

ACTIVITY AND LIFE SATISFACTION IN THE ELDERLY

A STUDY AT SENIORS' CENTRES

A thesis submitted to the Department of Psychology,

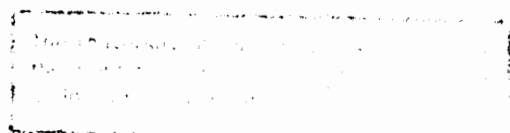
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in partial fulfilment of the requirements for the degree of

Master of Arts in Research Psychology

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ABSTRACT

Although the activity theory of optimal ageing has attracted much interest amongst psychological gerontologists since its explication by Havighurst and Albrecht (1953), little work has been done in the South African context. As the many seniors' centres which now exist in South Africa have the beneficial effects of heightened life satisfaction through improved social activity as their rationale, a study was undertaken at six seniors' centres in Cape Town to examine the connection between social activity and life satisfaction.

A questionnaire incorporating nine measures of social activity, based on the work of Graney (1975), two self-reported health scales and the Life Satisfaction Index A developed by Neugarten, Havighurst and Tobin (1961) was administered to 188 members of the centres (aged from 65 to 92, mean age 77,6; S.D. 6,0) and interviews were conducted with ten of these respondents. Although a convenience sample was used, comparisons with life satisfaction responses obtained by the Multidimensional Survey of Elderly South Africans (Ferreira, Møller, Prinsloo & Gillis, 1992), provided reassurance that the sample was representative of elderly members of the "white" and "coloured" population groups, allowing for certain limitations in the generalisability of the survey.

Results showed moderate, though significant, correlations between activity and the LSIA ($p=,014$) and the Life Satisfaction Index Z developed by Wood, Wylie and Sheafor (1969) ($p=,004$). No significant correlation was found using Liang's (1984) 11-item version of the index (LSIL). Three of the dimensions of life satisfaction, "zest for life", "mood tone" and "resolution and fortitude" included in LSIZ showed moderate correlation ($p=,013$; $p=,012$ and $p=,027$) with social activity, and similar results were found for "mood tone" and "resolution and fortitude" as included in LSIA as well as for "zest for life" in respect of LSIL.

A significant relationship was also found, following a stepwise multiple regression, between two of the constituents of the activity scale and life satisfaction, namely the number of contacts with friends and relatives ($p=,024$) and the frequency of attendance at religious services ($p=,027$). Self-reported health, although very closely related to life satisfaction, only slightly affected these results.

Other findings were that there were no significant differences in life satisfaction scores between the age groups (65-74, 75-84 and 85 plus). This was also the case in respect of education, marital status and whether or not respondents were institutionalised. A significant difference in life satisfaction ($p=,0001$) was found between those who reported having had to give up, in the past five years, an activity that they had enjoyed, as compared with those who stated they had not had to do so. However it was found that those who reported having found a substitute activity did not have significantly higher scores in respect of either activity or life satisfaction than those who did not. There was no correlation between greater frequency of attendance at activities at the seniors' centres and either the activity scale or the life satisfaction index.

A significant difference was found between the life satisfaction scores of English ($n=164$) and Afrikaans ($n=18$) speakers ($p=,007$), which may have been due to the small size of the Afrikaans-speaking sub-sample and to the fact that the questionnaire was in English. Social activity by males was shown to be significantly lower ($p=,007$) than among females, echoing Havighurst and Albrecht (1953). No significant difference in either activity or life satisfaction scores was found between the six respondents who failed to complete a clock diagram designed to screen for dementia and the remainder of the sample.

Considerable support for the value of maintaining social activity was provided by the interviews but they also provided evidence that individual attitudes to life played a very important role in determining the levels of social activity and life satisfaction achieved by older people.

A number of practical recommendations are made. These relate to the importance of optimising contacts with friends and relatives by such practical measures as the provision of comfortable facilities in which to make and receive telephone calls as well as the provision of small, private rooms in which visitors can be received. The importance of measures to enable the elderly to continue to attend the church, temple or mosque of their choice, where they will be likely to meet old friends and possibly make new ones is also stressed.

Research into the relationship between social activity and life satisfaction amongst the rapidly growing elderly black population of South Africa is recommended, provided that culturally appropriate instruments are used.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	i
ABSTRACT	ii
TABLE OF CONTENTS	v
LIST OF TABLES	vii
CHAPTER ONE	
INTRODUCTION	1
Background concepts	2
Stages of life	3
Individuation	3
Process	4
The development of activity theory	5
Disengagement theory	6
Life satisfaction	7
Life satisfaction index Z	9
Liang's life satisfaction index	10
Activity theory and life satisfaction: further studies	10
Activity substitution	12
Social participation measures	13
Studies outside North America	17
Britain	17
Germany	18
Israel	18
South African studies	19
1991 pilot study	21
Research aims	22
CHAPTER TWO	
METHOD	24
Introduction	24
Description of the sample	24
Instrumentation	28
Pre-testing the questionnaire	32
Procedure	34
Analysis of results	38
Ethical aspects	39
CHAPTER THREE	
RESULTS	40
Demographics of the 198-subject sample	41
Comparison with the pilot study	43
Comparison with the multidimensional survey	44
Results of the present study (n=188)	45
Results of the interviews	64

CHAPTER FOUR

DISCUSSION	69
Representativeness of the sample and related questions	69
The interview sub-sample	71
Demographic profile of the 188 respondents aged 65 and over	72
Health and life satisfaction	75
Social activity and life satisfaction	76
The interviews	78
Conclusion and recommendations	79

REFERENCES	82
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APPENDICES

- APPENDIX A: Questionnaire
- APPENDIX B: Interview Schedule

LIST OF TABLES

Table 1	Membership of seniors' centres	26
Table 2	Completed usable questionnaires by seniors' centres	27
Table 3	Completed usable questionnaires as percentages of membership of seniors' centres	28
Table 4.	Comparison of average age of CPOA residents who completed the questionnaire, in relation to the average age of all residents at the relevant residences (in mid-1994).	42
Table 5	Age and life satisfaction index (LSIA) scores of Sea Point seniors' centre respondents in the 1991 pilot study in relation to those in the present study	43
Table 6.	Percentages of agreement with ten questions from the life satisfaction index (refer Appendix A, Part 2) by members of the "white" and "coloured" groups living at home included in the multi-dimensional survey, compared with similar respondents in the present study.	44
Table 7	Possible ranges of scores in the activity scale, the self-reported health scales and life satisfaction indices	45
Table 8	Demographic profile of the sample (n=188) by activity scale (ACTSC) and life satisfaction index (LSIZ)	46
Table 9	Constituents of the bother scale	
	Extent to which respondents (n=188) had been bothered by any illness, bodily disorder, pains or fears about their health during the past month, in relation to their scores on the activity scale (ACTSC) and life satisfaction index (LSIZ)	48

Table 10	Constituents of the health scale	
	Respondents' (n=188) description of their general health, in relation to their scores on the activity scale (ACTSC) and the life satisfaction index (LSIZ)	48
Table 11	Results of ANOVAs relating the mean scores of respondents (n=188) on the health and bother scales to mean scores on activity scale (ACTSC) and the life satisfaction indices (LSIA, LSIL and LSIZ)	50
Table 12	Correlation matrix indicating relationships between the activity scale (ACTSC), life satisfaction index (LSIZ), age, and the two self-reported health scales	50
Table 13	Comparison of respondents who volunteered to participate in further research (n=92) with those who did not (n=96), by scores on activity scale (ACTSC) and life satisfaction indices (LSIA, LSIL and LSIZ)	51
Table 14	Comparison of institutionalised (n=106) and non-institutionalised (n=82) respondents by scores on activity scale (ACTSC) and life satisfaction indices (LSIA, LSIL and LSIZ)	52
Table 15	Correlations between respondents' (n=188) scores on activity scale (ACTSC) and life satisfaction indices (LSIA, LSIL and LSIZ)	52
Table 16	Comparison of scores of male (n=34) and female (n=154) respondents on activity scale (ACTSC) and life satisfaction indices (LSIA, LSIL and LSIZ)	53
Table 17	Frequency of attendance per week by respondents (n=188) at activities at the seniors' centres by activity scale (ACTSC) and life satisfaction index (LSIZ)	54
Table 18	Reported acquisition of new activities by respondents (n=188) (even if they had not had to give up any activities) by scores on activity scale (ACTSC) and life satisfaction index (LSIZ)	55

Table 19	Results of ANOVAS relating respondents' (n=188) scores on the activity scale (ACTSC) and life satisfaction indices (LSIA, LSIL and LSIZ) in relation to the acquisition, or not, of new activities	55
Table 20	Comparison of respondents who reported having had, in the past five years, to give up an activity they enjoyed, with those who did not have to do so, in relation to mean scores on the activity scale (ACTSC) and life satisfaction index (LSIZ)	56
Table 21	Comparison of respondents who reported having had, in the past five years, to give up an activity they enjoyed and did not find a substitute, with those who did find a substitute, in relation to mean scores on the activity scale (ACTSC) and life satisfaction index (LSIZ)	57
Table 22	Results of ANOVAs relating the mean scores of respondents in the three age-groups (65-74; 75-84, 85-94) to activity and life satisfaction scores . .	57
Table 23	Comparison of scores of respondents who had never married (n=14) with those who were married, divorced or widowed (n=174) on activity scale (ACTSC) and life satisfaction index Z (LSIZ)	58
Table 24	Comparison of scores of respondents who were Afrikaans speaking (n=18) with those who were English speaking (n=164), relative to activity scale (ACTSC) and life satisfaction index (LSIZ)	58
Table 25	Comparison of scores of respondents who did not complete the clock diagram (n=6) with those who did (n=182), relative to activity scale (ACTSC) and life satisfaction index (LSIZ)	59
Table 26	Multiple regression equation estimates for the constituents of the activity scale	60
Table 27	Multiple regression equation estimates for the constituents of the activity scale and the health scale	61
Table 28	Multiple regression equation estimates for the constituents of the activity scale and the bother scale	62

Table 29
Means and standard deviations of respondents' scores on the
dimensions of the life satisfaction indices (LSIA, LSIL and LSIZ) 63

Table 30
Correlation of the means of life satisfaction dimension scores with the
mean of the activity scale scores 63

CHAPTER ONE

INTRODUCTION

"For age is opportunity no less
than youth itself, though to another dress
And as the evening twilight fades away,
The sky is filled with stars, invisible by day."

Henry Wadsworth Longfellow

"The fact is that old age is respectable just as long as it
asserts itself, maintains its proper rights, and is not
enslaved to anyone."

Marcus Tullius Cicero

Reference is frequently made by psychological gerontologists, geriatricians and those concerned with the aged, to theories of optimal ageing, usually contrasting the social activity theory with the disengagement theory. For example, Potocnic has referred to "two theoretical models concerning the most successful way for old people to cope with the various stresses to which they are subjected" and after briefly describing both theories, comments "clearly there is room for manoeuvre between the ... two, dependent on factors such as personality type, cultural background, financial status and former interests" (1991, p.15). It is noteworthy however that Potocnic cites as references the original work of Cumming and Henry (1961) and Maddox (1966), both dating back a quarter of a century or more.

In the past half-century there has been considerable growth, both absolute and relative, in the population of people aged 65 and over, particularly in Western Europe and North America. By the nineteen-eighties, 11.8% of the population of the United States was already 65 or over. Life expectancy at birth had improved in the previous 50 years by 13,2 years for males, to 71,0 years, and by 17,2 years for females to 78,3 years, and was still improving, albeit at a slower pace. At 65, life expectancy had reached 14,5 years for males, to 79,5 years, and 18,8 years for females, to 83,8 years.

In Western Europe the proportion of elderly persons was even higher, ranging from 12% to 16% in various countries (Siegel & Taeuber, 1986).

In South Africa between 1936 and 1985 those aged 65 and over in the "white" group quintupled to reach 513,300, and their percentage of the group rose from 4.97% to 10.38%. Amongst all other groups, improvements in the birth rate and general medical care, amongst other factors, led to an increase the proportion of younger persons in the population. Although this was reflected in a reduction in the percentage of the aged in these groups from 3.55% in 1936 to 2.77% in 1985, their absolute number nevertheless more than doubled to 631,600. (Bureau of Census and Statistics, 1960; Central Statistical Services, 1986). In 1985 there were thus 1,144,900 South Africans aged 65 or older. It has been estimated that this number will increase to seven million in 2035 with the greatest increase being in the very old (80 plus), from 160,000 in 1985 to one million in 2035 (Hofmeyr & Mostert, 1989).

In view of such developments both overseas and in South Africa, it would have been expected that increased attention would have been given to the study of social activity in relation to optimum or successful ageing, for as Palmore (1969) pointed out, "If the activity theory is generally valid, the practical implications are widespread and profound". However, as the review of the literature which follows will suggest, although there has undoubtedly been a considerable increase in gerontological research in recent years, there has been comparatively little progress in the research into the relationship between social activity and successful ageing.

Background concepts

To better understand the background to the debate it is useful to first look at the attitudes of some of the earlier psychologists to ageing in general.

In 1905, at the age of 49, Freud stated that "Near and above the fifties the elasticity of the mental process on which the treatment depends is lacking. Old people are no

longer educable and on the other hand the mass of material to be dealt with would prolong the duration of the treatment indefinitely" (Freud, 1905, p.264).

Stages of life

Jung, on the other hand, believed that "we are shaped by our future goals, hopes and aspirations as well as by our past. Our behaviour is not fully determined by childhood experiences but is subject to change later in life" (in Schultz & Schultz, 1987, p.328). Jung saw human life as falling into several stages, and it has been argued that one of the important contributions made by Jung (which has in fact been widely adopted by psychology) is the suggestion that middle age is a time of critical personality change. This suggestion was embraced, in particular, by Abraham Maslow and Erik Erikson (1987, p.328).

In Jung's own words: "The afternoon of life is just as full of meaning as the morning; only its meaning and purpose are different" (Jung, 1953, p.74). Drawing attention however to the revaluation of the opposite of former ideals, Jung warns that the attempt to live in complete opposition to the former ego often leads to the repression of the former life and can produce just as unbalanced a state as existed before. He concludes that "the point is not conversion into the opposite but conservation of previous values together with the recognition of their opposites" (1953, p.74). It is clear that from a Jungian perspective the midlife crisis can have several outcomes and that it can be either the end of psychological growth or the beginning of a new growth.

Individuation

Over a period of more than fifty years, Jung developed and refined a concept of individuation which has important implications for the elderly. One of his definitions of individuation was "the process by which a person becomes a psychological 'individual' that is, a separate, indivisible unit or whole" (Jung, 1961, p.414).

Process

Individuation then is a process rather than a state, which suggests that it is never completed. Hinton (1979) has commented that while individuation is concerned with ego-development and mastery of ego-specific life tasks during the first half of life, mid-life calls for a deepening of the personality through a dialogue between the ego and the archetypal images reflecting the activity of the self. Maduro and Wheelwright have also described the distinction between the individuating processes of childhood and youth and those of adulthood, suggesting that if the challenge presented by the midlife crisis is successfully met, "individuation may proceed at an accelerated pace and lead to increased inner growth and transformation" (Maduro & Wheelwright, 1977, p.98).

The individuation process in the second half of life can be said then to be characterised by several aspects. First, there is preoccupation with philosophical or spiritual questions and the search for life's meaning, (a theme also taken up by Frankl, 1959). Secondly, there is a turning inward and preoccupation with self. Thirdly, there is a reversal into the opposite. Finally, the individuation process culminates in the preparation for and the acceptance of death (Bozarth, Barry, Myers & Heyn, 1985).

In his view of maturation, Erikson also focused on process, seeing the individual developing both as an emergent biological organism and as a responsible social being. His model was that of recurrent crises involving developmental dilemmas which can be resolved either by moving forward to a new stage or by remaining "frozen" at a level of incomplete development (Erikson, 1950 and 1959). Erikson calls the ego strength flowing from a successful resolution to the crisis of ageing "wisdom", which he describes as "detached concern with life itself, in the face of death itself" (1964, p. 133). In the writings of Jung and Erikson then, can be seen the theoretical origins of what emerged as the activity and disengagement theories of ageing.

The development of activity theory

Interest in the aged (that is, persons aged 65 and over) developed in the forties and fifties, against this background and in the context of the marked growth in the population of older people, particularly in Western Europe and North America. One of the earlier concerns of social gerontology was the study of what became known as the "activity theory of optimum ageing". This arose out of a concern to establish the components of successful ageing and particularly to determine whether the widely held belief that activity, and especially social activity, contributes to increased life satisfaction in the elderly was valid and indeed might even lead to increased longevity.

Although the concept already existed informally in the 1940s (Longino & Kart, 1982, p.713), the first explicit statement concerning the importance of social role participation in relation to successful adjustment to old age was made in 1953 by Havighurst and Albrecht, who also commented that "The American formula for happiness in old age might be summed up in the phrase "keep active" (1953, p.55). In contrast to a view of old age as a period of life in which feelings of dissatisfaction and low morale prevail, these researchers argued that there is a positive relationship between activity and life satisfaction, and that the greater the loss of roles, the lower the life satisfaction (Lemon, Bengtson & Peterson, 1972, p.511). Or, in Havighurst's own words "...activity in a wide variety of social roles is positively related to happiness and good social adjustment in old age and...a high degree of activity in a given social role is positively related to happiness and good social adjustment" (Havighurst, 1954, p.309). Inactivity was seen as leading to deterioration and illness (Maddox, 1987, p.45).

The observed decrease in social interaction which accompanied ageing was, according to activity theory, attributed to the withdrawal of society from the ageing person rather than the reverse. Withdrawal was viewed as being contrary to the wishes of the aged. Optimum ageing was seen as success by the aged in finding substitutes for those interactions which they were forced to relinquish by reason of retirement, the death of significant others, or other circumstances (Havighurst, Neugarten & Tobin, 1963, p.161). Appealing, as it did, to a "common-sense" view of successful ageing, the

functionalist approach of activity theory found a ready response in the 1950s and rapidly became "...a part of gerontological wisdom..." (Longino & Kart, 1982, p.713).

In 1952 a series of large-scale investigations of social and psychological ageing were begun under the direction of Robert Havighurst, William Henry and Bernice Neugarten. These investigations, which continued for more than a decade, became known as the Kansas City Study of Adult Life (Cumming & Henry, 1961; Kimmel, 1974; Maddox, 1987). The study involved a large number of anthropologists, sociologists and psychologists, and constituted "...the first community-based research to focus attention upon middle age and upon the changes that occur as persons move from middle to old age" (Maddox, 1987, p.372). Although prompted in part by concerns such as the need to obtain more comprehensive data with which to investigate issues such as the activity theory, it was to provide the basis for the development of a radically opposed theory, that of "disengagement".

Disengagement theory

Analysis of the first sets of cross-sectional data gathered by the Kansas City Study provided the basis of a serious challenge to activity theory. This challenge took the form of an exposition of a theory of disengagement by Cumming, Dean, Newell & McCaffrey (1960), which was later modified in a book by Cumming and Henry (1961), and in subsequent papers by Cumming (1963) and Henry (1963). The theory took as its basis data showing "...a marked decline in the amount of social interaction, present role activity, ego involvement in present roles and changes in role activity with age" (Kimmel, 1974, p.314).

According to the disengagement theory, decreased social interaction is a mutual process in which the withdrawal of society from the ageing person is paralleled by a withdrawal from society by the ageing person. Moreover, this withdrawal of ageing persons is accepted and perhaps even desired by them. The theory went on to suggest that the resultant withdrawal had "...intrinsic or developmental, qualities as well

as responsive ones; social withdrawal is accompanied by, or preceded by, increased preoccupation with the self and decreased emotional involvement in persons and objects in the environment; and in this sense, disengagement is a natural rather than an imposed process" (Havighurst *et al.*, 1963, p.161). The proponents of disengagement theory further argued that it led to individuals maintaining morale in old age at a higher level than if they "...attempted to keep involved in a range of social affairs and activities" (Fennel, Phillipson & Evers, 1988 p.47).

Additional support for disengagement theory was provided by data from projective tests included in the Kansas City Study. They also appeared to substantiate Jung's observation that "ageing people should know that their lives are not mounting and expanding, but that an inexorable inner process enforces the contraction of life ... for the ageing person it is a duty and a necessity to devote serious attention to himself" (Jung 1933, p.17). The data also showed compatibility with Erikson's view of the eighth stage of personality development, namely "Integrity vs. Despair" (Erikson, 1980).

Life satisfaction

The enunciation of the disengagement theory prompted debate and called forth more specific statements on activity theory as well as improved measures of life satisfaction. To begin with, Neugarten *et al.* (1961) developed "Life Satisfaction Ratings", or LSRs, which analysed the concept of psychological well-being into five components:

- (1) "Mood Tone" gave high ratings to respondents who expressed "...happy, optimistic attitudes and mood; who use spontaneous, positively-toned affective terms for people and things; who take pleasure from life and express it" (1962, p.138), and low ratings for those who expressed depression, feelings of bitterness, frequent irritability and anger.
- (2) "Zest vs Apathy" gave high ratings for "...enthusiasm of response and degree of ego-involvement - in any of various activities, persons or ideas, whether or not these are activities which involved...other people" (1961, p.137). Low ratings were

given for listlessness and apathy, but physical energy *per se* was not involved in this rating.

- (3) "Congruence between desired and achieved goals" measured the extent to which respondents felt they had achieved their goals in life, whatever those goals might be.
- (4) "Resolution and Fortitude" dealt with the extent to which respondents accepted personal responsibility for their lives, accepted their lives as meaningful and inevitable, and were relatively unafraid of death (Erikson's "integrity"). Low ratings were given for the highly intro-punitive who were self-critical and the extra-punitive who blamed others and the world in general for their failures and disappointments.
- (5) "Self-concept" was concerned with the respondent's concept of self, i.e. physical as well as psychological and social attributes, with high ratings given to those who felt proud of their achievements and who were concerned with their grooming and appearance. Low ratings were given to those who spoke disparagingly of themselves, or felt "old", weak, sick or incompetent.

Two self-report instruments were devised which would take only a few minutes to administer and which could be used separately or together. The first, called the Life Satisfaction Index A (LSIA), consisted of 25 items for which only an "agree" or "disagree" response was required. The second, called Life Satisfaction Index B (LSIB), consisted of 17 open-ended questions and check-list items, to be scored on a three-point scale. After testing, the indices were reduced to 20 and 13 items respectively and correlations with the LSR of ,55 and ,58 were obtained.

Utilising the Life Satisfaction Index A, the same researchers subjected the remaining 55% (159) of the original sample included in the Kansas City Study to further analysis. On the basis of this analysis they concluded that neither activity theory nor disengagement theory was sufficient in itself to account for the overall findings of the Kansas City Study; as people (in a modern industrialised society) became older than 70 years they regretted the decrease in role activity that occurred in their lives. Havighurst *et al.* found that the relationship between life satisfaction and present

activity, while positive, was only moderate, thus providing "...all four combinations of activity and life-satisfaction: high-high and low-low, but also high- low and low-high" (1963, p.171) and took this as a measure of support for disengagement theory. On the other hand they found that as the level of activity decreased, so did the individual's feelings of contentment regarding present activity, thus supporting activity theory. Overall, they distinguished between disengagement as a process and disengagement as a theory and concluded that the data supported the first but not the second, and that social engagement, not disengagement, is generally related to psychological well-being. Finally, they found that this relationship did not hold for all persons; they found personality to be "...the pivotal dimension in predicting relationships between social engagement and psychological well-being" (Havighurst *et al.*, 1963, p.171).

The Life Satisfaction Index also received attention from Adams, who found it to provide a "...fair estimate of life satisfaction for a small town elderly sample as it does for the urban and rural samples on which it has previously been tested." (Adams, 1969, p.473); however the fifth factor "self-concept" had no items highly correlated with it. Adams also found that two items, S and T, which correlated more highly (.42 and .39) with "self-esteem" than any other factor, performed very poorly in terms of item reliability and accordingly recommended that they be dropped from the index. Adams' study was based on 508 persons living in towns of between 1000 and 2500 persons in Missouri.

Life satisfaction index Z

Following an item analysis of the LSIA, Wood, Wylie and Sheafor (1969) developed a 13-item version, the LSIZ, with validity and reliability coefficients of .57 and .79 between the LSIZ and LSR ratings. Morgan, Dallosso, Arie, Byrne, Jones and Waite (1987) found this index to exhibit moderate correlations with a scale of social engagement (.49) and with the Symptoms of Anxiety and Depression Scale (.49). Additionally, Kozma and Stones (1987) found a .74 correlation between the LSIZ and the Philadelphia Geriatric Centre Morale Scale. Bowling (1991), in a review of quality of life

measurement scales, reported that the LSIZ has probably become the most widely used version of the life satisfaction indices.

Liang's life satisfaction index

Further work on the LSIA was undertaken by Liang (1984) in which, in addition to examining the structure of the LSIA, this researcher posed the question, amongst others, of "How valid is the LSIA as a measure of life satisfaction or, more broadly, subjective well-being?" (1984, p.620). Also, using data from the Louis Harris survey, Liang demonstrated correlations between 11 of the 18 LSIA items and three first-order dimensions of LSIA, "mood tone", "zest for life" and "congruence" between desired and achieved goals and found that a second-order factor, "subjective well-being" caused such correlations. On the issue of the validity of the LSIA, Liang observed that the answer depended on one's definition of life satisfaction and pointed out that it had been defined in at least two different ways. Apart from the original definition by Neugarten *et al.* (1961) in terms of five interrelated dimensions, an alternative definition was that preferred by George (1978) and Lawton (1975), that of "...a cognitive assessment of how satisfying one's life is in general. Specifically, it is the congruence between the attained and desired goals" (Liang, 1984, p. 621). Liang contended that this suggested that LSIA, in addition to measuring life satisfaction, also contained "components such as happiness and zest or age-related morale" (1984, p.621). However, on the question of its measurement of subjective well-being, Liang found this to be incomplete since the LSIA did not measure transitory positive and negative affects.

Activity theory and life satisfaction: further studies

Further work relating to activity theory was done by Maddox (1966) and Palmore (1968 and 1969), based on a non-random sample of non-institutionalised volunteer subjects aged 60 years and over in the central North Carolina area. The sample initially

consisted of 256 participants who were chosen so that their sex, racial and occupational distribution approximated that of the area. The study was conducted from 1955 to 1967, by which time the size of the sample had fallen to 127. Maddox showed that persistence, rather than changes in life style, characterized 79% of the subjects on re-evaluation; he interpreted this as being contrary to disengagement theory in as much as levels of social activity had not shown a decrease over time. He went on to argue that "...a pattern of disengagement is more adequately viewed as a continued life-style of particular individuals than as a likely culmination of a process characteristic of all ageing individuals" (Maddox, 1966, p.182).

In his analysis of the longitudinal data, Palmore (1968) found (using the Inventory of Activity and Attitudes developed by Cavan, Burgess, Havighurst & Goldhammer (1949)) that changes in total activities were significantly and positively correlated with changes in total attitudes. He commented that this meant that "...those who reduced their activities as they aged tended to suffer reduction in over-all satisfaction, and conversely, those who increased activities tended to enjoy an increase in satisfaction...contrary to what might be predicted from disengagement theory" (1968, p. 262). He added that "It may well be that disengagement theory is applicable to some and the activity theory is applicable to others; that some find most satisfaction in disengaging and others find most satisfaction in remaining active. But apparently in our panel the activity theory was most applicable to most of the participants" (1968, p. 262).

In a further review of the same studies, Palmore (1969) pointed out that they were based on relatively healthy subjects and commented that disengagement might be more typical of the less healthy aged who die earlier. He stressed that the studies indicated that disengagement was not inevitable, even over long periods of time, and concluded that the evidence was overwhelmingly on the side of activity theory. (Palmore (1987) later analysed the predictors of successful ageing in the second Duke Longitudinal Study of Aging; by stepwise multiple regression he found two of the strongest explanatory predictors to be group activity and physical activity).

These and other findings sufficiently undermined support for disengagement theory to enable Maddox to claim that, on balance, disengagement theory had been found wanting empirically (Maddox, 1969). However, as far as activity theory was concerned, it became increasingly clear that an adequate formulation of the theory was lacking. This was then provided by Lemon *et al.* (1972) who after careful definition of constructs, presented a summary of their view of activity theory: "Activity provides various role-supports necessary for re-affirming one's self-concept. The more intimate and the more frequent the activity, the more reinforcing and the more specific will be the role supports. Role supports are necessary for the maintenance of a positive self-concept which in turn is associated with high life satisfaction" (1972, p.515).

Lemon *et al.* (1972) also carried out a study to test various hypotheses resulting from their formal axiomatic theory. The study, based on a sample of 411 subjects, focused on persons aged 52 and over who were about to move into a retirement community in Southern California. Using the LSIB scale, in conjunction with interviews, they found no significant relationship between activity with neighbours, relatives, formal organisation or solitary activity and life satisfaction. They concluded that the data lent "...only limited support to some propositions of this theory" (1972, p.522), and that overall this pointed to a need to revise and/or enlarge the theory, including as concepts personality configurations and the availability of confidants. They also identified a need to test the theory on a broader spectrum of the aged population.

Activity substitution

The issue of the effects of activity substitution was taken up by Graney, beginning with his study of media use as a substitute activity in old age (Graney, 1974). A four-year longitudinal study of 60 urbanised elderly women in the mid-western United States was conducted. Using an Affect Balance Scale (ABS) developed by Bradburn and Caplovitz (1965), validated for use with older people by Moriwaki (1974) and which he had revised (Graney, 1973) to improve its suitability for use with older people, Graney also examined social participation. To do so he employed nine questions relating to media

use, interpersonal interaction and participation in voluntary associations. Two interviews were conducted, four years apart. Apart from finding "...a substantial positive relationship between happiness and social participation activities in old age and in ageing", Graney (1975, p.705) also found that "...the ageing are involved in a chain of behaviour exchanges and substitutions, beginning with losses in the most vigorous, demanding and costly activities being replaced through increased activity in behaviours that are more easily maintained over time".

Social participation measures

Examining the nine social participation questions individually, Graney found six of them to be significantly related to happiness at the ,05 level of statistical significance with a seventh close to this at ,06. The two activities found to be unrelated to happiness were television use and reading. Looking at the same measures longitudinally, Graney found four of the activity measures to be significantly related to happiness, the activities being radio listening, visiting neighbours, maintaining membership in voluntary associations and maintaining attendance in voluntary associations. (Graney, 1975).

Pointing out that, as has often been said "...the elderly are not a homogeneous category of people..." (1975, p.704), Graney observed that differences were found within the age-range covered in his panel (66 to 92 years). Comparing the youngest group (66 to 75 years) with the oldest group (82 to 92 years), Graney found that whereas happiness and longitudinal change in activity were related for only two of six activities, for the oldest group this was true in four of the six activities. Based on these and other findings he suggested that the most elderly may be more sensitive to activity changes than other elderly persons and that "...those relatively demanding activities that remain in extreme old age are difficult or impossible to replace, and are more dearly held as sources of genuine satisfaction than the same activities among younger persons." (Graney, 1975, p. 705).

A study by Knapp (1976) based on interviews with 51 subjects (age range 62 to 86, mean age 75,7) in a coastal resort in Southern England, nicknamed the "Costa Geriatrica", drew attention to the importance of treating the LSIA as a multidimensional measure. This suggestion was followed by Hoyt, Kaiser, Peters and Babchuk (1980) in a study involving 124 completed interviews with persons aged 65 years and older in a midwestern United States community of 35 000 (mean age 74,74 years; S.D. 6,66), using a total of five activity measures.

Hoyt *et al.*'s (1980) conclusions were that "The general failure of the various measures of activity to be related to life satisfaction is reaffirmed in a multidimensional context" and that "The only aspects of the activity theory perspective given strong support were the hypotheses linking role loss and self-concept to the dimensions of the LSIA". They went on to suggest that in order to provide a more definite test of the relationship of activity to life satisfaction it would be necessary to develop "...activity measures that indicate the quality of the interactions" (1980, p.940).

Hoyt *et al.* (1980) summed up their inquiry into life satisfaction and activity theory by saying "...there may be greater problems inherent in activity theory than those which attend utilizing a multidimensional interpretation of life satisfaction." "It is extremely difficult", the authors continued, "to uncover significant associations which characterize activity theory given the measures of interaction that have been employed and developed up to this time" (1980, p.940). In this, they summarised the state of activity theory at the beginning of the 1980s. Despite the attractiveness of the theory and its implications for social policy, there was still a lack of general confirmation of the relevance of the theory.

The past ten years have seen further work, notably by Longino and Kart (1982) who attempted a formal replication of the work of Lemon *et al.* (1972) but with a considerably enlarged sample of 1209 from three distinct types of retirement communities, thus providing "...far greater variation on background variables than existed in the original study" (Longino & Kart 1982, p.714). Apart from this improvement, the researchers addressed the self-criticism of the earlier study - that its

activity measures were inadequate. Accordingly behaviourally-based activity scales were drawn from daily activity inventories rather than the single-item ordinal measures of activity types used in the original research. Three activity scales were devised, measuring informal social activity (interaction with close friends, neighbours and relatives), formal social activity (participation in formal organisations) and solitary activity. For the dependent variable, life satisfaction, a 13-item modified Life Satisfaction Scale, which was factor analysed, was used. Multiple classification analysis was used to sort out the effects of each activity type from the others and from the effects of age, gender and health on life satisfaction.

The results, although mixed, differed from those of Lemon *et al.* (1972) and were considered to lend "...strong support to the activity theory of ageing. Informal activity contributed positively, strongly and frequently to the life satisfaction of respondents. Solitary activities had no effect on life satisfaction. Formal activity had a negative effect. All activity effects were similar in the three communities" (Longino & Kart, 1982, p.713). Overall, it was concluded that parts of activity theory have predictive power but that more research is needed, especially as regards "...the interactionist underpinnings of activity theory..." (Longino & Kart 1982, p.720). They also urged that activity theory be examined in broader theoretical contexts by taking into account Rose's aged subculture hypothesis (Rose, 1962; 1965) and by placing activity theory in the context of a life-course perspective, bearing in mind that "The degree to which the activity theory model holds over the adult phases of the life course has not yet been well tested" (Longino & Kart, 1982, p.721). These findings have, however, been criticised by Louw on the grounds that "... informal activities do not necessarily make an elderly person happy; rather the happy elderly person involves himself in informal activities" (Louw, 1991, p. 533).

One of Longino and Kart's suggestions was followed by McClelland (1982, p.723) who found self-conception to be "...an important intervening variable between social activity and life satisfaction, especially for the sub-sample of older people who prefer to spend time with others their own age". McClelland used data from a survey conducted by the Louis Harris organisation in 1974 for the United States National Council on Aging. The

data covered two samples of 1 324 and 439 respondents respectively. Arising out of this study McClelland made several suggestions for future research, including "...the matter of better defining and mapping the extent of ageing group consciousness among the elderly..." and the "...investigation of how local group situations affect ageing group consciousness and adjustment" (McClelland 1982, p. 731).

A telephone survey of a random sample of 400 persons (including 206 replacements for non-respondents) in the midwestern city of Peoria was undertaken by Steinkamp and Kelly (1987) to determine the relative contribution of objective integration, subjective integration and total leisure activities to life satisfaction. Thirty percent of the sample was aged over 65 years (20%, 65 to 74 years, 10%, 75 years and over). The researchers found, comparing the contribution of leisure activities to life satisfaction of persons under the age of 65 years, with that of persons aged 65 years and over, that "...several dimensions of Activity Theory are supported...". Noting, however, a lesser contribution in the older group, they suggest that at some point in the ageing process, "the role of leisure activity in the life satisfaction of older adults may undergo a developmental change." (1987, p.305). They also concluded that more research needed to be addressed to the question "...what types of activities and in what psychosocial environments are leisure activities most apt to have a positive effect on life satisfaction?" (1987, p.301) and drew attention to the fact that solitary activities might enhance life satisfaction, pointing out at the same time, "...the folly of blanket prescriptions for activity increases for all older persons regardless of age, gender and integration propensities." (1987, p.306).

Noting that "Activity theory is the layperson's theory of ageing, and many elderly persons explain their longevity in terms of their continued high activity levels" and that professionals similarly advise elderly persons to keep active in order to maintain their health, Lee and Markides (1990, p.39) pointed out that no studies had attempted to link activity levels with subsequent mortality among elderly persons. Interviews were conducted by them with an area probability sample (85% response rate) of 508 elderly Mexican Americans and Anglos in southwest San Antonio, Texas, from 1976 to 1984. (By the end of the eight-year period 119 of the subjects had died). A 10-item scale

capturing "informal activity" was employed to examine the impact of activity on mortality, which was only partially confirmed. This was attributed to the influence of age in the model. Lee and Markides concluded that their findings "...suggest that the popular notion of an active life leading to increased longevity may not be a valid one, or that activity might influence longevity in a more complex manner that cannot be established with the present data" (1990, p.42).

Studies outside North America

A number of studies have been conducted outside North America and three of the most relevant are reported here.

Britain

In Britain, Morgan, Dallosso, Arie, Byrne, Jones and Waite (1987) used the Life Satisfaction Index Z as one of four assessment scales to construct profiles of mental health and psychological well-being from 507 old (aged 65-74 years) and 535 very old (aged 75 plus) individuals. For their study they developed a 20-item Social Engagement Scale. They reported that "While the old and the very old subgroups showed similar levels of depression, anxiety and overall 'disturbance', life satisfaction was significantly lower among those aged 75+. Nevertheless, the significant correlation between the Symptoms of Anxiety and Depression Scale and LSIZ scores does indicate that the scales assess some common aspects of well-being"(1987, p.806). They also noted that levels of "...social engagement were also significantly lower among the older subgroup" (1987, p.807).

Germany

In Germany, Baltes, Wahl and Schmid-Furstoss (1990), commenting that the few descriptive studies on daily activities of the elderly used the time budget method or a variation thereof, noted that this task overburdens the subject, especially the elderly. They accordingly used a behaviour mapping approach in an endeavour to describe the behavioural repertoire of 49 elderly persons living in West Berlin. This involved 37 mutually exclusive categories for activities, five for location and six for companionship. A cluster analysis revealed three groups, the first "cognitively oriented", the second "physically and media oriented" and the third being least engaged in both physical and mental leisure activities but most frequently in obligatory activities of daily living. Overall, a moderate multiple correlation between activity and control was found, with functional health being a moderator. One of the explanations advanced by the researchers as to why the elderly were found to engage so frequently in obligatory activities was that this might be "... in order to increase possibilities for social contact." (1990, p.178).

Israel

In Israel, a Self-Anchoring Scale has been used "to provide the construct of life satisfaction with an essential time orientation" (Shmotkin, 1991, p. 243). Using the combined data of five national surveys conducted between November 1982 and April 1984, Shmotkin employed scales "...adapted from Cantril...where the top (9) and the bottom (1) represented the best and worst possible conditions of a person's life, respectively" and respondents were asked to indicate "...on which rung they believed that they stood at the present time (Present), had stood five years before (Past), and would stand five years hence (Future)" (1991, p.245). The results suggested that older people attached "...increasing satisfaction to the past, relative to the present and future, than do younger people" (1991, p.248).

South African studies

In 1990/1991 the South African Human Sciences Research Council's (HSRC) Centre for Research on Ageing conducted a comparative multidimensional survey of the social and economic circumstances of elderly South Africans (Ferreira *et al.*, 1992). A randomly-drawn sample of 4400 persons in the four main population groups was used for the survey. The questionnaire used in the survey was printed in English and Afrikaans and translated into six of the other main South African languages for the use of the relevant interviewers. The target population was non-institutionalised persons aged 60 years and above.

Probably due to the fact that the survey was conducted during daylight hours, when some persons aged 60-64 years (especially males) were still at work, the proportions of males and of persons in the 60-64 years age group were lower than in the general population. Accordingly the sample was not statistically representative of the entire South African elderly population and generalizability of the findings could not be assumed. The average duration of each interview ranged from 56 minutes for the "Rural Black" population group, to 57 minutes for the "Indian" and "White" population groups, to 60 minutes for the "Coloured" group and 69 minutes for the "Urban Black" group.

Interviewers' ratings of how well the respondents understood the questions, rated as either "very well" or "well", were 92,7% in the case of the "White" group, 75,8% for the "Rural Black" group, 75,3% for the "Coloured" group, 65,5% for the "Urban Black" group and 64,3% for the "Indian" group.

The survey included an 11-item version of the LSIA in which ten of the original items were included and a new item "I feel pretty much in control of my life" was added as "...a single indicator of locus of control..." (1992, p.158). The survey found that "a much smaller proportion of blacks were satisfied with their present or past lives, or felt in control of things, compared with the other subsamples" (1992, p. 161).

The researchers also noted that "...the two mood tone items, which both contain explicit references to intrapersonal comparisons, did not perform as well as expected..., particularly for black subjects. Only 13% of the rural blacks, compared with an average of 32% across the five subsamples, agreed that they had reached 'the best years of my life'. For the black subsamples, the correlation between the LSIA and the mood tone subscale was lower than with the other two subscales, reducing the reliability of the LSIA as a whole" (1992, p.165). They went on to conclude that "...zest and congruence factors, rather than mood tone dominate feelings of subjective wellbeing among older blacks. The same may be true for the coloured and Indian elderly. In contrast, in the white subsample, congruence, in the sense that lifestyles and achievements match expectations, makes less impact on subjective wellbeing than mood tone and zest." (1992, p. 166).

Overall, the mean scores found for the LSIA employed in the survey, based on a maximum positive score of 30, ranged from 19,0 for "Rural Blacks", to 19,4 for "Urban Blacks", to 22,1 for "Indians", to 23,6 for "Coloured", to 24,5 for "Whites". (1992, p. 167). Noting that 90,8% of "Whites" agreed with the statement "As I look back on my life I am fairly well satisfied" and 81,9% agreed that "I have got pretty much what I expected out of life" the report pointed out that "In an earlier study in the Cape Town area (Gillis & Elk, 1981) the researchers found that a comparable proportion of elderly whites (81%) felt satisfied with their lives, and that there was a positive association between life satisfaction and interests." (1991, p. 161).

In the course of a study of the elemental human experiences of the aged, Garden (1991) interviewed two groups of aged widows. The widows were representative of the residents of an old age home operated by the Cape Peninsula Organisation for the Aged in Muizenberg, Cape Town and non-institutionalised members of a Seniors' Centre operating from the home and also serving the adjacent community. Two random samples of 15 respondents were drawn in respect of the age groups 60 to 79 years and 11 months and 80 years to 99 years and 11 months. As part of the study, respondents were given brief explanations of the theories of disengagement and activity and asked to state with which theory they identified themselves. Amongst

residents 23 out of 28 respondents identified with the disengagement theory, as explained to them, whereas amongst non-residents 18 out of 26 respondents identified themselves with the activity theory. Overall, Garden found that her interviews suggested that "...respondents who participated in a more active lifestyle revealed a more positive lifeview, thus they require encouragement to participate in appropriate activities in service centres and other settings." (1991, p.158).

1991 pilot study

Given the paucity of South African literature in this field it appeared that there was a need for research into the relationship between life satisfaction and activity in elderly South Africans. With this in mind, the author undertook a pilot study in October, 1991 to test the suitability of a modification of the activity scale developed by Lee and Markides (1990) and the LSIA for use in the South African context. Noting that various social centres and other bodies have come into existence, designed to assist the elderly in becoming and remaining involved in various forms of social and other activity, the pilot study was conducted amongst members of a seniors' centre managed by the CPOA in Sea Point, Cape Town (Gillespie & Louw, 1993). The respondents comprised a fairly homogenous urban group and were all members of the white population group. Thirty-five women and eight men between the ages of 62 and 89 years, with a mean age of 76,5 (SD=7,6) completed questionnaires. Fourteen of the respondents were either married or had never married. The remaining 29 had suffered marital role loss, being either separated, divorced or widowed.

The pilot questionnaire was made up of 35 items: six related to personal details; 11 to activity levels; and 18 to life satisfaction. Three measures of activity were included. based on Lee and Markides (1990, p.40) and Hoyt *et al.* (1980, p.937), together with 18 of the original Life Satisfaction Index A items developed by Neugarten *et al.* (1961).

The questionnaire and its purpose was briefly explained to members after a midday event at the centre and their co-operation invited. A large majority of those present

volunteered to participate, and 70 questionnaires were distributed. Of those 50 were handed in and after discarding seven because of omissions, 43 completed questionnaires were available for the study.

Analysis of the results showed no significant correlations between the three activity measures and life satisfaction, either overall or in its four dimensions. Multiple regression equation estimates for the dimensions of the life satisfaction index also found no significant differences.

It was concluded, nevertheless, that further research in the South African context was warranted, using other measures of activity and employing a larger sample as well as providing for the possibility of repetition over time (Gillespie, 1991).

Research aims

In a review of research in ageing, Rowe and Kahn (1987) pointed out that research on ageing has emphasized losses and that "in the absence of identifiable pathology, gerontologists and geriatricians have tended to interpret age-associated cognitive and physiologic deficits as age-determined" (1987, p.143). They expressed the belief that the role of ageing *per se* in these losses has "often been overstated and that a major component of many age-associated declines can be explained in terms of life styles, habits, diet, and an array of psychosocial factors extrinsic to the ageing process" (1987, p.143).

Rowe and Kahn went on to make four recommendations for gerontological research. First, that it should incorporate the distinction between usual and successful ageing. Secondly, that it should concentrate on understanding transitions in later life, especially transitions that have functional importance. Thirdly, that extrinsic factors that influence successful ageing should be studied in interdependent combinations as well as singly. Fourthly that ageing research should link the psychosocial and physiologic levels (1987).

Illuminated by these recommendations, the present study will attempt to examine the activity patterns of South Africans who are members of seniors' centres, devised to facilitate social and cultural activity in the elderly. Specifically it will address the question as to whether there is a relation between activity, informal, formal or solitary and life satisfaction, both overall and in the dimensions originally defined by Neugarten *et al.* (1961) (as well as later versions) and to the extent possible, examine their relation to functional health.

CHAPTER TWO

METHOD

Introduction

The study utilised a 48 item questionnaire incorporating an activity scale developed by Graney and Graney (1974) and the multi-dimensional Life Satisfaction Index A (LSIA) as modified by Adams (1969) and Knapp (1976) on the basis of the original index developed by Neugarten *et al.* (1961), to assess the relationship between social activity and life satisfaction amongst members of seniors' centres administered by the Cape Peninsula Organisation for the Aged (CPOA). Interviews were also conducted with certain respondents in order to examine in more depth the perceived effect of having to relinquish activities and also respondents' attitudes towards issues raised by the questionnaire.

This chapter describes the source and composition of the sample, the instruments used and the pilot studies conducted. It then covers the actual procedures, methods of analysing the results, and the ethical aspects involved.

Description of the sample

In view of the difficulties reported by CPOA organisers in securing satisfactory responses to mailed questionnaires, a convenience sample was drawn from six seniors' centres administered by the CPOA. The various centres cater for members with varying economic backgrounds, with five centres involving mostly members of the "white" population group and one, members of the "coloured" population group. As the instruments employed had been developed in essentially English-speaking, westernised communities in North America, it was expected that they would not be suitable for administration to those whose home language was not either English or

a related Indo-Germanic language. It was accordingly decided not to administer the questionnaire to Xhosa-speaking members of the Guguletu Seniors Centre, a decision which was supported by the results obtained from a number of Xhosa-speakers who attempted the questionnaire. There having been no clear indication in the literature that gender plays any significant role in the relationship between activity and life satisfaction, no attempt was made to obtain equal samples of men and women (Palmore and Kivett, 1977).

The six seniors' centres are all located within the greater Cape Town metropolitan area, distributed over approximately thirty kilometres from north to south. Four of the centres are adjacent to, or in the same building as, residential accommodation provided by the CPOA. Two (Belgravia and Monterey) are independently situated, although some members of Monterey do in fact live in CPOA accommodation and Belgravia Seniors' Centre is in the next street to CPOA accommodation. The seniors' centres offer their members a range of activities. These include outings by bus, either for shopping or to attend cultural events, or to visit places of interest. They also offer a variety of indoor activities. These include musical events, play-readings, card games, study groups, art classes and religious services. Television, video programmes and books are also available. A paid organiser, assisted by volunteers, is responsible for the programme at each centre.

The total membership of the six centres in the period during which the questionnaires were administered (mid-1994) totalled 1,571. Of these 722 (46%) were resident in CPOA accommodation while 849 (54%) were "community members" resident elsewhere (including other institutionalised accommodation). Of the 1,571 members, 1,252 (80%) were female and 319 (20%) were male. Table 1 gives details of the composition of the membership by centre.

Table 1

Membership of seniors' centres

Number									
Centre	Non-Residents			Residents			Total Members		
	M	F	T	M	F	T	M	F	T
Belgravia	28	163	191	-	-	-	28	163	191
Disa	24	65	89	41	199	240	65	264	329
Monterey	20	71	91	-	-	-	20	71	91
Muizenberg	25	50	75	15	50	65	40	100	140
Pinelands	36	125	161	28	131	159	64	256	320
Sea Point	59	183	242	43	215	258	102	398	500
Total	192	657	849	127	595	722	319	1252	1571
Percentages									
Centre	Non-Residents			Residents			Total Members		
	M	F	T	M	F	T	M	F	T
Belgravia	2	10	12	-	-	-	2	10	12
Disa	2	4	6	2	13	15	4	17	21
Monterey	1	5	6	-	-	-	1	5	6
Muizenberg	1	3	4	1	4	5	2	7	9
Pinelands	2	8	10	2	8	10	4	16	20
Sea Point	4	12	16	3	13	16	7	25	32
Total	12	42	54	8	38	46	20	80	100

250 questionnaires were issued to members of the six centres. Of these, 33 were not returned and 19 could not be used, resulting in 198 completed, usable questionnaires (79%). The minimum sample size calculated by Howell to be necessary in order for power to be equal to 0,80, with a level of significance of 0,05 (two-tailed) and a small effect size of 0,20 is 196 (Howell, 1985, p.217). A high proportion of missing questionnaires were issued at one seniors' centre, Belgravia, thus the percentage of usable questionnaires received, excluding Belgravia, was somewhat higher than 79%.

Distribution of the 198 completed, usable questionnaires by senior centre is shown in Table 2.

Table 2

Completed usable questionnaires by seniors' centres

Number									
Centre	Non-Residents			Residents			Total Members		
	M	F	T	M	F	T	M	F	T
Belgravia	2	24	26	-	-	-	2	24	26
Disa	7	5	12	5	22	27	12	27	39
Monterey	3	15	18	1	5	6	4	20	24
Muizenberg	-	1	1	6	24	30	6	25	31
Pinelands	-	8	8	1	24	25	1	32	33
Sea Point	9	19	28	2	15	17	11	34	45
Total	21	72	93	15	90	105	36	162	198
Percentages									
Centre	Non-Residents			Residents			Total Members		
	M	F	T	M	F	T	M	F	T
Belgravia	1	12	13	-	-	-	1	12	13
Disa	3	3	6	3	11	14	6	14	20
Monterey	2	7	9	-	3	3	2	10	12
Muizenberg	-	1	1	3	11	14	3	12	15
Pinelands	-	4	4	1	12	13	1	16	17
Sea Point	4	10	14	1	8	9	5	18	23
Total	10	37	47	8	45	53	18	82	100

From Table 3, which expresses the completed, usable questionnaires as percentages of membership of seniors' centres, it can be seen that this ranged from 9,0% of Sea Point members to 26,4% of Monterey members. Overall, the sample comprised 11,0% of non-resident members and 14,5% of resident members. Males had an 11,3% representation and females 12,9%.

Table 3

Completed usable questionnaires as percentages of membership of seniors' centres

Centre	Non-Resident			Resident			Total Members		
	M	F	T	M	F	T	M	F	T
Belgravia	7,1	14,7	13,6	-	-	-	7,1	14,7	13,6
Disa	29,2	7,7	13,5	12,2	11,1	11,3	18,5	10,2	11,9
Monterey	15,0	21,1	19,8	-	-	-	20,0	28,2	26,4
Muizenberg	-	2,0	1,3	40,0	48,0	46,2	15,0	25,0	22,1
Pinelands	-	6,4	5,0	3,6	18,3	15,7	1,6	12,5	10,3
Sea Point	15,3	10,4	11,6	4,7	7,0	6,6	10,8	8,5	9,0
Total	10,9	11,0	11,0	11,8	15,1	14,5	11,3	12,9	12,7

Instrumentation

As already indicated, the questionnaire incorporated two existing measures. The first of these is the Life Satisfaction Index A (LSIA), originally developed by Neugarten *et al.* (1961), who sought to measure "Mood Tone", "Zest vs. Apathy", "Congruence" and "Resolution and Fortitude" as dimensions of overall life satisfaction (see Appendix A, pages 7 and 8). This was chosen, following Knapp (1976) in preference to other multidimensional morale scales such as the Philadelphia Geriatric Center Morale Scale, as revised by Lawton (1975). This was because of "its specific construction for use with a general elderly sample and its extensive previous examination and application in gerontological contexts". Knapp (1976), supported the recommendation by Adams (1969) that items 11 and 14 of the original scale should be dropped, finding that although these were intended by the original authors to measure "positive self-concept", this dimension was only very weakly correlated, both with the other four dimensions of life satisfaction and with other exogenous variables, including "hours per week in social activity", "hours per week in associations" and "hours per week in contact with kith and kin", variables analogous to those which the present questionnaire planned to measure (Knapp, 1976, p. 598).

Cognisance was taken of further work in connection with the LSIA done by Hoyt *et al.* (1980), Longino and Kart (1982), Hoyt and Creech (1983) and particularly Liang's (1984), proposed 11-item, three-dimensional version of the original LSIA. It was also noted that the Multidimensional Survey of Elderly South Africans, 1990-91 (Ferreira *et al.* 1992) employed a modification of Liang's 11-item version of the LSIA, which differed from it on only one item.

Ultimately, however, it was decided to use the 18-item LSIA. This was done to make full use of opportunities which it affords for comparison with other studies including those based on the LSIZ which is imbedded within it. It also took into account that 10 of the items were included in the modified scale used by Ferreira *et al.* (1992). It was also decided to use the trichotomous scoring system developed by Wood *et al.* (1969), who concluded that "...being unable to decide between agree-disagree alternatives was not comparable to a nonanswer". They therefore scored "0" for the "wrong" answer, "1" for a question mark or no response, and "2" for the "right" answer (1969, p. 467). As pointed out by Knapp, this scoring system "... is preferred, on the grounds of increased information, to the zero-one scoring originally suggested by Neugarten *et al.*..." (1976, p. 597). (In this context "right" equals a positive rating of life satisfaction in terms of the original index).

The second measure used was that developed by Graney and Graney (1974) using a 60 member panel (composed exclusively of women because of difficulties in securing a representative number of elderly men). The 60 member panel, when first contacted, ranged in age from 62 to 89, with a median age of 75,3 years and the 46 contactable survivors, four years later, ranged from 66 to 92, with a median age of 74,9 years.

The scale consisted of nine questions, of which three concerned media use, three concerned interpersonal interaction and three concerned participation in voluntary associations. The media-use questions dealt with use of TV, radio and books, whilst the interpersonal interaction questions dealt with social interaction with neighbours and friends and relatives as well as telephonic contact. Attendance at religious services, membership of voluntary associations and attendance at their meetings was the focus

of the remaining questions. Provision was made for the classification of each of these variables into low, moderate and high activity categories. (See Appendix A, pages 4 and 5).

In addition to the two measures described above, a number of other items were incorporated in the questionnaire. A description of these follows.

Studies of the life satisfaction of elderly people invariably describe the samples used as being composed of "healthy individuals", often without any statement as to how their health status was established. In order to control for this factor, three items were included in the questionnaire. Two of these were self-report items. Following Dupuy's "General Well-Being Schedule" as reported by McDowell and Newell (1987), the question "Have you been bothered by any illness, bodily disorder, pains or fears about your health over the past month"? was included with six ratings, ranging from "All the time" to "None of the time". This question was positioned immediately following the demographic questions, (which were placed first in the questionnaire) and before the questions comprising the activity scale (see Appendix A, page 2). The second question asking "How would you describe your own health, in general?" and providing for rating from "Excellent" to "Poor" was selected because of its use by Spreitzer and Snyder (1974) in their study of the correlates of life satisfaction among older persons. It was placed after the activity scale (see Appendix A, page 6) so as to provide respondents with an opportunity to review their health against the background of the review of their social involvement which the activity scale provides.

It was also felt that there was a need to screen respondents for possible dementia. It has been shown by Sunderland, Hill, Mellow, Lawlor, Gundersheimer, Newhouse and Grafman (1989) and by Tuokka, Hadjistavropoulos, Miller and Beattie (1992) that clock drawing, traditionally used to examine for constructional apraxia and thought to reflect parietal lobe function, can be "a practical screening tool for the presence of cognitive impairment in the elderly population and specifically in persons with Alzheimer Disease" (Tuokko *et al.*, 1992, p 579). Highly significant correlations were reported between

ratings from the Clock Drawing Test and three separate standard clinical measures of dementia severity" (Sunderland *et al.*, 1989).

In a separate study, patients admitted to a geriatric outpatient department in New York were given a sheet of paper on which was printed a circle 10 cm in diameter. They were simply asked to "draw a clock" and if they asked questions, the same instruction was repeated. The drawings were then classified into ten previously identified patterns which had been matched to clinical categories and tested for statistical significance by chi-square analysis. Clock patterns one to six were found to have specificity for Alzheimer's disease whereas clock patterns 7-10 were found to be characteristic of patients with normal mental status (Wolf-Klein, Silverstone, Levy and Brod, 1989).

Accordingly, a request to "Please draw a clock on the circle below" was included in the questionnaire following the second health question and above a circle 10 cm in diameter. (See Appendix A, page 6).

As has been suggested in the literature (Graney, 1975), the relationship between activity and life satisfaction may be dependent not just on the present level of activity but also on the relationship between past and present levels of activity. In view of this the question "In the past five years have you had to give up any activities which you enjoyed?" was included. Supplementary questions were then asked to establish which one of these activities was particularly missed, whether or not a substitute had been found and if so, what it was. Also included was a question to establish whether, even if respondents had not had to give up any activities, they had acquired new ones. These questions were also included so as to form a basis on which to conduct interviews designed to probe the issue of loss and substitution of activities with a small sub-set of respondents. (See Appendix A, page 3).

The demographic questions covered age (asked both as age next birthday and as date of birth to minimize error), gender, home language (to provide for the possibility of imperfect understanding of the questionnaire by respondents whose home language was not English), marital status (a loss measure), education and accommodation. The

accommodation questions also enabled differentiation to be made between institutionalised and non-institutionalised respondents. Specific questions were included to identify, for those living in CPOA accommodation, exactly in which residence they lived. Similarly, provision was made to identify membership of specific seniors' centres and frequency of attendance. (See Appendix A, pages 1 and 2).

Based on their experience, CPOA management and seniors' centre organisers strongly recommended that no attempt be made to include questions directly or indirectly relating to income or financial standing. (It had been found that attempts to elicit responses to such questions were strongly resisted by their members who perceived such questions as threatening). In order to improve the likelihood of a satisfactory response rate it was decided to rely instead, for any assessment of financial well-being or lack thereof, on the parameters used by the CPOA in respect of admissions to the various residences associated with the seniors' centres involved.

Residents whose economic status is classified as "sub-economic" have an income of below R450 per month and live in subsidised accommodation, which includes Muizenberg Place and Sea Point Place. In the former, 72% of residents were in the "sub-economic" category and in the latter, only 32%. Residents of Disa Place and other unsubsidised accommodation occupied by certain Monterey respondents were all in the "economic" category, that is having an income of above R450 per month.

Pre-testing the questionnaire

The initial draft of the questionnaire was informally discussed with colleagues, who provided a number of important suggestions, particularly in regard to the inclusion of questions designed to establish the incidence of loss of activities and whether or not substitutes had been found for them.

It was felt that inclusion of such questions would offer the opportunity to probe in interviews the suggestion by Palmore (1968) that normal ageing persons tend to

compensate for reductions in some activities or attitudes by increases in others, a view supported by Graney (1974).

Next, the revised draft was submitted to a small test panel of older people ($n=6$), whose ages ranged from 66 to 82 (mean=75,5, SD=6,5) comprising three widows, two married persons and one unmarried person. All gave English as their home language. Time taken to complete the questionnaire ranged from eight minutes for the youngest respondent up to 16 minutes for the older respondents. The general response to the questionnaire was very positive in the sense that it was found to be clearly set out and interesting.

In completing the questionnaire the problem most frequently encountered related to confusion regarding the question "Do you attend any meetings of any civic groups or other organisations?" for which the word "meetings" was sometimes interpreted as referring to formal, annual general meetings. When the word "meetings" was replaced by "activities" no problem was experienced as this was felt to relate to regular meetings of such organisations. The pre-test also revealed minor inconsistencies in the choice of answers provided. For example the possible answers to the question "how many times a week do you attend meetings at the Seniors' Centre" did not provide for the possibility of "Less than once a week". Such inconsistencies were dealt with appropriately as they were encountered.

Finally, in part two (the LSIA), the question "My life could be happier than it is now" was found to be open to some confusion as to the meaning of "now". A suggestion was made by one member of the panel that it should be altered to "nowadays" to avoid confusion with "now" in the sense of "this very day". As the other members did not report any problem with this item, it was decided that as this was part of a well-established instrument no change should be made.

An open-ended interview schedule was prepared (Appendix B) for the purpose of examining more closely respondents' attitudes towards issues which may have been raised for them by the questionnaire. Specifically, it was intended to probe for any

relations which interviewees may have perceived between the loss of treasured activities and their ability, or not, to compensate by finding substitute activities.

The interview schedule was planned so as to begin with a general enquiry as to how interviewees felt about the questionnaire and then to move on to an examination of the meaning for them and their life satisfaction, of their reported loss of a particularly valued activity. Thereafter, it enquired as to whether and how a substitute was found and the implications of this for life satisfaction. Those who had not found a substitute were asked whether or not a substitute was in fact sought and if not, why not. An attempt was to be made to find out whether they had any insight as to the reasons for their lack of success in finding a substitute and whether they had any views as to why others might have been more successful.

Procedure

An essential pre-requisite to the study was the obtaining of permission from the CPOA to administer the questionnaire at their Seniors' Centres. This was granted once the nature of the research was made clear and assurances given that no questions would be asked relating to personal financial status. The location of the five centres serving the white population group was identified as Sea Point (Sea Point Place), Gardens (Disa Place), Pinelands (Pinelands Place), Newlands (Monterey) and Muizenberg (Muizenberg Place). As practically all the research reported in the literature has been carried out in westernised communities of North America, where, for example, the LSIA was developed, or Europe, it was believed that the questionnaire would be better received by members of the more westernised white population group and that at this stage research should concentrate on this group until the effectiveness of the instrument could be better judged. Accordingly the remaining five centres which serve members of the so-called coloured (largely Afrikaans-speaking) and black (largely Xhosa-speaking) communities were not targeted.

At this stage discussions were held with the organisers responsible for the various centres to determine the most suitable opportunities for administering the questionnaire. The first opportunity identified was a choir festival to be held at Disa Place. This was found to offer an opportunity to access members of several centres as choirs and their supporters would be attending from most of the CPOA centres. This proved to be the case as seven centres were represented. Again in consultation with the organisers involved, the questionnaire was administered at Sea Point (just prior to lunch), Pinelands (after a "movement to music" session), Muizenberg (during a tea break prior to a musical performance), and Monterey (after a showing of a special "Chelsea Flower Show" video). All these occasions were chosen because of the opportunities they were expected to provide to access representative cross-sections of the seniors' centre concerned. The Disa Place event proved to be especially valuable as the participation by members of the Belgravia (coloured community) centre was sufficiently encouraging to prompt the inclusion of this centre in the administration programme. It also provided some evidence that members of the Guguletu (black, Xhosa-speaking community) centre although enthusiastic about participating experienced very real problems with the questionnaire, as did those members of the Grassy Park (coloured community) centre who participated. It subsequently became clear that the initial presentation at Disa Place, because of the presence of so many visitors, had not reached a representative number of Disa Place members. Two additional visits to Disa Place were therefore arranged, one immediately prior to and after a church service and the other at a tea break during an art class.

Organisers, all of whom gave every evidence of being extremely hard-working and dedicated to the well-being of their members, were keen to ensure a good response and made efforts to publicise the presentations by putting up notices announcing that the author would be present on the relevant occasions for the purpose of seeking voluntary co-operation in research regarding older people. Wherever possible organisers made a point of being present and introducing the author and his colleague and when this was not possible they arranged for leading members of the centre to carry out the introductions on their behalf.

Within the parameters of the actual conditions existing on each occasion a particular effort was made to standardise the manner of the presentations. The author was semi-formally dressed (business suit and tie) as it was thought that older persons were more likely to be acceptant of a researcher who presented in a semi-official manner. The author then addressed the gathering briefly, explaining that he and his colleague were from the University of Cape Town and that the purpose of their visit was to conduct research into how older people feel about life. The author then stated that the over 65 group was the fastest growing section of the population and one which he hoped to join within the next two years. This statement was invariably very positively received, as was the next, to the effect that statements are often being made about what older people think but these did not always appear to be the outcome of asking older people for their opinions. The purpose of the questionnaire to be handed out was to obtain such opinions.

It was stressed, however, that participation in the research was entirely voluntary and that strict confidentiality would be maintained. Potential respondents were told that it was entirely up to them whether or not they gave their name and that the sole purpose of obtaining names was to enable follow-up research to be done with a sample of those who wished to participate further. Respondents were also told that there were no "right" or "wrong" answers and that they should give their own views and not those of other people. Respondents were encouraged to complete and hand in the questionnaires immediately but were told that if they preferred, they could complete them at home and hand them in to the organiser later. It was announced that pens and pencils were available for those who needed them. Questions were called for, and answered, and it was made clear that anyone who experienced any difficulty with completing the questionnaire should ask the researcher or his colleague for assistance. The importance of answering all the questions was stressed, it being pointed out that omitting answers could invalidate the entire questionnaire.

The questions asked at this stage were varied, but a common theme was the use to which the research would be put. The answer given was that the better the views and needs of older persons were understood the easier it would be to motivate action to

assist. A few respondents enquired about the purpose of drawing a clock to which the indication was given that it was a measure of dexterity. Some asked whether the hands of the clock should be shown and were told that that was entirely up to them. A large number of respondents did not ask questions but rather gave their individual views of the questionnaire. When circumstances made it possible, respondents tended, as they handed in their questionnaires, to engage the researcher and his colleague in conversation, expressing interest and appreciation. With the exception of a few who found it rather long, there were many who stated that they had very much enjoyed completing the questionnaire and/or that they had found it interesting or stimulating or both. The researcher's colleague, a final year, female MA (research psychology) intern, noted, however, that the mainly female audiences responded more positively to the older (male) researcher. Some also commented that they thought it important for research of this kind to be conducted with older people.

It soon became evident that a number of problems were being experienced by respondents. One of these was the need for spectacles. This led to perhaps ten per cent of the respondents opting to take the questionnaires away for completion once they could use their spectacles. There was, however, no criticism of the readability of the questionnaire. Another problem, encountered at Belgravia, was semi-literacy. This was overcome by the researcher, his colleague and the organiser sitting with the respondents and reading aloud the questionnaire to the four respondents experiencing difficulty. The replies were recorded without comment and it is considered that the assistance given was unlikely to have affected the responses significantly.

It also became clear that it was very important, whenever possible, to carry out a rapid check for omissions at the time the questionnaire was returned. A common error was to turn over two pages. Another was to leave out some answers to the LSIA. In discussion with respondents it became clear that this was owing to a tendency to read the question, decide to think about it further while proceeding with the next answer and then forgetting to go back to complete it. Overall, the experience with omissions supported the decision to administer the questionnaires directly rather than by mail as it became evident that mailing was likely not only to have resulted in a low response

rate but would also have produced a high number of questionnaires with missing variables.

When omissions were identified at the time of handing in, respondents generally showed great willingness to supply the missing answers and sometimes some annoyance with themselves for overlooking them. Occasionally, however, respondents complained of feeling tired and these were not pressed to complete the questionnaire. Three questionnaire forms were found to have been printed with a blank page, and as two of these respondents had not given their names they could not be contacted to rectify the omission.

In those cases where omissions were found later, it was possible in the case of those who had provided their names to refer back to them for completion. This was successfully done in all cases.

Respondents were asked to indicate willingness to participate in further research and 97 did so. Of these, 32, aged over 65, reported that they had had in the past five years to give up activities which they enjoyed. 15 had found a substitute, while 17 had not. For interview purposes, five subjects were drawn randomly from each of these two sub-groups.

Ten interviews with randomly selected respondents were arranged with the help of the relevant centre organisers and conducted in private rooms. Interviews averaged 30 minutes each. With the permission of the interviewees, all interviews were recorded to facilitate subsequent analysis.

Analysis of results

The questionnaires were coded and the data input into the University of Cape Town VAX system was repeated for verification. The VAX system was then used for examination of the degree of correlation between the main variables (activity, life

satisfaction and self-reported health) as well as for the estimation of multiple regression equations in respect of the influence of activity, age and self-reported health on the dimensions of life satisfaction.

No objectively verifiable diagnoses were available against which to measure the sensitivity and specificity of perceived health as an indicator of actual health.

Ethical aspects

Mention has already been made of the fact that potential respondents were made aware that participation in the research was entirely voluntary and that strict confidentiality would be maintained. In addition a message emphasizing the confidential nature of the questionnaire, briefly describing its thrust and calling for the co-operation of respondents was placed at the beginning of the questionnaire. The questionnaire concluded with thanks to the respondents and an invitation, if they wished to help with further research, to provide their names (as previously mentioned). It was hoped, through emphasis on confidentiality on the part of the researcher and the importance of co-operation on the part of the respondents, to secure a high percentage of volunteers who would not only provide a substantial pool from which to draw potential interviewees but also to obtain a source for possible future examination of the relationship between social activity and life satisfaction at various stages of ageing. The fact that 97 (49%) of respondents felt sufficiently confident to provide their names is seen as an indication that the approach adopted by the researcher was adequately reassuring.

CHAPTER THREE

RESULTS

In order to establish the representativeness and reliability of the convenience sample used in the study, a number of comparisons were made. Firstly, a comparison was made between the sample and the overall membership of the relevant CPOA seniors' centres in respect of those factors for which data was available. A comparison was also made between those members of the Sea Point seniors' centre who participated in the present study and those who took part in the 1991 pilot study. Finally, a comparison was made between affirmative responses to certain LSIA questions by subjects in this study and those obtained by Ferreira *et al.* (1992) in their multidimensional survey of elderly South Africans.

Correlations were sought between the scores on the activity scale and three overall life satisfaction indices (18-item, 13-item and 11-item) as well as with their dimensions. Following Knapp's (1976) approach, multiple regression equations were also estimated in order to examine the influence of activity, age and self-reported health on the dimensions of life satisfaction (the responses to the two self-reported health questions were designated the health scale in respect of the question "How would you describe your own health, in general?" and the bother scale in respect of the question "Have you been bothered by any illness, bodily disorder, pains or fears about your health during the past month?"). Comparisons were also made between the scores on the two self-reported health scales and the activity scale as well as with the life satisfaction indices.

In addition, results were examined to determine whether or not any statistically significant differences occurred on social activity and life satisfaction between institutionalised respondents and those living at home, as well as between various age groups (65 to 74, 75 to 84 and aged 85 and over). Results for respondents who had not suffered loss of social activities were also compared with those who had,

distinguishing between those who had found substitutes and those who had not. Results in the various categories of self-reported health were also compared.

As reported in Chapter 2, of the 217 questionnaires which were returned, 19 could not be used. The reasons for this varied but in almost all cases it was either because the life satisfaction index or the components of the activity scale had not been completed. In one case no age was reported. Apart from incompleteness, many of the questionnaires would have been rejected, in any event, because the clock diagrams suggested the likelihood of dementia. However, in no case was it necessary to reject a completed questionnaire because of an unsatisfactory clock diagram. Overall, the sketchy information included in most of the rejected questionnaires was insufficient to enable any conclusions to be reached regarding differences with scores obtained from usable questionnaires.

Finally, the data from the interviews was examined to establish whether or not it shed additional light on the implications for life satisfaction of the loss of valued activities and the ability, or not, to compensate by finding a substitute.

Demographics of the 198-subject sample

The data provided by the 198 completed usable questionnaires was first examined to establish the demographics of the subjects. Many studies of the elderly (Havighurst & Albrecht, 1953; Liang, 1984, Morgan *et al.*, 1987) have used the age of 65 as the marker for the beginning of old age, and for the purposes of this study it was decided to conform to this practice. Accordingly, the results which are presented in this chapter refer to the 188 persons who reported their age at next birthday to be 65 or over. Ages ranged from 65 to 92 years, with a mean age of 77,6 years and a standard deviation of 6,0 years.

However, because membership of the CPOA seniors' centres is not restricted to persons aged 65 and over, it was decided first to compare the 198 subjects who

submitted completed questionnaires with the membership of the relevant seniors centres in order to establish, as far as possible, their representativeness. The raw data required for this purpose has been set out in Tables 1, 2 and 3 in Chapter 2 which record the membership of each seniors' centre and its percentage of the total membership of the six centres included in the study. They also record the number of completed usable questionnaires obtained from each seniors' centre both as a percentage of the membership of each centre and as a percentage of the total of 198 obtained.

From the records of the CPOA it was possible to obtain the mean age of the residents of CPOA accommodation adjacent to the relevant seniors' centres (the mean age of non-resident members was not available). The means and standard deviations of the ages of those residents who completed questionnaires at each centre were calculated and as no standard deviations were available in respect of the total membership of the centres, Student's t tests were conducted to establish whether any significant differences existed between the means. Table 4, which follows, compares the average age of the residents of the various centres with that of those residents who completed questionnaires and gives the results of the t tests.

Table 4.

Comparison of average age of CPOA residents who completed the questionnaire, in relation to the average age of all residents at the relevant residences (in mid-1994).

Residence	Residents		Respondents			
	N	Mean	N	Mean	SD	T Value
Disa	227	82,6	27	79,2	5,9	-3,03*
Harfield/Hampshire	54	74,6	6	74,3	8,3	0,07
Muizenberg	72	81,6	30	80,0	5,7	-1,57
Pinelands	154	79,4	25	79,6	6,1	0,18
Sea Point	250	82,0	17	80,9	4,6	-0,94
* p < .05						

From Table 4 it can be seen that the only centre for which a significant difference was found was Disa Centre. The average age of Disa Centre respondents, at 79,2 years, was significantly lower than the average age of all Disa Park members, which was 82,6 years. However, bearing in mind that a difference of 3,4 years is relatively inconsequential for octogenarians, this differences was not considered to warrant concern.

Comparison with the pilot study

In order to examine the reliability of the sample, a comparison was made with the 1991 pilot study, which was conducted with members of the Sea Point seniors' centre. Although it used a different activity scale, it also used the 18-item LSIA. Table 5 compares the demographics of the sample used in the pilot study with those of the members of the Sea Point seniors' centre who participated in the present study. Because the ages of the members of the pilot study sample ranged from 62 upwards, comparison is made with all those who responded in the present study and not only those aged 65 and over. As means and standard deviations were available in respect of Sea Point participants in both the pilot study and the present study, ANOVAs were used to make the comparisons and their results are given in Table 5. Neither ANOVA showed a significant difference between the two samples at $p < ,05$. For age, $t(86)$ equalled ,46 and for LSIA, $t(86)$ equalled 1,51.

Table 5

Age and life satisfaction index (LSIA) scores of Sea Point seniors' centre respondents in the 1991 pilot study in relation to those in the present study

Study	N	Age			LSIA	
		Mean	SD	Range	Mean	SD
1991	43	76,6	7,6	62-89	23,1	7,8
1994	45	72,3	6,8	56-92	25,4	6,8

Comparison with the multidimensional survey

The Multidimensional Survey of Elderly South Africans, 1990-91 (Ferreira *et al.*, 1992) used a randomly-drawn sample of 4400 non-institutionalised South Africans of 60 years and older. Those sampled were asked ten of the questions included in the LSIA. The opportunity arose, therefore, to compare their responses with those given to the same questions by respondents in the present study, in order to assess its representativeness in regard to the broader South African non-institutionalised, elderly population.

The survey reported the percentage of agreement given to each of the 10 LISA questions separately for the "white" and "coloured" population groups and these were compared by chi-square with the percentage of agreement recorded by respondents in the present study. The results of these comparisons are shown in Table 6.

Table 6.

Percentages of agreement with ten questions from the life satisfaction index (refer Appendix A, Part 2) by members of the "white" and "coloured" groups living at home included in the multi-dimensional survey, compared with similar respondents in the present study.

Question Order	"Whites"			"Coloureds"		
	Survey n = 989	Study n = 62	Chi-sq.	Survey n = 974	Study n = 20	Chi-sq.
2nd	76,9	59,7	9,5*	73,7	85,0	1,3
5th	33,3	37,1	2,7	44,7	45,0	0,0
6th	31,6	37,1	0,8	52,4	90,0	11,2*
7th	12,5	19,4	2,4	23,0	5,0	3,6
8th	55,3	56,5	0,03	40,4	70,0	7,1*
9th	80,9	74,2	1,67	79,4	95,0	3,0
10th	32,4	27,4	0,65	52,9	30,0	4,1*
11th	90,8	80,6	6,8*	85,7	90,0	0,3
12th	64,1	59,7	0,5	68,4	80,0	1,23
17th	81,6	67,7	7,62*	75,6	75,0	0,01

* p < ,05

Table 6 compares the percentage of agreement found by Ferreira *et al.* (1992) from samples of non-institutionalised members of the "white" (n=989) and "coloured" (n=974) population groups aged 60 years and older with the responses obtained from those participants in the present study who were living at home ("whites", n=62; "coloureds", n=20). It will be seen from Table 6 that in the case of seven of the ten questions there was no significant difference (at the $p < .05$ level) in the percentage of agreement responses recorded by the participants in the survey and the participants in the present study. For the "white" group the questions for which significant differences were found were questions 2, 11 and 17. For the "coloured" group the questions for which significant differences were found were questions 6, 8 and 10.

Results of the present study (n = 188)

The possible ranges of the activity scale, the self-reported health scales and the three life satisfaction indices are set out in Table 7.

Table 7

Possible ranges of scores in the activity scale, the self-reported health scales and life satisfaction indices

ACTSC	:	From 9 to 27
Health scale	:	From 0 to 4
Bother scale	:	From 0 to 6
LSIA	:	From 0 to 36
LSIL (Liang)	:	From 0 to 22
LSIZ	:	From 0 to 26

The demographics of the sample, together with average scores and standard deviations in respect of the activity scale and the life satisfaction index Z, are given in Table 8. It is also possible to examine the average scores and standard deviations in respect of the other two life satisfaction indices (LSIA and LSIL) and this was done, but

as they were found to exhibit very similar trends to those shown for LSIZ, details were omitted to simplify presentation.

Table 8

Demographic profile of the sample (n=188) by activity scale (ACTSC) and life satisfaction index (LSIZ)

Description	N	ACTSC		LSIZ	
		Mean	SD	Mean	SD
Agegroup 65-74	67	17,9	2,3	19,2	5,6
▪ 75-84	98	17,9	2,1	18,4	5,2
▪ 85-94	23	17,2	2,1	18,0	3,8
Male	34	16,9	2,0	18,2	5,1
Female	154	18,0	2,1	18,7	5,2
English-speaking	164	17,9	2,1	18,4	5,2
Afrikaans-speaking	18	17,3	2,8	20,6	3,0
Other home language	6	18,3	2,2	18,2	4,3
Never married	14	17,9	1,6	16,3	6,5
Married	34	17,9	1,9	19,3	5,2
Divorced	23	18,3	2,1	18,8	5,1
Widowed	117	17,7	2,3	18,6	5,0
Up to Standard 9	75	17,8	2,2	18,5	5,6
Matric	73	17,6	2,1	18,7	5,0
Tertiary education	40	18,2	2,0	18,7	4,8
Belgravia	20	18,4	2,4	22,1	3,4
Disa	39	17,3	2,2	20,0	4,1
Monterey	23	17,9	1,8	16,4	5,9
Muizenberg	31	16,9	2,0	16,1	5,1
Pinelands	32	18,4	2,0	20,0	4,8
Sea Point	43	18,2	2,1	17,8	5,4

It will be seen that most respondents reported English as their home language, that widowed females predominated, and that the majority of respondents (64%) were aged

75 and over in age. Those respondents claiming tertiary education formed 21% of the total and as is not uncommon with older groups, 36% had not matriculated.

Mean activity scale scores showed a very slight declining trend with age and the mean activity scale score for females was higher than that for men. No marked differences in mean scores were obvious in respect of language, education and marital status. Activity scores of respondents by seniors' centre membership were fairly similar, with Muizenberg being the lowest.

Mean LSIZ scores similarly showed a declining trend with age and a higher score for females than males. The small number of Afrikaans speakers recorded a markedly higher mean score than other respondents and the even smaller number of respondents who had never married had a markedly lower mean score than any of the other groups (married, divorced or widowed). No respondents reported themselves as separated. Scores for education were very similar. Scores by respondents from the various seniors' centres ranged from 16,06 for Muizenberg to 22,05 for Belgravia.

Answers to the question as to the extent to which respondents had been bothered by any illness, bodily disorder, pains or fears about their health, were scored one point if they replied "All the time", rising to six points if they replied "None of the time". (See Appendix A). Similarly respondents' descriptions of their view of the state of their general health were scored one point if they replied "Poor", rising to four points if they replied "Excellent" (See Appendix A). Those who did not reply (two respondents in the case of each question), were given no score. (Similar scales have been used by others, including Havighurst & Albrecht (1953), who developed a 20-point "health handicap score" based on reports "by the person or those responsible for his care and on observations made by the interviewer" (1953, p.65)).

Tables 9 and 10 set out the responses to the two measures of perceived health, together with the relevant means and standard deviations of the scores on the activity scale and LSIZ. Again, only scores on the LSIZ are given as the scores for the other two indices exhibit similar trends.

Table 9

Constituents of the bother scale

Extent to which respondents (n=188) had been bothered by any illness, bodily disorder, pains or fears about their health during the past month, in relation to their scores on the activity scale (ACTSC) and life satisfaction index (LSIZ)

Description	N	ACTSC		LSIZ	
		Mean	SD	Mean	SD
No answer	2	19,0	1,4	17,0	4,2
All the time	13	17,4	2,2	14,7	6,1
Most of the time	12	18,0	1,7	17,8	5,9
Good deal of the time	11	17,0	3,4	17,6	5,6
Some of the time	45	18,2	2,0	18,2	14,6
Little of the time	49	18,0	2,1	19,5	4,9
None	56	17,5	2,1	19,4	5,2

Table 10

Constituents of the health scale

Respondents' (n=188) description of their general health, in relation to their scores on the activity scale (ACTSC) and the life satisfaction index (LSIZ)

Description	N	ACTSC		LSIZ	
		Mean	SD	Mean	SD
No reply	2	17,5	0,7	20,5	5,0
Poor	5	17,8	1,8	10,8	6,4
Fair	57	17,7	2,0	17,0	5,1
Good	100	18,0	2,3	20,0	4,5
Excellent	24	17,4	2,3	19,0	5,9

It will be seen that 124 (66%) of respondents rated their general health as either good or excellent and that in fact only five persons rated their general health as poor. This

compares closely with a study by Levkoff, Cleary and Wetle (1987, p.117) involving 191 individuals aged 65 years and over in Central Wisconsin, U.S.A. Using the same scale, they found that 70% reported their health to be excellent or good.

Similarly persons stating that they had only been "bothered" slightly ("none of the time", "a little of the time" or "some of the time") by any illness, bodily disorder, pains or fears about their health during the past month, numbered 150 and constituted 80% of the sample. Although mean activity scores do not vary much between the various levels of being "bothered" by health, the LSIZ score for those who are bothered "all the time" by their health is markedly lower than for the other levels shown. This is paralleled by the markedly lower LSIZ mean score by respondents who rated their general health as "poor" as compared with all the other respondents.

In comparing perceived health with four measures of physical health derived from respondents' medical records for persons aged from 45 to 64 and 65 and older, Levkoff *et al.* found that older individuals tended to evaluate their health "significantly more poorly than did middle-aged persons ($p=.01$)." (1987, p.117). It appears possible that this pessimistic tendency may have been more sensitively tapped by the wider choices offered by the six-point bother scale which shows 36 people reporting having been bothered by their health a "good deal of the time", "most of the time" or "all of the time" compared with only five describing their health as "poor" on the health scale.

ANOVAS of the two self-reported health scales with the activity scale and the life satisfaction indices are reported in Table 11. Values for self-reported health related to the activity scale proved not to be significant at $p<.05$. For the health scale significant values at $p<.01$ were obtained in respect of all three life satisfaction indices but for the bother scale a significant value at $P<.05$ was obtained only in respect of LSIA. When the ANOVAs were re-calculated including whether respondents were institutionalised or not, the values remained significant, indicating that institutionalisation had no effect on activity and life satisfaction scores.

Table 11

Results of ANOVAs relating the mean scores of respondents (n=188) on the health and bother scales to mean scores on activity scale (ACTSC) and the life satisfaction indices (LSIA, LSIL and LSIZ)

	df	F value	p
Health scale/ACTSC	4	0,43	0,7863
Health scale/LSIA	4	5,20	0,0005**
Health scale/LSIL	4	3,66	0,0068**
Health scale/LSIZ	4	6,28	0,0001**
Bother scale/ACTSC	6	0,92	0,4799
Bother scale/LSIA	6	2,34	0,0336*
Bother scale LSIL	6	2,08	0,0573
Bother scale LSIZ	6	0,92	0,4799
* p<,05; **p<,01			

In order to examine the effect of age on the interactions shown in Table 11, correlations were calculated in respect of age, the two self-reported health scales, the activity scale (ACTSC) and the life satisfaction index Z (LSIZ), the results of which are shown in Table 12.

Table 12

Correlation matrix indicating relationships between the activity scale (ACTSC), life satisfaction index (LSIZ), age, and the two self-reported health scales

Variable	ACTSC	LSIZ	Age	Health	Bother
ACTSC	1,0	,21**	-,13	-,01	-,02
LSIZ		1,0	,09	,23**	,22**
Age			1,0	,08	,08
Health				1,0	,48**
Bother					1,0
** p<,01					

No significant correlations were found between age and the other four variables. The correlation between activity and life satisfaction Z scores was found to be significant ($p=,004$) as were the correlations between the two self-reported health scales and life satisfaction index Z scores (health: $p=,0014$ and bother: $p=,0023$).

In order to examine whether or not those respondents who volunteered to take part in further research were significantly different from those who did not volunteer, a comparison was made of the mean scores of the two groups on the activity scale and the three life satisfaction indices.

This comparison is set out in Table 13, which shows that no significant differences were found between volunteers and non-volunteers on the activity scale means and the life satisfaction indices' means.

Table 13

Comparison of respondents who volunteered to participate in further research ($n=92$) with those who did not ($n=96$), by scores on activity scale (ACTSC) and life satisfaction indices (LSIA, LSIL and LSIZ)

Variable	Volunteers		Non-volunteers		F	p
	Mean	SD	Mean	SD		
ACTSC	18,0	2,4	17,6	1,9	1,4	0,2
LSIA	26,2	7,1	25,3	6,3	0,8	0,4
LSIL	15,9	4,9	15,3	4,3	0,7	0,4
LSIZ	18,8	5,4	18,4	5,0	0,3	0,6

In view of the fact that the multidimensional survey only studied non-institutionalised subjects, a comparison was also made between the mean scores of respondents who lived in their own homes and the means scores of respondents who lived in either CPOA accommodation or other accommodation for the elderly. Table 14 shows this comparison, which revealed no significant differences between the two groups insofar as mean activity scores and life satisfaction indices' scores were concerned.

Table 14

Comparison of institutionalised (n=106) and non-institutionalised (n=82) respondents by scores on activity scale (ACTSC) and life satisfaction indices (LSIA, LSIL and LSIZ)

Variable	Institutionalised		Non-institutionalised		F	p
	Mean	SD	Mean	SD		
ACTSC	17,6	2,2	18,1	2,1	2,8	0,1
LSIA	25,3	6,74	26,2	6,7	0,8	0,4
LSIL	15,3	4,5	15,9	4,8	0,7	0,4
LSIZ	18,3	5,1	19,0	5,4	0,7	0,4

In order to examine the central hypothesis of this study, namely that an increase in social activity is related to an improvement in perceived life satisfaction, correlations were calculated between overall scores on the activity scale and the three life satisfaction indices. The results are set out in Table 15.

Table 15

Correlations between respondents' (n=188) scores on activity scale (ACTSC) and life satisfaction indices (LSIA, LSIL and LSIZ)

	Activity Scale	p
LSIA	,18	0,014*
LSIL	,14	0,061
LSIZ	,21	0,004**
* p<,05; ** p<,01		

Significant correlations were found between ACTSC and both LSIA and LSIZ but not between ACTSC and LSIL.

Comparisons were made in order to establish whether any significant differences existed between male and female respondents' scores on the activity scale and the life

satisfaction indices. The results are shown in Table 16, indicating that only in respect of the activity scale did males and females differ, with females being more socially active.

Table 16

Comparison of scores of male (n=34) and female (n=154) respondents on activity scale (ACTSC) and life satisfaction indices (LSIA, LSIL and LSIZ)

Variable	Males		Females		F	p
	Mean	SD	Mean	SD		
ACTSC	16,9	2,0	18,0	2,1	7,6	0,007**
LSIA	25,4	6,6	25,8	6,8	0,1	0,788
LSIL	15,9	4,5	15,5	4,6	0,2	0,649
LSIZ	18,2	5,1	18,7	5,2	0,3	0,575
** p<,01						

Respondents were asked how many times a week they attended activities at seniors' centres in order to ascertain whether frequency of attendance affected mean scores on the activity scale and life satisfaction indices. Their responses and their mean scores for activity and life satisfaction are given in Table 17.

Table 17

Frequency of attendance per week by respondents (n=188) at activities at the seniors' centres by activity scale (ACTSC) and life satisfaction index (LSIZ)

Weekly Attendance	N	ACTSC		LSIZ	
		Mean	SD	Mean	SD
Not given	1	17,0	-	20,0	-
Less than once	13	15,5	2,0	17,9	4,2
Once	32	17,3	1,8	16,5	6,3
Two	48	18,4	2,1	19,5	5,2
Three	34	18,5	1,7	20,0	4,4
Four	21	18,5	2,6	18,1	4,8
Five	19	17,4	2,2	18,1	4,9
More than five	20	17,2	1,8	18,9	5,4

It will be seen that 94 (50%) of respondents attended activities at seniors' centres three or more times a week. Mean scores on the activity scale tended to fall slightly, with increasing attendance at the centres. Life satisfaction means peaked at three attendances per week, not only in respect of LSIZ as shown in the table, but also in respect of the other two indices (The LSIA and the LSIL).

In order to examine the effect, if any, of the acquisition of new activities on activity scale scores and life satisfaction indices, respondents were asked to state whether or not they had acquired any new activities, even if they had not had to give up any activities which they enjoyed during the past five years. Table 18, which follows, sets out the mean scores, with their standard deviations, of those who reported having acquired new activities and those who did not, on the activity scale and the LSIZ. (Scores and standard deviations were also established in respect of LSIA and LSIL).

Table 18

Reported acquisition of new activities by respondents (n=188) (even if they had not had to give up any activities) by scores on activity scale (ACTSC) and life satisfaction index (LSIZ)

Description	N	ACTSC		LSIZ	
		Mean	SD	Mean	SD
Acquired	85	18,1	2,1	18,9	5,2
Not acquired	103	17,6	2,2	18,4	5,2

The following table examines the results of ANOVAS performed to examine the differences between the mean scores of those who reported having acquired new activities and those who did not, in regard to the activity scale and the life satisfaction indices. No significant differences were found.

Table 19

Results of ANOVAS relating respondents' (n=188) scores on the activity scale (ACTSC) and life satisfaction indices (LSIA, LSIL and LSIZ) in relation to the acquisition, or not, of new activities

Variables	df	F	p
Acquired-not acquired/ACTSC	1	1,84	0,177
Acquired-not acquired/LSIA	1	0,78	0,379
Acquired-not acquired/LSIL	1	0,07	0,794
Acquired-not acquired/LSIZ	1	0,53	0,466

A comparison was made in order to establish whether or not having had to give up, in the past five years, an activity which they enjoyed, resulted in a significant difference in mean scores of respondents on the activity scale and the life satisfaction index Z. The results are shown in Table 20.

Table 20

Comparison of respondents who reported having had, in the past five years, to give up an activity they enjoyed, with those who did not have to do so, in relation to mean scores on the activity scale (ACTSC) and life satisfaction index (LSIZ)

Description	N	ACTSC		LSIZ		f value	p
		Mean	SD	Mean	SD		
Gave up	72	18,0	2,2	16,7	5,2	16,62	0,0001**
Did not	116	17,7	2,1	19,7	4,9		

** p<,01

A significant difference in mean LSIZ was found between the two groups, with the group that had had to give up an activity which they enjoyed having a mean for LSIZ of 16,7 compared with a mean for LSIZ of 19,7 for those who had not had to give up an activity.

In order to establish whether finding a substitute after having had to give up a valued activity resulted in higher levels of activity and life satisfaction than for those respondents who did not find such a substitute, a comparison was made between the two groups. The number of those who reported having found a substitute was 38, whilst 34 reported not having found a substitute. The results of this comparison are shown in Table 21 and revealed no significant differences.

Table 21

Comparison of respondents who reported having had, in the past five years, to give up an activity they enjoyed and did not find a substitute, with those who did find a substitute, in relation to mean scores on the activity scale (ACTSC) and life satisfaction index (LSIZ)

Description	N	ACTSC		t value	p
		Mean	SD		
Did not find/ found substitute	38	18,2	2,2	0,88	0,38
	34	17,7	2,2		
		LSIZ			
		Mean	SD		
Did not find/ found substitute	38	17,8	5,0	1,68	0,10
	34	15,7	5,4		

As Morgan *et al.* (1987) had reported significant differences in both life satisfaction and social engagement between the old (aged 65 to 74 years) and the very old (aged 75 years and above), ANOVAs were performed on the mean scores of respondents in three age groups (65 to 74 years; 75 to 84 years; 85 years and above) in respect of the activity scale and LSIZ. The results of these ANOVAs, which showed no significant differences between the groups, are given in Table 22.

Table 22

Results of ANOVAs relating the mean scores of respondents in the three age-groups (65-74; 75-84, 85-94) to activity and life satisfaction scores

	df	F value	p
Age groups/activity scale	2	1,18	0,309
Age groups/LSIZ	2	0,64	0,529

As an examination of the demographic information given in Table 8 had suggested that there might be a significant difference in mean scores for the LSIZ between

respondents who had never married and all other respondents (married, divorced and widowed), a comparison was made between those who had never married and the other respondents. The results of this comparison, as well as a comparison of activity scale scores, are given in Table 23 and show no significant differences.

Table 23

Comparison of scores of respondents who had never married (n=14) with those who were married, divorced or widowed (n=174) on activity scale (ACTSC) and life satisfaction index Z (LSIZ)

Variable	Single		Others		F	p
	Mean	SD	Mean	SD		
ACTSC	17,9	1,6	17,8	2,2	1,85	0,21
LSIZ	16,3	6,5	18,8	5,1	1,68	0,17

As an examination of the demographic information given in Table 8 had suggested the likelihood of a significant difference existing between the mean scores on LSIZ of English speaking and Afrikaans speaking respondents, a comparison of these means was made (despite the small number of the Afrikaans speaking subsample), the results of which appear in Table 24, together with a comparison of mean scores of the two groups on the activity scale.

Table 24

Comparison of scores of respondents who were Afrikaans speaking (n=18) with those who were English speaking (n=164), relative to activity scale (ACTSC) and life satisfaction index (LSIZ)

Variable	Afrikaans		English		F	p
	Mean	SD	Mean	SD		
ACTSC	17,3	2,8	17,9	2,1	1,85	0,21
LSIZ	20,6	3,0	18,4	5,2	3,28	0,007**
** p<01.						

No significant difference in activity scale mean scores was found between the two groups, but there was a significant difference in life satisfaction (LSIZ) scores between Afrikaans and English speakers ($p=,007$) with Afrikaans speakers averaging 20,6 compared to the 18,4 averaged by English speakers.

Six respondents failed to draw a clock diagram. Under dementia testing conditions this would be regarded as one of the responses suggesting dementia. However, it was decided that the conditions prevailing in this study were quite different, and therefore, despite the small number of respondents involved, to make a comparison with activity scale and LSIZ mean scores reported by this group and the remainder of the sample. The results of this comparison are set out in Table 25 and show no significant differences between the two groups.

Table 25

Comparison of scores of respondents who did not complete the clock diagram (n=6) with those who did (n=182), relative to activity scale (ACTSC) and life satisfaction index (LSIZ)

Variable	Not completed		Completed		F	p
	Mean	SD	Mean	SD		
ACTSC	17,9	2,2	16,0	1,1	3,85	0,13
LSIZ	20,3	5,3	18,5	5,2	1,05	0,78

Multiple regression equations were estimated to examine the influence of the nine constituents of the activity scale with the life satisfaction indices. Results are shown in Table 26. A stepwise procedure was performed, with the following results. At step 1 the informal activity variable "Activity with friends and relatives" was entered. R-squared was ,022 and the F value was 4,19 with a probability of ,042. At the second step the formal activity variable "Attendance at religious services" was entered, resulting in R-squared being equal to ,049 and an F value of 4,79, with a probability of ,0009. At the

third step the formal activity variable "Membership of clubs" was entered. R-squared was ,064, F value 4,23 and probability ,006.

Table 26

Multiple regression equation estimates for the constituents of the activity scale

Variable	Parameter Estimate	T	p
Intercept	10,65	4,53**	0,0001
Religious attendance	0,98	2,23*	0,0270
Club membership	1,31	1,73	0,0851
Friends and relatives	1,14	2,27*	0,0244
Stepwise Variable	Parameter Estimate	F	Prob > F
Intercept	10,65	20,51**	0,0001
Friends and relatives	1,14	5,15*	0,0244
Religious attendance	0,98	4,97*	0,0270
Club membership	1,31	3,00	0,0851
* p<,05; **p<,01			

Further multiple regressions were run, introducing the health scale and the bother scale. Results are shown Tables 27 and 28. Stepwise procedures were again performed. In the case of the health scale this demonstrated that perceived health, whilst significantly linked to life satisfaction, does not alter the significant contribution of the two activity variables found above, that is "Activity with friends and relatives" and "Attendance at religious services". This suggests that the higher the level of activity with friends and relatives, the higher is life satisfaction as measured by LSIZ and similarly for attendance at religious services. At the final step, after entering "Club membership", R-squared was ,106, F value 5,43 and probability 0,0004.

In the case of perceived health as measured on the bother scale (also significantly linked to life satisfaction) although "Attendance at religious services" remained significantly linked to life satisfaction, "Activity with friends and relatives", at $p=0,0681$

was not. At the final step, after entering "Visiting neighbours", R-squared was ,116, F value 4,79 and probability 0,0004.

Table 27

Multiple regression equation estimates for the constituents of the activity scale and the health scale

Variable	Parameter	T	p
Intercept	7,60	3,00**	0,0031
Health scale	1,42	2,92**	0,0039
Religious attendance	0,91	2,10*	0,0371
Club membership	1,09	1,47	0,1434
Friends and relatives	1,08	2,19*	0,0299
Stepwise Variable	Parameter Estimate	F	Prob > F
Intercept	7,60	9,00**	0,0031
Health scale	1,42	8,53**	0,0039
Friends and relatives	1,08	4,79*	0,0299
Religious attendance	0,91	4,41*	0,0371
Club membership	1,09	2,16	0,1434
** < ,05; **p< ,01			

Table 28

Multiple regression equation estimates for the constituents of the activity scale and the bother scale

Variable	Parameter	T	p
Intercept	8,17	3,33**	0,0011
Bother scale	0,69	2,91**	0,0040
Religious attendance	1,00	2,32*	0,0216
Club membership	1,14	1,53	0,1277
Friends and relatives	1,05	2,13*	0,0342
Stepwise Variable	Parameter Estimate	F	Prob > F
Intercept	7,05	7,51**	0,0067
Bother scale	0,71	9,07**	0,0030
Visits to neighbours	0,90	2,11	0,1476
Friends and relatives	0,92	3,37	0,0681
Religious attendance	0,97	5,08*	0,0255
Club membership	1,21	2,65	0,1053
** <,05; **p<,01			

Because of the discussion in the literature regarding the multi-dimensional nature of the life satisfaction indices (Knapp, 1976; Hoyt *et al.*, 1980), a comparison of the mean of the activity scale scores as related to the means of the scores of the dimensions of life satisfaction was conducted in respect of each of the life satisfaction indices. The results are summarised in Tables 29 and 30. Significant correlations with the mean of the activity scale were found with the means of "zest" (as included in LSIL and LSIZ), "mood" (as included in LSIA and LSIZ) and "resolution" (as included in LSIA and LSIZ).

Table 29

Means and standard deviations of respondents' scores on the dimensions of the life satisfaction indices (LSIA, LSIL and LSIZ)

Dimension	LSIA		LSIL		LSIZ	
	Mean	SD	Mean	SD	Mean	SD
Zest	9,1	2,6	7,0	2,1	4,5	1,6
Mood	8,3	3,2	3,3	2,2	7,2	2,7
Congruence	4,7	1,6	6,2	2,0	3,3	1,1
Resolution	3,5	1,7	-	-	3,5	1,7

Table 30

Correlation of the means of life satisfaction dimension scores with the mean of the activity scale scores

Index	Variable	Coefficient	p
LSIA	Zest	,13	0,068
LSIL	"	,15	0,040*
LSIZ	"	,18	0,013*
LSIA	Mood	,17	0,023*
LSIL	"	,11	0,135
LSIZ	"	,18	0,012*
LSIA	Congruence	,03	0,721
LSIL	"	,04	0,551
LSIZ	"	,02	0,808
LSIA	Resolution	,16	0,027*
LSIZ	"	,16	0,027*

* p<,05

(Of the three life satisfaction indices, LSIA and LSIZ have four dimensions, whereas LSIL has only three, "Resolution and Fortitude" being absent.)

Results of the interviews

As reported in Chapter 2, ten interviewees were randomly drawn from a sub-set of the sample. 97 respondents had agreed to co-operate in further research and of these 32 had reported having had to give up, in the past five years, an activity which they enjoyed. These 32 comprised 15 respondents who reported having since found a substitute activity and 17 who reported that they had not been able to find a substitute activity. Five interviewees were randomly drawn from each of these groups.

The ten interviewees comprised eight females and two males, whose ages ranged from 67 to 88. Their average age was 77,2 years. Seven lived in CPOA accommodation, two in their own homes and one with relatives. The three who did not live in CPOA accommodation were interviewed in their homes.

The purpose of interviewing these respondents was to attempt to gain some insight into the perceived effects of having had to give up a valued activity and the consequences of finding, or not finding a substitute. It was also hoped to obtain an impression of the acceptability of the questionnaire as well as some views on the issue of activity versus disengagement, as had been done by Garden (1991).

After thanking interviewees for their co-operation they were given an assurance of confidentiality and agreement was obtained in all cases to the use of a recorder during the interviews. Making use of the interview schedule (Appendix B), subjects were first reminded of the interviewer's visit to their seniors' centre and of the questionnaire. They were then asked how they felt about the questionnaire. Responses fell into two categories. Seven had no problem with the questionnaire, three of them using the word "straightforward" to describe it. Approval was also voiced by some who thought the research was a good idea. One respondent who missed the explanatory introduction and thought there was a time limit for completing the questionnaire reported being able to do so in about eight minutes. The remaining three subjects reported difficulty in remembering the questionnaires, two saying that they couldn't

remember filling them in, although one of them remembered the interviewer because of his voice.

Interviewees were then asked about the activity which they had had to give up and what effect they felt this had had, if any, on the satisfaction they felt with life. Several reported having had to give up activities for health reasons: a stroke or heart trouble (five respondents); or eye trouble (one respondent). Two reported that the death of their husbands had brought about the curtailment of social activities such as going to the theatre or ballet in the evening. Four indicated that the lack of sufficient intellectual conversation due to circumscribed social opportunities was extremely frustrating. Three reported that the loss had precipitated a general decline in interest in other forms of activity, remarking "I've no inclination any more to do anything, it's all gone" or "it made me lose interest in being able to do things".

Not all interviewees were despondent about their loss, however. Attitudes ranged from "just accepted it", "wasn't depressed at all" to "isolates me rather (giving up driving) but I'm quite happy not to drive" and "not a heavy blow to give up (mountain climbing and horse-riding) because I found other things to compensate". One respondent stated she "never was a social body" and had just been gradually giving up.

Interviewees were then questioned as to how, if at all, they went about trying to find a substitute for the lost activity. Amongst the five who had reported being unsuccessful in finding a substitute, one 87-year-old woman stated that it wasn't so much that she had given up her activities (reading, sewing and dancing) but rather that they "gave me up" (in reference to failing eyesight and giddiness as a consequence of a severe allergy, both of which had begun in the past two or three years). She had "not really" tried to find substitutes because "at 87 one is pretty well at the end of the line". Another stated that she had not consciously tried to find a substitute but when her daughter-in-law suggested she join a seniors' centre she had done so and now says "I'd die without it" (her membership of the seniors' centre).

An 83-year-old man also had not consciously tried to find a substitute but said "I keep myself busy". This referred to putting in an average of four hours a day on his personal computer, which had resulted in a recent acceptance by publishers of the draft of a technical book (he is an electrical engineer). He stated he was currently working on a detective novel and had other projects in mind. A 67-year-old woman made it quite clear that she didn't think she would be able to find a substitute for the considerable benefits which she felt she had derived from membership of the Toastmasters' Club which she had had to give up as a result of a stroke which left her memory functioning unreliably. She had found inspiration and intellectual stimulus from her membership and the contact with others which it had brought. She had, however, joined a choir and taken up bridge, of which she said "is not a substitute but makes my brain work".

All in all, it was clear that these respondents defined a substitute as being not merely a replacement, which they were mostly able to find, but rather an activity which would provide them with all the associated benefits of a treasured activity which they had had to give up.

The five interviewees who reported finding a substitute took a rather different view. Clearly, for them, it was a person's attitude to a new activity, rather than the activity itself, which was important in determining whether it could be regarded as an adequate substitute. This is perhaps best exemplified by an 85-year-old woman who said "walking on the beach in the early morning is quite a good substitute for going to church".

All of these respondents had taken the initiative in order to find their substitute activities. One woman who felt she could no longer paint, following the sudden death of her husband, had decided to teach art instead and was now beginning to feel that she might be able to resume painting, albeit in water colours rather than oil paints. One man reported that he had placed a notice on the board asking people who were interested in rummy to contact him and now obtained pleasure from playing rummy. All of this sub-group evidenced enthusiasm in varying degrees regarding their substitute activities and stressed their view that it was important to keep active.

Those who had reported success in finding a substitute activity were asked for their views as to why others were not successful and what their advice to such persons would be. Their views were effectively summarised by a woman in her seventy-second year who said: "Those who don't find (substitutes) haven't really tried". Another, 73-year-old woman said quite bluntly: "You either go and cut your throat or get on with it". A 74-year-old man with health problems said that "those who cannot find anything are defeatists - those are the ones who degenerate and get Alzheimer's disease".

The interviewer was not successful in getting those who stated they had not found a substitute, to address the question of why some people could find substitutes, even if people like themselves could not. It was clear that they did not want to consider this issue.

The attention of both groups was drawn to the fact that some people noticed a scaling down of social activity with advancing age. All respondents were asked whether that had been their experience and if it had been then what effect they thought it had had on their life satisfaction. With the exception of two subjects, there was general agreement that social activity had scaled down for them. One remarked that "to some degree there is (a scaling down). You don't make friends as readily, don't abide fools and don't have as much energy". She went on to say that it was "a bit depressing at times - not terribly healthy, mentally". Another stated "these things have sort of gone away...frankly I'm damned lonely". The two exceptions were quite definite in their views. One said "I won't scale down my activity until I'm dead". The other said "My social activity is still what it used to be because I'm interested in people".

All subjects were told, in conclusion, of the two theories of successful ageing and asked to comment. The majority identified in varying degree with the activity theory and some were quite scornful of the concept of disengagement. One forthright comment was "rubbish". The respondent went on to explain that life for him only started at 60 and referred with approval to the examples of Churchill and Mandela. Another said of disengagement "some people do but I don't think it does them any good...they should keep on the go as long as they can". She added, however, "they should shoot you

when you're 70 - that's when things start to go wrong" (respondent aged 76). Another commented that he wouldn't agree with "letting go as it were" and added, "such activities as you are capable of doing you (should) do".

A dissenter saw the issue as being very much bound up with the individual's make-up. An 85-year-old woman, she said: "it depends entirely on the individual, those who were always outgoing will be very unhappy (to disengage) but if they are like me, a loner almost, it is not so difficult going into old age with a few things cut out". She added that she thought that she had been born lazy and that her lazy attitude to life had made things (adaptation to old age and the curtailment of social activity) easier. She pointed out that in fact she was doing now her "own thing more than ever in her life" (referring to the fact that she doesn't have to worry about family and other commitments as she had had to do as an only child doing things for her parents out of duty).

At the conclusion of the interviews all the interviewees were again thanked for their co-operation and again were assured of confidentiality.

CHAPTER FOUR

DISCUSSION

Representativeness of the sample and related questions

As explained in chapter 2, it was decided to use a convenience sample in this study, because of the known low return rates which are experienced by organisations such as the CPOA when attempting to assess the views of their members. Use of a convenience sample does, of course, raise the issue of the external validity of its results. With this in mind the sample was first of all compared with the population of the seniors' centres from which it was drawn.

The first of these comparisons, which appeared in Chapter 2 (Tables 1 to 3), demonstrated that the 198 member sample comprised 12,7% of the total membership of the six seniors' centres which were sampled and that the sample included 11,0% of the non-resident members and 14,5% of the resident members. There was thus a somewhat higher representation of resident members. The percentages of male and female respondents were fairly similar, although males were less well represented, at 11,3% of total male membership, than females, at 12,9% of total female members. There was more variation between the samples of membership of the individual seniors' centres, which ranged from 9,0% in the case of Sea Point, to 26,4% in the case of Monterey. Despite the variations noted, it was felt that the sample was representative of the membership of the six seniors' centres.

The second comparison, which appeared in Chapter 3 (Table 4), examined the average age of CPOA residents ($n=105$) who were respondents, with the average age of all CPOA residents at residences adjacent to the relevant seniors' centres, nearly all of whom are members of those centres. A significant difference was found in only one residence, Disa Place, where the respondents' average age of 79,2 years differed from the average age of 82,6 years for all residents. However, as noted in Chapter 3, it was

concluded that from the point of view of the examination of life satisfaction of octogenarians, the difference in mean age, of 3,4 years, although statistically significant, did not warrant concern.

A further comparison, shown in Chapter 2 (Table 5), was made between the age of respondents in the 1991 pilot study at Sea Point seniors' centre and Sea Point respondents in the present study. An analysis of variance showed no significant difference between the ages of the two groups (1991, n=43; 1994, n=45), suggesting that the method used to obtain respondents was reliable.

The combined effect of these comparisons suggested that the present sample was comparable in most respects with the total membership of the six seniors' centres and provided reassurance to proceed. In addition, the question of the external validity of the sample in relation to the wider South African elderly population remained. To examine this, a comparison was made with responses given by members of random samples of non-institutionalised persons over the age of 60 years included in the multidimensional survey of elderly South Africans conducted by the HSRC/UCT Centre for Gerontology in 1990-1991. (Ferreira *et al.*, 1992). The responses involved related to 10 of the questions which form part of the life satisfaction indices used in the present study. In Chapter 3 (Table 6), the results were given of a comparison of the percentages of affirmative responses by members of the "white" and "coloured" population groups in relation to those given by members of the sample living at home. In the case of each of the population groups, seven out of 10 questions showed no significant difference between the survey samples and the sample in the present study. (The three questions showing significant differences in affirmative responses were not the same for the different population groups). These results, therefore, gave some support to the belief that the sample in the present study had affinity with the wider South African elderly population insofar as the "white" and "coloured" communities were concerned.

However, as this comparison was limited to persons living at home or at least not in institutions for the aged, a further comparison was made between the mean scores

recorded in respect of activity and life satisfaction by respondents who were living in CPOA or other accommodation for the elderly and those who were not (reported as either "living in a house or flat" or "living with relatives or friends"). As will have been seen from Chapter 3 (Table 14), no significant differences were found between the two groups. This comparison thus supported the likelihood that the sample had affinity with elderly "white" and "coloured" South Africans, whether institutionalised or not.

Six of the respondents had answered the questionnaire fully, but had failed to complete the clock diagram. Although the analysis of types of clock diagram patterns by Wolf-Klein *et al.* (1989) listed "absence of number" (in other words, a blank clock) as one of the seven patterns suggesting dementia, it was felt that different conditions applied in respect of this study and that the six questionnaires should be included. This decision was supported by the fact that the successful completion of the questionnaires was in itself a disclaimer for dementia, especially as none of the questionnaires which included undoubtedly unsatisfactory clock diagram patterns had been fully completed. A comparison was made however between those who had completed the clock diagram satisfactorily and those who had either overlooked it, or had decided not to complete it. The result of this comparison appears in Chapter 2 (Table 25), and shows no significant difference between the two groups.

The interview sub-sample

As the random samples of respondents for interview could only be drawn from those who had agreed to participate in further research, it was necessary to compare the mean scores (for the activity scale and the life satisfaction indices) of those who volunteered to participate further, with those who did not. The results of this comparison were given in Chapter 3 (Table 13). These showed no significant differences and it is therefore taken that the sub-sample of interviewees was equally representative of those respondents who did not volunteer, as far as their reported levels of social activity and life satisfaction were concerned.

Demographic profile of the 188 respondents aged 65 and over

From this information, which was given in Chapter 3 (Table 8), it will have been seen that 64% of respondents were 75 or over in age. The mean scores of the age-groups 65 to 74, 75 to 84 and 85 and over were examined and as can be seen from Chapter 3 (Table 22), no significant differences were found between the three age groups as to scores for activity and life satisfaction. This finding differs, however, from that of Morgan *et al.* (1987) using LSIZ, that there was a significant difference between the scores of the old (65-74)(n=507) and the very old (75+)(n=535) living at home. It is also shows a different result, insofar as social activity is concerned, from their finding of a significant difference between the two groups in terms of their Social Engagement Scale (1987: 805). Although two of the interviewees, who were in their late eighties, offered some evidence of reduced life satisfaction, this was offset by the positive attitudes of others, in their mid-seventies and early eighties.

The demographic profile also showed the distribution of the sample between three levels of education. These showed a close correspondence in mean LSIZ scores (Up to standard 9, 18,5, SD 5,6; matriculation, 18,7, SD 5,0; and tertiary education 18,7, SD 5,0). In relation to LSIA the means were respectively 25,59, SD 6,97; 25,82, SD 6,54; and 25,80, SD 6,75. Education, therefore, appeared to have had very little effect on life satisfaction levels. This was in contrast to Edwards and Klemmack's (1973) finding of a significant relationship between "education" and LSIA. However, this may be due to the fact that their sample (n=507) ranged in age from 45 years upwards and cannot be regarded as an entirely elderly sample.

As has already been noted, only limited information was available as to the socio-economic status of respondents. It was, however, known that the members of the Muizenberg seniors' centre, or at least, those who were living in the CPOA accommodation at Muizenberg, fell into the "sub-economic" category (as defined by the CPOA for purposes of residential admittance). It was accordingly interesting to find that Muizenberg members had a mean life satisfaction score, as reported on the LSIZ of 16,1. This was the lowest found at any of the six seniors' centres.

The CPOA accommodation in Muizenberg consists of a converted former hotel, which inevitably compares less than favourably with other CPOA residences built especially for the purpose of accommodating older people. It is possible therefore that those members who were accommodated there might have felt some negative effects from their surroundings. Be this as it may, it would be reasonable to assume that many of the members of the Muizenberg seniors' centre might have felt that they had lost ground, from a socio-economic point of view, compared to their position earlier on in life.

On the other hand the situation of the members of the Belgravia seniors' centre appeared to be possibly somewhat different. Those who responded to the questionnaire were nearly all non-institutionalised. Many were living with relatives or friends. Their opportunities for close personal contacts would, accordingly, be generally much better than those of the Muizenberg members. In view of the finding that frequency of informal social activity, especially with friends and relatives is conducive to higher levels of life satisfaction, a higher score by this group is therefore not surprising. Indeed, a member of the CPOA management to whom this result was conveyed remarked (obviously drawing on his personal knowledge of the centre), that such a finding did not surprise him.

It was also noted that the Belgravia seniors' centre was housed in what appeared to be a large, converted private home. Being thickly carpeted, on entry it gave a warm and welcoming impression. All in all, it appeared to be possible that the Belgravia members are not, currently, any worse off than they had been earlier in their lives. In some cases they might, now, even be experiencing a somewhat easier life. The determining effect of socio-economic status on life satisfaction may well, then, be related not to existing circumstances *per se*, but rather to how present circumstances relate to those previously enjoyed.

Other studies have included the loss of married partner in their examination of factors affecting life satisfaction. The mean scores by marital status shown in Chapter 3 (Table 8), were subjected to further analysis, especially as the mean life satisfaction score of

those who stated that they had never been married appeared to be markedly below those of the other three categories (married, divorced and widowed). As Table 23 shows, however, no significant differences were found between the two groups. It was clear from the interviews, however, that the loss of their spouses had had, in several instances, a long-lasting detrimental effect on both the social activity and the life satisfaction of the interviewees concerned. This related not only to reduction in ability to attend social and cultural events, but also to the loss of intimate companionship and in some cases to a reduction in opportunities for intellectual discussion.

Nearly all respondents claimed English as their home language. Some 10% (n=18), however, who claimed Afrikaans as their home language, recorded a significantly higher mean score on LSIZ (See Chapter 2, Table 24). Obviously, the small size of the subsample of Afrikaans speakers may have had an important effect on this result. However, it is also possible that differences in interpretation of the questions comprising the life satisfaction index, may also have had an effect. Although the interviewees reported having had no problems with the questionnaire, they were all English speaking and therefore it was not possible to probe the aspect of language interpretation. In this regard it is noted that the multidimensional survey used questionnaires in eight languages, including Afrikaans, and it would be a recommendation for future research that questionnaires be available in the home language of the respondent.

In their pioneering study, Havighurst and Albrecht (1953, p.281) showed that the social activity of males was significantly lower than that of females. The mean score of male respondents in the present study has also been shown to be significantly lower than that of females (Table 16). It has also been seen from Chapter 2 (Tables 1 and 2), that a somewhat smaller percentage of males (18%) participated in the study than their percentage of the overall membership (20%). The impression formed by the researcher was that males tended to avoid some of the larger gatherings at which questionnaires were issued and indeed the best concentration of males was found amongst members of an art class.

In their study Havighurst and Albrecht attributed the difference to the fact that there were more "lower-status" men in their sample and stated that "The determining factor in role-activity appears to be socioeconomic status more than age" (1953, p.282). Because of the lack of individual socio-economic data, it was not possible to investigate this aspect in regard to the present study.

Health and life satisfaction

Havighurst and Albrecht (1953) had stated that they had found that "Attitudes towards one's own health, as measured by the Attitude Inventory, correlated .60 with happiness" (1953, p.295). Twenty years later, Edwards and Klemmack (1973) reported that "...perceiving oneself as being in good health is positively related to satisfaction with life, while the number of experienced ailments - either recent or immediately past ones - is unrelated", finding a correlation between perceived health and life satisfaction measured on the LSIA. Palmore and Kivett (1977) also found self-rated health to be a significant predictor of life satisfaction. Cockerham, Sharp and Wilcox (1983) found, in addition, that "Older respondents are significantly more likely than younger respondents to perceive themselves as having the most positive level of health." (1983, p.354) but as we have seen, this finding was reversed by Levkoff *et al.* (1987, p.117).

In view of these findings and the possibility of self-rated health affecting the relationship between social activity and life satisfaction, the responses to the two questions regarding the perceived health of respondents were examined in some detail. In Chapter 3, Tables 9 to 12 show the relationship between the levels of self-reported health and the activity scale and LSIZ. Significant relationships were noted between the health scale and all three life satisfaction indices and between the bother scale and LSIA, indicating overall a clear linkage between self-reported health and life satisfaction.

A check was then made to determine whether this also affected the relationship found between two of the activity variables and life satisfaction and the results of this are set

out in Chapter 3 (Tables 27 and 28). No indication was found, however, to suggest that self-rated health had any such effect.

The importance of health as a factor in limiting social activity was brought out in most of the interviews, sometimes very strongly. It was clear, however, from the interviews that the nature of respondents' responses to these limitations was, more often than not, the deciding factor in determining the extent to which their life satisfaction was affected.

Social activity and life satisfaction

Moving to the central issue of this study, correlations between the means of the activity scale and the three life satisfaction indices were calculated (Chapter, 3, Table 15). Two of these, the original LSIA and the widely used LSIZ showed significant correlations. The correlation between the activity scale and Liang's 11-item index, LSIL was not significant, implying that the five items which are included in the LSIZ, but not in the LSIL, are more closely connected with activity than the four items which were preferred by Liang and that similarly, the extra seven items in the LSIA increase its linkage with activity.

On investigation (Chapter 3, Table 26), the relationship between the constituents of the activity scale and life satisfaction proved, following a stepwise multiple regression, to be significant in respect of contacts with relatives and friends and in respect of attendance at places of religion. These relationships remained significant, as has been indicated above, even when the influence of self-rated health was taken into consideration (Chapter 3, Tables 27 and 28).

These findings may be compared, firstly with those of Lemon *et al.* (1972), who found informal activity to be directly associated with life satisfaction and also that informal activity was more highly associated with life satisfaction than is formal activity (1972, p.518). They also accord well with Graney's (1975) findings which noted significant

relationships between happiness and visiting friends and relatives as well as attending religious services (in addition to a number of other significant relationships). They also show agreement with Longino and Kart's (1982) finding that "Informal activity (with friends, relatives and neighbours) is directly associated with life satisfaction" (1982, p.713).

Because of the multidimensional nature of the life satisfaction indices, correlations were also investigated between the activity scale and the three indices, two of which contained four dimensions, "zest vs apathy", "mood tone", "congruence between desired and achieved goals" and "resolution and fortitude" (LSIA and LSIZ), with LSIL excluding "resolution and fortitude".

Significant relationships were found between activity and "zest" for both LSIL and LSIZ and between activity and "mood" for LSIA and LSIZ. In addition, a significant relationship was found between activity and "resolution and fortitude" for LSIA. These findings contrast with Hoyt *et al.*'s (1980) statement that "The general failure of the various measures of activity to be related to life satisfaction is reaffirmed in a multidimensional context" (1980, p.940) and instead support the conclusion of Knapp (1976), that "the multidimensional modelling of life satisfaction is both computationally feasible and theoretically possible" (1976, p.603). Knapp's view is in line with the widely held gerontological position that "well-being is a multidimensional concept" (1976, p.596) and it is encouraging, therefore, to find it supported in a South African context.

In view of the comment by Graney (1975) that "Increases in activity over time were often related to happiness, and declines in activity were related to unhappiness" (1975, p.705), an attempt was made to examine the impact on activity scale scores and the life satisfaction indices of the loss of activities and the finding or not of substitute activities. The roles of the acquisition of new activities and the intensity of participation in seniors' centre activities were also examined.

Results, given in Chapter 3 (Tables 12 and 18 to 21), showed a significant reduction in the life satisfaction (as measured by LSIZ) of those who had had to give up an

activity which they enjoyed compared to those who had not had to do so (Table 20). This finding tended to be supported by the comments of interviewees, especially when the activities which had been given up were perceived to have been of importance to them.

It was found, however, that there was no significant difference between those who reported having found a "substitute" and those who had not (Table 21). It was also found that there were no significant difference between those who had found new activities (whether or not they had had to give up any) and those who had not found new activities (Table 19).

From the interviews it emerged, however, that the term "substitute" used in the questionnaire had been variously interpreted. Some respondents regarded a "substitute" as being a fully satisfying replacement, while others regarded it as being merely an alternative activity. It is possible therefore that this variability in interpretation of the question may have affected the extent to which significance can be attached to the findings.

Finally, it was noted from Table 17, that the highest means, in respect of both activity and life satisfaction, were recorded by respondents who indicated that they attended activities at seniors' centres either two or three times a week. Although the differences were not significant, they suggested that simply increasing the frequency of attendance at the seniors' centres did not necessarily bring about an increase in life satisfaction. It is possible, in fact, that those who attended most often, did so because of a lack of satisfying interaction with other friends and relatives, and this was certainly suggested by the content of one of the interviews.

The interviews

Overall, the interviews showed fairly strong support for activity theory. They revealed, however, the complexity of the issue, supporting to some extent, the view summarised

by Louw (1991) that "It is not social activities and roles *per se* that determine whether or not ageing will be successful, but rather the individual's inner, subjective experience of his life and circumstances." (1991, p.533). It was clear that, in the case of at least two of the interviewees, there was a measure of agreement with the view of disengagement theory. It suggested that those who maintain only a low level of social activity in earlier life, do not feel as much need for social interaction in later life as may be felt by others. It was also clear that the closer social interaction provided in accommodation for the elderly has both its positive and its negative aspects. Generally, however, the activities provided by the seniors' centres appeared to be very well accepted. The interviews also revealed that there was a difference between merely replacing treasured activities and finding satisfactory substitutes. Certain activities were clearly felt to be more or less irreplaceable.

Conclusion and recommendations

This study constitutes the first successful attempt to establish a relationship between social activity and life satisfaction in the South African context. Although there are limitations to its generalisability, it does point very clearly to the importance of regular contacts with friends and relatives as well as frequent attendance at religious services as significant contributors to the level of life satisfaction in, at least, urbanised South Africans over the age of 65, in the "white" and "coloured" population groups.

For those charged with the administration of seniors' centres and accommodation for the elderly, there will be little in this study to surprise them. They will doubtless be glad, nevertheless, to have some measure of confirmation that what many have always believed to be true, namely the beneficial effect of social activity, does appear to have some foundation, in the South African context. The comment by Louw (1991, p.533) that "the happy elderly person involves himself in informal activities" should, however, not be overlooked. Certainly the attitudes of several of those interviewed appeared to support this view.

Specifically, the study underlines the importance, especially for those of the elderly who are institutionalised or living away from their relatives or longstanding friends, of doing everything possible to enable them to maintain regular contacts with such "significant others". Whenever it is possible to accommodate elderly persons in residences located in suburbs which make it easier for them either to visit or be visited by relatives and friends, careful consideration should be given to doing so. This may make it necessary to bend rigid rules as to who may be accommodated where. It also suggests, of course, that new residences for the elderly should be accessible and not remotely sited.

Other, innovative, possibilities for optimising contacts with friends and relatives should also be investigated and where practicable, implemented. Not all elderly people can afford a telephone but the provision of comfortable facilities in which to make and receive calls can contribute to their quality of life. One person interviewed in the course of this study remarked that "precious time" which he was spending with his granddaughter who visited him at the residence was spoilt when another resident interrupted them. Because bedrooms are not always suitable for receiving visitors, the provision of one or two small, private rooms in which visitors can be received could help to improve the quality of visits.

The significant relationship found between frequency of attendance at religious services and life satisfaction, confirmed the importance of efforts to provide religious services at residences for the elderly. However, equally important are efforts to enable the elderly to continue to attend the church, temple or mosque of their choice, where they will be likely to meet old friends and possibly make new ones. The responsibility for implementing this rests, of course, as much with the religious communities concerned as with those responsible for the accommodation of the elderly.

Although disengagement theory is not supported by this study, it did appear from certain of the interviews, that Palmore's remarks, quoted in Chapter 1, that "...some find most satisfaction in disengaging..." (1968, p.262), may well be true for a small minority. It would seem that Steinkamp and Kelly's caution against "blanket prescriptions for

activity increases for all older persons" (1987, p.306) is also valid for this small group. It also seemed possible, from information gathered during the interviews, that some of those who appear to disengage, do so because of a feeling of intellectual incompatibility with others. The beneficial effects of bringing such people together, if it can be achieved, should not be overlooked.

The findings of this study are, however, certainly not generalisable to the rapidly growing number of "black" elderly people in South Africa. As improvements in health care and living standards accelerate the growth in the number of elderly "black" people still further, a fuller understanding of the determinants of life satisfaction for the elderly "black" community will become increasingly important. Such understanding will need to be based on well-constructed research, which does not merely accept, as this study has done, the well-established westernised measures of life satisfaction, but re-develops them in the African context and either re-moulds them to meet contemporary local needs or, if necessary, replaces them with others which take full cognisance of the cultural issues involved.

Finally, although the study found that there is a significant relationship between certain forms of social activity and life satisfaction, albeit moderate, it is clear that this finding adds only one small dimension to the understanding of the multifaceted phenomena of human life and satisfaction. Social activity does make a very real contribution to the life satisfaction of the elderly. It is, however, only one strand in a very complex tapestry. It does not stand alone.

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APPENDIX A

QUESTIONNAIRE

PRIVATE AND CONFIDENTIAL

**RESEARCH INTO LIFE SATISFACTION
AND SOCIAL ACTIVITY IN LATER LIFE**

Your help in this research into life satisfaction and social activity in later life is greatly appreciated. Please answer **ALL** the questions, ticking boxes (☑) where appropriate. It is **NOT** necessary to give your name, but if you would like to do so it would be very useful if further research is needed. If you have any questions please ask the researcher. All replies will be treated in *strict confidence*.

THANK YOU FOR YOUR HELP

PART 1

Your date of birth: 19

Your age next birthday: years

Sex

Male

Female

What is your home language?

English

Afrikaans

Xhosa

Other

Marital Status

Never Married

Married

Separated

Divorced

Widowed

Education

Up to Standard 9

Matric

University or other tertiary training

Where do you live?

CPOA accommodation

Other accommodation for the elderly

Residential hotel or boarding house

With relatives or friends

In a flat or house

If you live in CPOA accommodation, please state the name of the residence:

.....

Have you been bothered by any illness, bodily disorder, pains or fears about your health during the past month?

All the time

Most of the time

A good deal of the time

Some of the time

A little of the time

None of the time

Which Seniors' Centre do you attend?

.....

How many times a week do you attend activities at the Seniors Centre?

- Less than once
- Once
- Two
- Three
- Four
- Five
- More than five

In the past five years have you had to give up any activities which you enjoyed?

- Yes
- No

If 'Yes', which one do you particularly miss?

.....

Have you found a substitute?

- Yes
- No

If 'Yes' what is the substitute?

.....

Even if you have not had to give up any activities, have you acquired any new activities?

- Yes
- No

If 'Yes', what are they?

.....

About how many hours would you say you watched TV on a day like yesterday?

- Two hours or less
- Between two and five hours
- Five hours or more

About how many hours would you say you listened to the radio yesterday?

- Less than one hour
- At least one but less than two hours
- Two or more hours

About how many hours would you say you read yesterday?

- An hour or less
- More than one but less than three hours
- More than three hours

Do you visit your neighbours often?

- More than once a day
- Daily
- Less than daily
- Never

All in all, how often do you see any of your friends and relatives in the Cape Peninsula, that is, people you know pretty well?

- Several times a week
- About once a week
- Less often than once a month
- Never

About how many phone calls did you make or receive yesterday?

- Two calls or fewer
- Three of four calls
- Five or more calls

Do you go to church or temple?

- Yes
- No

If 'Yes', about how often?

- More often than weekly
- Weekly
- Monthly
- Less often than monthly

Do you attend activities of any clubs, civic groups or other organisations?

- Yes
- No

If 'Yes', which ones?

.....

.....

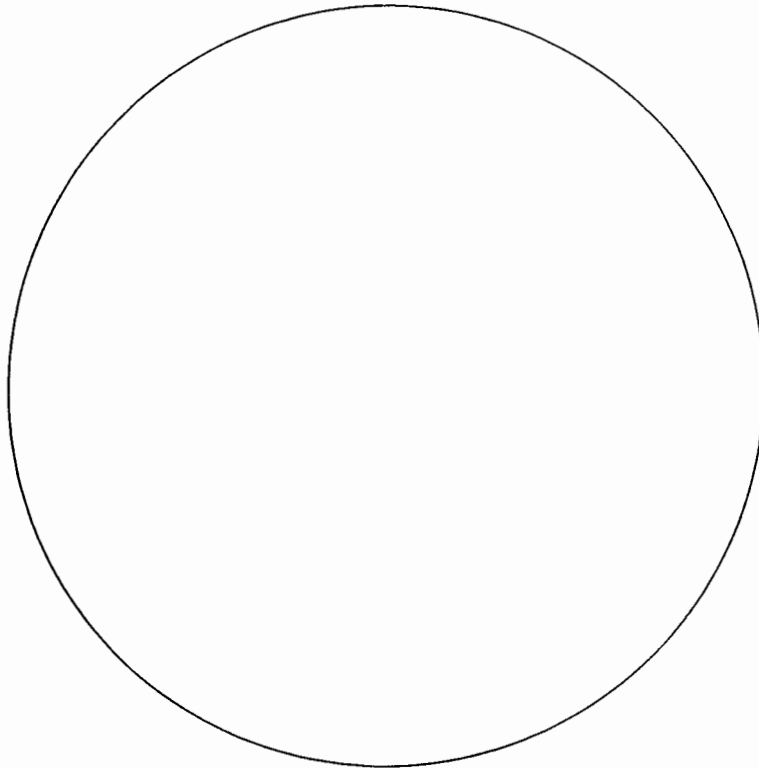
If 'Yes', do you attend these kinds of activities often?

- More often than weekly
- Weekly
- Monthly
- Less often than monthly

How would you describe your own health, in general?

- Excellent
- Good
- Fair
- Poor

Please draw a clock on the circle below:



PART 2

Here are some statements about life in general that people feel differently about. Please read each statement on the list and, if you agree with it, put a tick in the box under 'Agree'. If you do not agree with a statement, put a tick in the box under 'Disagree'. If you are not sure one way or the other, put a tick in the space under '?'.

	Agree	Disagree	?
As I grow older, things seem better than I thought they would be.			
I have had more opportunities in life than most of the people I know.			
This is the dulllest time of my life.			
I am just as happy as when I was younger.			
My life could be happier than it is now.			
These are the best years of my life.			
Most of the things I do are boring or monotonous.			
I expect some interesting and pleasant things to happen to me in the future.			
The things I do are as interesting to me as they ever were.			
I feel old and somewhat tired			
As I look back on my life, I am fairly well satisfied.			
I would not change my past life even if I could.			
Compared to other people my age, I make a good appearance.			
I have made plans for things I'll be doing in the future.			

Agree Disagree ?

When I look back over my life, I didn't get most of the important things I wanted.

--	--	--

Compared to other people, I feel low or down in the dumps more often.

--	--	--

I have generally got what I expected out of life.

--	--	--

In spite of what people say, the lot of the average person is getting worse, not better.

--	--	--

Please check that you have answered ALL the questions in this questionnaire, and drawn the 'clock' on page 6.

THANK YOU ONCE AGAIN FOR YOUR HELP

If you would like to help further research, if required, please print your name below.

.....

Issued at:
by Ian Gillespie, in connection with a research M.A. thesis to be submitted to the University of Cape Town.

APPENDIX B

INTERVIEW SCHEDULE

APPENDIX B: INTERVIEW SCHEDULE

All subjects

1. Thank subject for agreeing to be interviewed. Explain that the interview will take about 30 minutes and that the its purpose is to provide some additional insight into certain aspects of the questionnaire. Obtain, if possible, permission to record the interview, stressing the confidential nature of the interview.
2. Ask how the subject felt about the questionnaire, in general. Ask whether there was anything of particular interest. Ask whether there was anything they found difficult in any way.
3. Remind subject of their report of loss of an activity and if appropriate, one which they particularly missed. Ask what effect they feel giving up this activity has had on the satisfaction they feel with life.

Group A (Those who have reported finding a substitute):

4. Ask how they went about finding a substitute. Enquire what effect, if any, they feel finding this substitute activity has had on the satisfaction they feel with life.
5. Ask what they would suggest to others who have not been successful in finding a substitute for lost activities.

Group B (Those who have reported not finding a substitute):

4. Ask whether they tried to find a substitute and if not, why not. If they tried to find a substitute, ask how they went about doing so.
5. Ask why they think they were unsuccessful in finding a substitute and then enquire what they think may have been the reasons why others have been successful in finding substitutes.

Both groups

6. Remark that some people notice a scaling down of social activity with advancing age and enquire whether that has been their experience. If it has not, then enquire as to why they believe they have not had such an experience. If it has been their experience then enquire what effect they believe it to have had on their life satisfaction. In the case of those over 75 also enquire whether they have experienced any change in their level of social activity as compared with that of ten years ago and if so what significance it has for them.
7. Conclude by thanking subjects again for their help with this research and once again stressing its confidentiality.