Life satisfaction in old age and activity theory: should the debate be re-opened?

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Abstract

Since the formulation of the activity theory of ageing by Havighurst and Albrecht in 1953, the theory has been subject to intense scrutiny. Although subsequently challenged by the disengagement theory advanced by Cumming and Henry in 1961, it is now widely held that activity, particularly social activity, contributes to increased life satisfaction in the elderly. A literature review however suggests only limited support for activity theory. Meanwhile, the increased proportion of aged people in the population over the past forty years has made the significance of activity theory for the wellbeing and care of the aged increasingly important. Given the paucity of South African research on activity theory, a pilot study was conducted among 43 white South Africans between the ages of 62 and 89 years, using a modified activity scale as developed by Lee and Markides (1990), and a multidimensional life satisfaction index originally developed by Neugarten, Havighurst and Tobin (1961) and further refined by Adams (1969). The pilot study failed to provide support for activity theory, as described by the original theorists, possibly due to a small sample size. Further research in the South African context is suggested, and attention is drawn to the importance of investigating the type and quality of activity in terms of its perceived effects on life satisfaction.

Activity theory

For forty years social gerontology has observed and encouraged debate on what is known as the "activity theory of optimum aging". Although the concept already existed informally in the 1940s (Longino & Kart, 1982: 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. 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: 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: 309). Inactivity was seen as leading to deterioration and illness (Maddox, 1987: 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: 161). Appealing 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: 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: 372).

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 and 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, 1974:314). According to 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, the withdrawal of ageing persons is accepted and perhaps even desired by them. The theory went on to suggest that withdrawal has ". . . intrinsic or developmental, qualities as well as responsive ones; social withdrawal is accompanied

 Address correspondence to Mr Ian Gillespie, P.O. Box 259, Constantia 7848, Republic of South Africa. 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, Neugarten & Tobin, 1963: 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: 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 "... aging people should know that their lives are not mounting and expanding, but that an inexorable inner process enforces the contraction of life... for the aging person it is a duty and a necessity to devote serious attention to himself" (Jung, 1933: 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 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, Havighurst and Tobin (1961) developed "Life Satisfaction Ratings", or LSRs, which analysed the concept of psychological wellbeing according to 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" (1961: 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: 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 that 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.

Using 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 became older than 70 years (in a modern-industrialized community), they regretted the decrease in role activity that occurred in their lives. Havighurst, Neugarten and Tobin 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 lowhigh" (1963: 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 wellbeing. 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: 177).

Activity theory and life satisfaction: later studies

Further work relating to activity theory was done by Maddox (1966) and Palmore (1969), based on a sample of 148 non-institutionalized volunteer subjects aged 60 years and over. Maddox showed that persistence rather than changes in lifestyle 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 aging individuals" (Maddox, 1966; 182).

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 "... on the question of whether activity is related to high or to lowered morale and life-satisfaction, the evidence is overwhelmingly on the side of activity theory" (Palmore, 1969). (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 assert: "In the balance, disengagement theory has been found wanting empirically and its original formulation is rarely defended by anyone" (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, Bengtson and Peterson (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: 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, focussed on persons aged 52 years and older 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 organization or solitary activity and life satisfaction. They concluded that the data lent ". . . only limited support to some propositions of this theory" (1972: 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.

The Life Satisfaction Index had meanwhile 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: 473); however the fifth factor, "self-concept", had no items highly correlated with it. Adams (1969) 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 1 000 and 2 500 persons in Missouri.

A study by Knapp (1976) based on interviews with 51 subjects (age range 62 to 86 years; mean age 75,7 years) 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 up 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 74,7 years; SD 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 multi-dimensional 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" (1980:940).

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: 940). In this, they summarized the state of activity theory at the beginning of the 1980s. Hence, 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 1 209 from three distinct types of retirement communities, thus providing "... far greater variation on background variables than existed in the original study." (Longino & Kart, 1982: 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, formal social activity and solitary activity. For the dependent variable, life satisfaction, a 13-item modified Life Satisfaction Scale B, 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 aging. 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: 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, 1982:720). They also urged that activity theory be examined in broader theoretical contexts by taking into account Rose's aged subculture hypothesis (Rose, 1962), 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: 721).

One of these suggestions was followed by McClelland (1982: 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 organization 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 aging group consciousness among the elderly", and the "... investigation of how local group situations affect aging group consciousness and adjustment" (McClelland, 1982: 731).

Finally, a very recent study by Lee and Markides (1990) at the University of Texas has developed a useful activity level scale derived through factor analysis which they employed in an attempt to examine the influence of activity on mortality.

Rationale for the study

It will have been seen from this review of the increasingly sophisticated research on activity theory over the past forty years that, despite occasional "encouraging" results, the overall picture has been one of failure to find any widespread support for the theory. Better measures have been constructed and refined. Larger and more elaborate samples have been used. But despite these methodological changes, it has not been possible to obtain unqualified support for activity theory. It has even been argued that continued preoccupation with the question of how the individual successfully adapts to his/her own ageing hinders theoretical progress in new and perhaps more fruitful directions (Marshall, 1978). However the considerable growth, both absolute and relative, which has taken place in the population of old people, not only in Western Europe and North America but also in South Africa (a million and a quarter people over the age of 65 in 1991 (Central Statistical Services, 1991)). has made it increasingly important to analyse the significance of activity theory for the wellbeing and care of the aged.

With this in mind, and in view of the fact that a search of the literature failed to reveal any published research on activity theory in the South African context, a pilot study was conducted to establish some preliminary empirical baselines for further research in the country.

Method

Sample

Questionnaires were completed by 43 members of a seniors' centre managed by the Cape Peninsula Organization for the Aged (CPOA) in Sea Point, Cape Town. 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 years (SD = 7,6) completed questionnaires.

Fourteen of the respondents were either married or had never married. The remaining 29 had all suffered marital role loss, being either separated, divorced or widowed. Forty-one respondents who described themselves as retired had suffered occupational role loss.

Measures

The questionnaire was made up of 35 items: six related to personal details; 11 to activity levels; and 18 to life satisfaction.¹

Three measures of activity were included in the questionnaire, based on Lee and Markides (1990: 40) and Hoyt *et al.* (1980: 937). These measures were an activity level scale and the number of days per week that the respondents interacted with friends and relatives.

Eighteen of the original Life Satisfaction Index A items developed by Havighurst *et al.* (1961) were used. Wood, Wylie and Shaefor's (1969: 467) method of scoring the LSIA was used. On some items of both the activity and the life satisfaction indices the wording had to be altered slightly to eliminate Americanisms.

Procedure

The questionnaires were completed after a mid-day musical event at the centre, as these events usually attract an audience of between 80 and 100 centre members, which includes residents of the adjacent aged residential centre. It was briefly explained to the members that their participation was sought in a preliminary study of life satisfaction. An assurance of confidentiality was given. The majority of the members present remained behind; 70 questionnaires were distributed, of which 50 were completed. Seven of the completed questionnaires had to be discarded because of omissions, leaving 43 completed questionnaires for inclusion in the study.

Results

The means and standard deviations for the independent and dependent variables are shown in Table 1. The potential range of scores for the activity measures were contact with friends and with relatives (0 to 364), and activity scale (9 to 27). Life satisfaction indices were 0 to 26. The distribution of scores

on the variable measuring contact with relatives is skewed, the median being 52, the minimum 0 and the maximum 364.

Table 1

Means and standard deviations for the variables

	x	SD
Activity measures		
Friends	215,30	120,40
Relatives	117,50	136,40
Activity scale	17,58	4,76
Life satisfaction		
Mood Tone	7,61	3,27
Zest vs Apathy	8,61	3.08
Congruence	4.00	1,99
Resolution and Fortitude	2.84	1,72
Total LSI	23,05	7,80
N = 43		

Table 2 shows correlations between the four life satisfaction indices, demonstrating relatively low correlations, except between Mood Tone and Zest vs Apathy.

Table 2

Correlations between the four life satisfaction index dimensions^a

	Mood Tone	Zest vs Apathy	Con- gruence	Resolution and Fortitude
Mood Tone	-	,678	.311	,433
Zest vs Apathy		-	.385	,330
Congruence			-	,432
Resolution and Fortitude				-

The estimates are the product-moment coefficient of correlation, r.

Table 3 shows correlations between the three activity measures and life satisfaction and its four dimensions. No significant correlations are demonstrated.

Table 3

Correlations between activity measures and measures of life satisfaction^a

	Friends	Relatives	Scale
Mood Tone	,234	-,045	,069
Zest vs Apathy	,175	134	,287
Congruence	057	,022	,038
Resolution and Fortitude	.078	.056	,067
Total LSI	,170	-,054	,167

The estimates are the product-moment coefficient of correlation, r.

Table 4 shows the multiple regression equation estimates for the dimensions of the life satisfaction index. The estimates are standardized regression coefficients. No significant differences (at the 0,05 level) were found. Despite the small sample size the table is shown as a replication of Hoyt *et al.*'s (1980: 938) Table 3.

Table 4

Multiple regression equation estimates for the dimensions of the life satisfaction index^a

	Mood Tone	Zest vs Apathy	Con- gruence	Resolu- tion and Fortitude	Total LSI
Control varia		040	100		
Age Sex	-,176 -,060	-,312 -,049	,198 ,204	,024 –,163	-,141 ,134
Role loss Marital	215	160	179	047	051
status Retirement	,315 222,-	,160 –,084	,178 –,099	,047 ,062	,251 ,138
Activity					+
Friends Relatives Activity	,187 ,204	,032 ,125	-,038 -,137	,091 ,058	,097 ,097
scale	,054	,215	,072	,016	,100
R² Adjusted R ² F	,254 ,105 1,710	,239 ,087 1,570	,101 Nil ,560	,047 Nil ,250	,155 Nil ,920

The estimates are the standardized regression coefficients. There is no significance at the ,05 level.

Discussion

The sample, although small compared to those referred to in the literature review, was similar in terms of sample characteristics to some of the samples used in the cited studies. For example, Knapp's (1976) sample had a mean age of 75,7 years (SD 6,91) and Hoyt et al.'s (1980) sample had a mean age of 74,7 years (SD 6,66). The means found by Knapp for the dimensions of life satisfaction approximated fairly closely those found in the Cape Town study (the Cape Town study's means are shown in brackets): Mood Tone X7,49 (7,61); Zest vs Apathy X 9,16 (8,61); Congruence X 5,20 (4,00); Resolution and Fortitude \overline{X} 3,02 (2,84). However similarity was not evident in a comparison with Hoyt et al.'s sample, which recorded much lower ratings: Mood Tone X 4.01 (7,61); Zest vs Apathy X 3,98 (8,61); Congruence X 2,44 (4,00); Resolution and Fortitude X 1,84 (2,84). A higher activity with friends score was found in the Cape Town study than in the Hoyt et al. study: activity with friends in the Hoyt et al. study had a mean of 148,5 days a year (215,3 in the Cape Town study). On the other hand the Hoyt et al. study recorded a mean of 183,4 days a year activity with relatives, compared to 117,5 days in the Cape Town study. Overall there was no indication that the sample in the Cape Town study was unsuitable; however it is obviously not possible to generalize the Cape Town findings to populations other than similar urban-based semi-institutionalized white South African elderly communities.

Conclusions

Essentially the results show no significant support for activity theory. This is in line with the general findings in other Western countries, which it was seen only found limited support for the theory even when examined multidimensionally – as has been done here. A number of possible conclusions follow. The first is that there is in fact no significant relationship between social activity and perceived life satisfaction. To accept this would be to entirely discount reports from social workers and other professionals in the field who repeatedly report observing marked improvements in cheerfulness and psychological wellbeing in elderly people after they are drawn into social and other activity (Meiring, 1990: 370). Nevertheless it must be recognized that activity theory has the effect of legitimizing the provision of certain social services to the elderly and that the report of benefits derived from such services is open to the possibility of classification with self-fulfilling prophecies. However the persistence which researchers overseas have displayed in attempting to explicate activity theory demonstrates that the theory continues to attract support from gerontologists despite suggestions that attention should shift to "... questions of social structure and large-scale social changes" (Longino & Kart, 1982: 721).

A second possible conclusion is, equally obviously, that a larger sample should have been used. The data in the present study were not subjected to step-wise multiple regression analysis because of the sample size (see Hoyt et al.'s (1980) criticism of Knapp (1976) in this regard). It would certainly be useful to administer the questionnaire (with minor revisions) to several similar communities in order to ascertain whether a similar pattern of results is obtained, or whether the particular community sampled is less representative of the urban white South African elderly population than assumed. In this regard it has to be borne in mind that although seniors' centres provide a convenient venue for the administration of questionnaires such as the one used in this study, in some cases their proximity to institutionalized or semi-institutionalized retirement accommodation may have the effect of making the sample biased when compared with the elderly population at large. Despite the growth in retirement accommodation, the greatest section of the South African aged population still lives outside such accommodation and samples should therefore be carefully controlled to avoid such bias. However in view of the fact that, though a minority, the white group in South Africa compares most closely to the samples used in research in Western-industrialized countries, it continues to represent an ideal starting point for local research in this regard.

It is suggested that whilst a larger sample would clearly be desirable, the findings support the view of those who have drawn attention to the need for more sensitive measures of activity. Although time-consuming to administer, the behaviourally-based activity scales developed by Longino and Kart would appear to provide more satisfactory measures than those employed in the present study. Further, the emphasis that several researchers have given to the importance of measuring the *quality* rather than the *degree* of activity warrants serious attention. Clearly regular, increased social interaction with depressed or aggressive others is unlikely to bring about a heightened sense of life satisfaction. In this regard a phenomenological approach may prove invaluable in establishing parameters for a measure of the perceived quality of social activity.

Finally, in order for activity theory to be examined in a life-course perspective, any future sample should be constructed so as to be adequate for an examination of the effects of activity on life satisfaction at various stages of ageing. Such a study would then also be suitable for replication over time.

Accordingly, it is concluded that despite the inadequacies of the pilot study, further research in the South African context is warranted, if directed towards establishing a relationship between type and quality of activity, and perceived life satisfaction amongst the elderly.

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Note

 The following extracts from the questionnaire are given as examples of items:

From Part 1, Question 13: How often do you get together with friends or neighbours to play games such as cards, dominoes, chess, etc.?

Once or twice a month or more	SCORE 3
Once or a few times a year	SCORE 2
Never or almost never	SCORE 1

From Part 2. Question 1: As I grew older, things seem better than I thought they would be

Agree	SCORE 2
Disagree	SCORE 0
Query or no answer	SCORE I
From Part 2, Question 11: As	I look back on my life. I am fairly well

satisfied
Agree SCORE 2
Disagree SCORE 0

Disagr	ee	2COKE 0
Query	or no answer	SCORE 1
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A copy of the questionnaire is as allable from the first author.

References

- Adams, D.L. 1969. Analysis of a life satisfaction index. Journal of Geroniology, 24 (4): 470-74.
- Cumming, E. 1963. Further thoughts on the theory of disengagement. UN-ESCO International Social Science Bulletin, 15: 377-93.
- Cumming, E., Dean, L.R., Newell, D.S. & McCaffrey, I. 1960. Disengagement: a tentative theory of aging. *Sociometry*, 23: 23-35.
- Cumming, E. & Henry, W.H. 1961. Growing old: the process of disengagement. New York: Basic Books.
- Erikson, E.H. 1980. Identity and the life cycle. New York: Norton.
- Fennel, G., Phillipson, C. & Evers, H. 1988. Sociology of old age. Philadelphia: Open University Press.
- Havighurst, R.J. 1954. Flexibility and the social roles of the retired. American Journal of Sociology, 59: 309-11.
- Havighurst, R.J. & Albrecht, R. 1953. Older people. New York: Longmans Green.
- Havighurst, R.J., Neugarten, B.L. & Tobin, S.S. 1963, Disengagement and patterns of aging. In: Neugarten, B.L. (Ed.) Middle age and aging: a reader in social psychology. Chicago: University of Chicago Press, pp. 161-72.
- Henry, W.E. 1963. The theory of intrinsic disengagement. Paper read at the International Gerontological Research Seminar, Markyrd, Sweden

- Hoyt, D.R., Kaiser, M.A., Peters, G.R. & Babchuk, N. 1980. Life satisfaction and activity theory: a multidimensional approach. *Journal of Gerontology*, 35(6): 935–41.
- Jung, C.G. 1933. The stages of life. (Translated by R.F.C. Hull.) In: Campbell, J. (Ed.) 1971. The portable Jung. New York: Viking.
- Kimmel, D.C. 1974. Adulthood and aging: an interdisciplinary, developmental view. New York: John Wiley.
- Knapp, M. 1976. Predicting the dimension of life satisfaction. Journal of Gerontology, 31:595-604.
- Lee, D.J. & Markides, K.S. 1990. Activity and mortality among aged persons over an eight-year period. *Journal of Gerontology*, 45 (1): S39-42.
- Lemon, B.W., Bengston, V.L. & Peterson, J.A. 1972. An exploration of the activity theory of aging: activity types and life satisfaction among in-movers to a retirement community. *Journal of Gerontology*, 27 (4): 511-23.
- Longino, Jr., C.F. & Kart, C.S. 1982. Explicating activity theory: a formal replication. *Journal of Gerontology*, 37(6): 713-22.
- Maddox, G.L. 1966. Persistence of life-style among the elderly: a longitudinal study of patterns of social activity in relation to life satisfaction. In: Neugarten, B.L. (Ed. Middle age and aging - a reader in social psychology. Chicago: University of Chicago Press, pp. 81-83.
- Maddox, G.L. 1969. Themes and issues in sociological theories of human aging. Proceedings of the Eighth International Congress of Gerontology. Washington.
- Maddox, G.L. (Ed.) 1987. The encyclopedia of aging. New York: Springer.
- Marshall, V.W. 1978. No exit: a symbolic interactionist perspective on aging. International Journal of Aging and Human Development, (9): 345-58.
- McClelland, K.A. 1982. Self-conception and life satisfaction: integrating aged subculture and activity theory. *Journal of Gerontology*, 37(6): 723-32.
- Meiring, P. de V. 1990. Towards independence in later years. In: Meiring, P. de V. (Ed.) Textbook of geriatric medicine. Kenwyn: Juta, pp. 363-74.
- Neugarten, B.L., Havighurst, R.J. & Tobin, S.S. 1961. The measurement of life satisfaction. *Journal of Gerontology*, 16 (2): 134-43.
- Palmore, E. 1969. Sociological aspects of aging. In: Busse, E.W. & Pfeiffer, E. (Eds) Behavior and adaptation in later life. Boston: Little, Brown, pp. 33-69.
- Palmore, E. 1987. Successful aging. In: Maddox, G.L. (Ed.) The encyclopedia of aging. New York: Springer, p. 654.
- Republic of South Africa. Central Statistical Services. 1991. Population Census 1991. Summarised results before adjustment for undercount. Report No. 03-01-00. Pretoria: Government Printer.
- Rose, A.M. 1962. The subculture of the aging. A topic for sociological research. *The Gerontologist*, 2: 123-27.
- Wood, V. Wylie, M.L. & Shaefor, B. 1969. An analysis of a short self-report measure of life satisfaction: correlation with rater judgements. *Journal of Gerontology*, 24(4): 465-69.