impose a high degree of control on their academic lives. As such, their subjective QOL, and their perceptions of primary control and secondary control may not be generalisable to younger non-students.

2.9.3. Relationship between Control Strategies and Subjective QOL

Inconsistent with the second hypothesis, secondary control strategies were not more positively related to subjective QOL for older people than younger people. Older people tended to have a higher subjective QOL when they had high perceptions of primary control rather than secondary control. Hence, if older people believe that they can alter their environment to equate with themselves, they tend to maintain a higher subjective QOL. It may be questioned how they can maintain their perceptions of primary control, when the probability of primary control failure increases. For example, although an older person may fail when attempting to increase their exercise levels to improve their health, they still report that they can control their health status. Although there is little research investigating how older people are able to maintain perceptions of control without actual control, a number of possibilities are speculated.

Older people may maintain their perceptions of primary control through avoiding experiencing or thinking about primary control failure and through selectively focusing on areas where they have actual primary control. For example,

an older person who has failed when exercising may avoid experiencing or thinking about their primary control failure through reducing the importance of exercise (i.e., goal disengagement), not thinking about their failure (i.e., denial), believing that their health status will be okay (i.e., illusory-optimism), or reminding themselves that the situation will change (i.e., wisdom). Through avoiding primary control failure, older people are able to maintain their perceptions of control because they have no contradictory information. Additionally, in the previous example, when older people evaluate the degree of control they have over their health status, they may only think about areas where they have actual control, such as their diet (i.e., self-protective attribution). These secondary control strategies allow older people to avoid experiencing or thinking about their primary control failure, and are subsequently expected to increase with age. Consistently, older people reported more secondary control strategies and the same amount of primary control strategies as younger people. As such, secondary control strategies may enhance older people's perceptions of primary control.

Although secondary control strategies were reported more by older people than younger people, they were not significantly related to subjective QOL for the older group who had, on average, high perceptions of primary control. However, as proposed by the Primacy/Back-up model, secondary control may only be positively related to subjective QOL when perceptions of primary control are low (Thompson et al., 1998). Exploratory research conducted on this model however, demonstrated that older people low in primary control tended to rely less on secondary control strategies than older people high in primary control. Hence, older people with high perceptions of primary control also reported moderately high use of secondary control strategies. These findings, consistent with the Life Span Theory of Control, suggest that secondary control strategies enable older people to maintain their perceptions of primary control. As this exploratory research was based on a very small sample size however, further research is required to investigate whether secondary control strategies are positively related to subjective QOL for older people low in primary control. This research should be longitudinal as a cross-sectional design does not allow conclusions to be reached about the direction of causality of the relationship between control strategies and subjective QOL.

These findings suggest that interventions designed to increase older people's subjective QOL should increase their perceptions of primary control. As older people with low perceptions of primary control tend to report low secondary control strategies, interventions aiming to increase older people's perceptions of primary control may do so through increasing their reliance on secondary control strategies. Older people could be taught to disengage from goals that may result in primary control failure, avoid thinking about primary control failure, and to focus on areas where they have actual primary control. Hence, although only primary control was positively related to subjective QOL for the older people, secondary control strategies may enable older people to maintain their perceptions of primary control.

2.9.4. Influence of Dispositional Optimism on Primary control, Secondary control and Subjective QOL

Although the control strategies significantly predicted subjective QOL for both the younger and older groups, dispositional optimism predicted subjective QOL beyond the influence of primary control and secondary control. When dispositional optimism was included in the equation, primary control and secondary control no longer predicted subjective QOL. This finding emphasises the importance of dispositional optimism in predicting subjective QOL, and suggests that dispositional optimism exerts its influence on subjective QOL through primary control and secondary control strategies. The third hypothesis, postulating that both younger and older people low in dispositional optimism would report a lower subjective QOL than those high in optimism, was supported

People high in optimism are expected to have a high subjective QOL because they tend to utilise primary control strategies during stressful situations (Aspinwall & Taylor, 1992). They are less likely to give up in a stressful situation and as such, have a better chance of attaining their goal (Lai, 1995). People low in optimism are expected to have a lower subjective QOL as they tend to rely more on secondary control strategies, whereby they adjust themselves to less desirable circumstances..

2.9.5. Age differences in Subjective QOL for those low in Dispositional Optimism

Although the younger group high in optimism did not report a significantly different subjective QOL from the older group high in optimism, the older group low in optimism reported a higher subjective QOL than the younger group low in optimism. Both the younger and older people high in optimism are expected to utilise primary control strategies, which are associated with enhanced physical and emotional well-being for both younger (Endler & Parker, 1990) and older people (Abeles, 1991). Conversely, older people low in optimism may benefit from implementing secondary control strategies more than younger people low in optimism, as secondary control strategies enable them to move from primary control failure to maintaining perceptions of primary control. As such, older people low in optimism may have reported a higher subjective QOL than younger people low in optimism. These findings suggest that, as proposed by the Life Span Theory of Control, secondary control strategies may be beneficial to older people. As these findings were based on a small sample size however, further research should examine whether older pessimistic people benefit from implementing secondary control strategies.

As it is difficult to alter personality directly, research relating dispositional optimism to subjective QOL generally has limited intervention applicability. The present findings however, demonstrate that optimism can impact on subjective QOL through control strategies. Hence, people can be trained to recognise ineffective control strategies, and to develop a repertoire of active control strategies (Aspinwall & Taylor, 1992).

2.9.6. Relationship between Daily Hassles, Daily Uplifts, and Subjective QOL

In addition to dispositional optimism, daily uplifts accounted for more variance in subjective QOL than primary and secondary control strategies. As daily uplifts influenced subjective QOL beyond that of daily hassles, the fourth hypothesis was supported. Although previous research has tended to only examine hassles, the present findings demonstrate that uplifts are important in predicting subjective QOL.

Subjective QOL can be increased by decreasing the severity of daily hassles and by increasing the intensity of daily uplifts. Uplifts may increase subjective QOL by acting as an emotional buffer against stress (Lazarus et al., 1980). They may serve as a ‘breather’ from stressful situations, sustain coping activities, and restore depleted resources. Interventions to increase older people’s subjective QOL may benefit from increasing the intensity of the uplifts rather than attempting to decrease the severity of their daily hassles. Daily hassles account for less of the variance in subjective QOL, and are often uncontrollable situations such as health problems, that are not as amenable to change as uplifts.

A potential limitation of the Hassles and Uplifts scale employed in the current research was that several older people indicated that they did not experience hassles. When probed further in casual discussion, the older people indicated that while they experienced hassles, they were expected, and therefore accepted. For example, one older female said “Well, I can’t garden anymore, but that’s not a hassle because I shouldn’t expect to be able to at my age”. This response is indicative of the secondary control strategy, goal disengagement. As people may fail to recognise that they are implementing secondary control strategies, further research investigating daily hassles may gain insight through conducting qualitative interviews.

Furthermore, the average intensity of uplifts was very high for both the younger and older groups, and the variance was low. The intensity of uplifts was assessed in addition to the nature of the uplifting experience, as it is only how a person perceives an event that influences a person’s subjective QOL. Hence, although two individuals may have an uplifting experience such as spending time with family, only one individual may experience intense pleasure from it. Future measures of uplifts may have greater variance if they weight the importance of each uplift by the satisfaction of each uplift.

Conclusion

Contrary to the stereotypical perceptions of aging, older people’s level of subjective QOL and control may not necessarily deteriorate. Older people’s subjective QOL, secondary control strategies and level of dispositional optimism

exceeded that of younger people. Older people who reported a high subjective QOL tended to have high perceptions of primary control and dispositional optimism, and experience intense daily uplifts. Although secondary control strategies do not increase older people's subjective QOL, interventions aiming to increase perceptions of primary control may do so through increasing secondary control strategies. Specifically, older people can be taught to disengage, or avoid thinking about goals that may result in primary control failure. As dispositional optimism exerts its influence on subjective QOL through control strategies, perceptions of primary control are associated with a higher subjective QOL. Hence, although age and dispositional optimism influence the control strategies selected by an older individual, both suggest that perceptions of primary control are fundamental to older people's subjective QOL and their ability to age successfully. With an aging population, longitudinal research investigating how primary control, secondary control, and dispositional optimism relate to each other, and impact on subjective QOL, is required.

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7. How Important to you is YOUR OWN HAPPINESS?Not important
at allCould not be
more important

1	2	3	4	5	6	7	8	9	10
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Appendix 2

Cognitive and Behavioural Control Questionnaire (Heep, 1998)

Listed below are a number of different things people might think, or do, when facing a hassle. Please indicate on the scale 1-10 (1= Not true at all, 10= Could not be more true) to what extent each of the following statements apply to you when you face a hassle, or try to achieve an important goal. Please answer each question by placing a (X) in the appropriate box.

- 1) When faced with a hassle, I look for something good or positive in what is happening.

Not true At all Could not be more important

1	2	3	4	5	6	7	8	9	10
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- 2) When facing a hassle, I do some physical exercise or meditation

Not true At all Could not be more important

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- 3) When things don't go my way, I think to myself "you can't always get what you want in life".

Not true at all Could not be more important

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- 4) When facing a hassle, I say to myself, "Don't worry, things will work out".

Not true at all Could not be more important

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

5) When I find a goal that is difficult to achieve, I look for new ways to reach my goal.

Not true at all Could not be More important

1 2 3 4 5 6 7 8 9 10

6) When up against a hassle, I think to myself things will be okay because I can rely on my family or friends for their emotional support.

Not true at all Could not be more important

1 2 3 4 5 6 7 8 9 10

7) When I have a hassle, I remind myself that in many ways I am better off than many other people.

Not true at all Could not be more important

1 2 3 4 5 6 7 8 9 10

8) When I want someone to do something for me, I make efforts to have it happen.

Not true at all Could not be more important

1 2 3 4 5 6 7 8 9 10

9) When I doubt myself, I keep in mind that I have already accomplished a lot in my life.

Not true at all Could not be more important

1 2 3 4 5 6 7 8 9 10

10) When struggling with a hassle, I think of the past successes of my family or friends.

Not true at all Could not be more important

1 2 3 4 5 6 7 8 9 10

11) When faced with a hassle, I do something I find pleasurable or enjoyable to take my mind off things

Not true at all Could not be more important

A horizontal scale with 10 numbered boxes (1 to 10) connected by a line. The boxes are empty.

12) When something really matters to me, I invest as much time as I can on it.

Not true at all Could not be more important

A horizontal scale with 10 numbered boxes (1 to 10) connected by a line. The boxes are empty.

13) When struggling with a hassle, I remind myself that things will change (e.g. "I will not feel bad forever").

Not true at all Could not be more important

A horizontal scale with 10 numbered boxes (1 to 10) connected by a line. The boxes are empty.

14) When it turns out I cannot reach a goal, I let go of it.

Not true at all Could not be more important

A horizontal scale with 10 numbered boxes (1 to 10) connected by a line. The boxes are empty.

15) When I have failed to achieve something important, I think about other aspects of life where I have had more success.

Not true at all Could not be more important

A horizontal scale with 10 numbered boxes (1 to 10) connected by a line. The boxes are empty.

16) When I really want something, I am able to work hard to achieve it.

Not true at all Could not be more important

A horizontal scale with 10 numbered boxes (1 to 10) connected by a line. The boxes are empty.

17) When facing a hassle, I remind myself that I might fail, so that if I do, I won't be so disappointed.

Not true at all Could not be more important

A horizontal scale with 10 numbered boxes (1 to 10) connected by a line. The boxes are empty.

18) When something gets in the way of a goal, I work out how to remove it.

Not true at all Could not be more important

A horizontal scale with 10 numbered boxes (1 to 10) connected by a line. The boxes are empty.

19) When I cannot deal with a hassle by myself, I ask others for help, or advice on what to do about the problem.

Not true at all Could not be more important

A horizontal scale with 10 numbered boxes (1 to 10) connected by a line. The boxes are empty.

20) When I cannot reach my goal, I can see it was not my fault.

Not true at all Could not be more important

A horizontal scale with 10 numbered boxes (1 to 10) connected by a line. The boxes are empty.

21) When I have set a task for myself, I try to learn the skills necessary to do it well.

Not true at all Could not be more important

A horizontal scale with 10 numbered boxes (1 to 10) connected by a line. The boxes are empty.

Appendix 3

Hassles and Uplifts Scale

Hassles are irritating, frustrating demands, such as being lonely, or not having enough money. Please list your top 5 hassles, and indicate how severe they are on a 10-point scale, ranging from “Not at all severe” to “Could not be more severe”.

1) _____

Not severe At all	Could not be more severe

2) _____

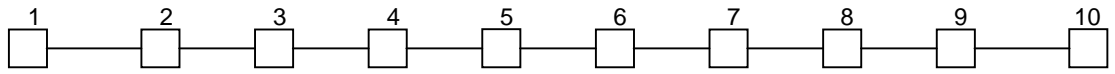
Not severe at all	Could not be more severe

3) _____

Not severe at all	Could not be more severe

4) _____

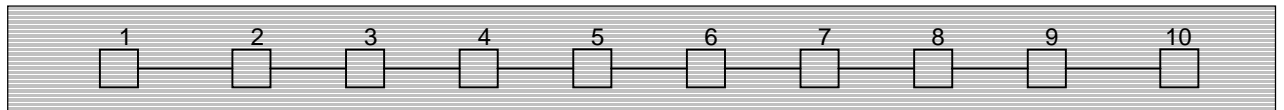
Not severe at all	Could not be more severe



5) _____

Not severe
at all

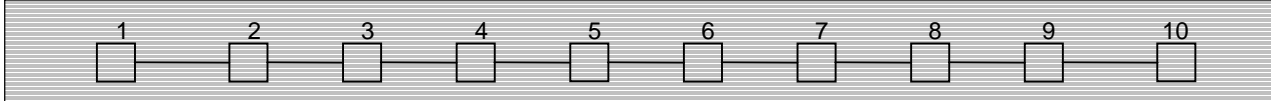
Could not be
more severe



Uplifts are events that make you feel good, for example, the pleasure of a good night's sleep, or spending time with family. Please list your top 5 uplifts, and rate the intensity of them on a 10-point scale ranging from "Not intense at all" to "Could not be more intense".

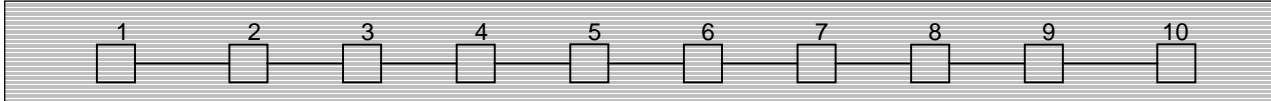
1) _____

Not intense at all Could not be more intense



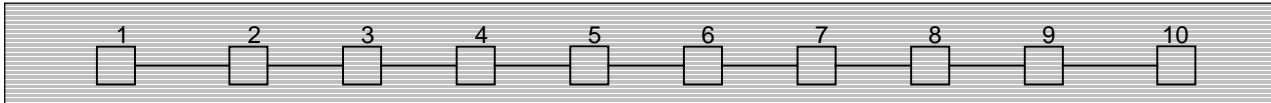
2) _____

Not intense at all Could not be more intense



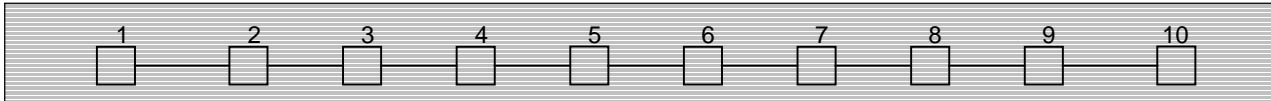
3) _____

Not intense at all Could not be more intense



4) _____

Not intense at all Could not be more intense



5) _____

Not intense
at all

Could not be
more intense

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Appendix 4
Life Orientation Test (Scheier & Carver, 1985)

Please indicate on the scale 1-10 (1= Not true at all; 10= Could not be more true) to what extent each of the following statement apply to you. Please answer each question by placing a (X) in the appropriate box.

- 1) In uncertain times, I usually expect the best.

Not true at allCould not be more true

1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 2) If something can go wrong for me it will.

Not true at allCould not be more true

1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 3) I always look on the bright side of things

Not true at allCould not be more true

1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 4) I'm always optimistic about my future.

Not true at allCould not be more true

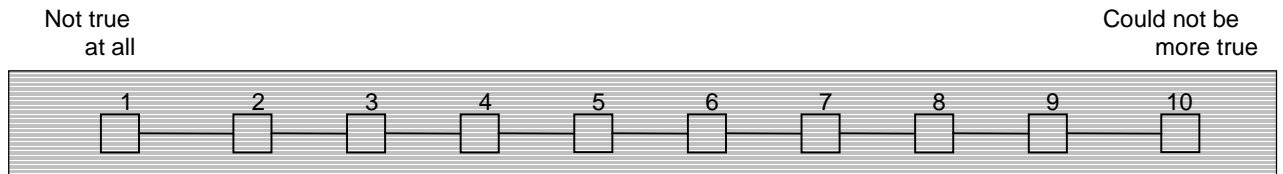
1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 5) I hardly ever expect things to go my way.

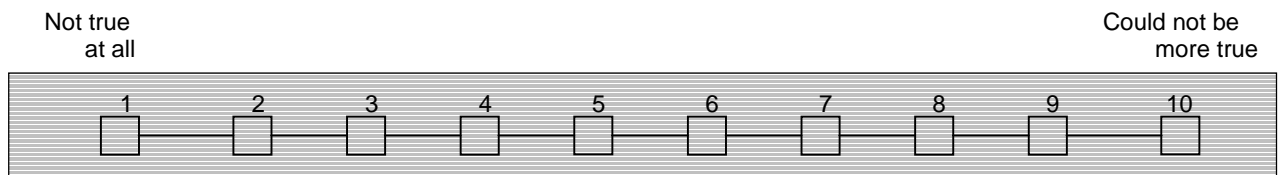
Not true at allCould not be more true

1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 6) Things never work out the way I want them to.



7) I'm a believer in the idea that "every cloud has a silver lining."



8) I rarely count on good things happening to me.

