

# Quality of life in old age described as a sense of well-being, meaning and value

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## Quality of life in old age described as a sense of well-being, meaning and value

The purpose of the study was to present a model of quality of life and related factors, to study quality of life in a group of elderly subjects, and to do preliminary testing of the model. Quality of life was defined as a sense of well-being, meaning and value. The model includes health, functional capacity, and coping mechanisms as intra-individual conditions for quality of life, while factors in the biophysical and sociocultural environment are described as external conditions. The study sample consisted of 300 subjects, aged 75 or older and living in Finland. Data were gathered by means of structured personal interviews. The participants' quality of life was generally quite good. The correlations among the variables related to quality of life were significant, but the results of the regression analyses showed that the individual aspects of quality of life did not have identical explanatory models. The internal consistency of the instruments was good. The results give preliminary support to the model, but in future studies more attention must be paid to the conceptual and theoretical validity. In order to achieve results that can be applied in gerontological nursing practice, different groups and contexts must be investigated.

**Keywords:** gerontological nursing, elderly, health, ADL, quality of life, self-esteem, meaning in life, well-being

## INTRODUCTION

Questions about what a good life is and how we should live in order to live a good life have been discussed by philosophers for hundreds of years. The term 'quality of life', however, is of a more recent origin. Social scientists

started to use it in the 1970s and since then there has been a growing interest in quality of life issues in medicine, nursing and other health care areas. There are various explanations for this growing interest. One has to do with the growing number of elderly people in society. Higher age often brings about health problems and a decrease in functional capacity. This means that we have a growing number of people living with chronic diseases, health problems and decreasing capacity. For these patients the

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goal of health care cannot be freedom from disease. What we can do is to help the patients to live as good a life as possible despite their illnesses and decreasing capacities. (Lawton 1991, Nordenfelt 1991a, Sarvimäki 1999).

On the basis of previous research we may conclude that life does not necessarily become miserable when one gets old. Comparisons between young people and elderly people, for instance, have shown that elderly people were more satisfied with their lives than the young, although a smaller number of elderly people said that they were happy (Campbell *et al.* 1976), and that life satisfaction decreased with age up to 50 or 60 years of age, after which it increased somewhat or remained stable (Mastekaasa *et al.* 1988). Studies that have included only elderly people have shown that their life satisfaction and subjective quality of life were fairly high. Functional capacity, perceived health, good housing conditions, an active life style, and good social relationships were some of the factors that explained life satisfaction and subjective quality of life (Karjalainen 1984, Ojala 1989, Beijar & Christiansson 1995, Nilsson *et al.* 1998). In their studies of elderly women, Lohr *et al.* (1988) showed that the subjective perception of health and functional capacity seem to be of greater importance than objective factors, and that coping strategies may explain the relationship between health and life satisfaction. On the basis of a literature review, Salokangas *et al.* (1989) suggested that personality should be included as one factor influencing life satisfaction.

The results are, however, by no means free from contradictions. In some studies, for instance, there were differences in life satisfaction and quality of life between older men and older women (Seppänen *et al.* 1975, Ojala 1989), while others indicated no such differences (Karjalainen 1984). The results concerning the relationships between quality of life and marital status and between quality of life and socio-economic factors are also contradictory (Karjalainen 1984, Ojala 1989). The problems are to a large extent conceptual and methodological, i.e. the results depend on what is meant by quality of life and how it is measured.

Quality of life has been recognized as a relevant issue for nursing (Padilla & Grant 1985, Hanestad 1993, King 1994, Sarvimäki 1995), but there is no agreement as to what we should mean by the term and how quality of life should be measured. Definitions and indicators vary from socio-economic status, satisfaction of needs and functional capacity, to meaning in life, life satisfaction, well-being and happiness (Ferrans & Powers 1985, Holmes 1989, Zahn 1992, Hanestad 1993, Peplau 1994, Farquhar 1995). Although quality of life issues are relevant to all aspects of nursing, they are probably especially relevant in the care of elderly people. As was pointed out previously, old age is often associated with health problems and irreversible decrease in functional capacity. Thus, it is a

challenge for nurses as well as for other health care providers to try to maintain and promote the quality of life of elderly people, despite their health problems. To investigate how health care providers can improve quality of life in old age, we need to know how to characterize quality of life and which factors influence quality of life in old age.

The purpose of this study was to develop a conceptual model of quality of life and related factors, to describe the quality of life in a group of elderly people, and to do preliminary testing of the model in the group of elderly people by analysing some of the relationships in the model.

## **THEORETICAL AND CONCEPTUAL FRAMEWORK**

### **Ageing**

The view of ageing adopted in this study was based on Erikson's theory of the life cycle (Erikson *et al.* 1986, Erikson 1997). Originally, the life cycle comprised eight stages, but Joan M. Erikson has added one more stage to the theory. Old age is represented by stages eight and nine. Stage eight is dominated by the conflict between integrity and despair, integrity standing for a sense of wholeness and meaning in looking back upon life, and despair standing for a sense of meaninglessness, lost opportunities and failures. The resolution is offered by wisdom, 'informed and detached concern with life itself in the face of death itself' (Erikson *et al.* 1986 p. 37). In the ninth stage, due to bodily weakness, a person's autonomy, independence and control are challenged and as a consequence, self-esteem and confidence weaken. Despair is constantly present, but it is less concerned with past life than with daily functions and getting through one more day.

In this perspective, quality of life will deal with issues of integrity, meaning, self-esteem, confidence and coping.

### **Quality of life: conceptual discussion and presentation of the model**

Lawton (1991) has suggested that quality of life is a multidimensional concept consisting of four main areas: objective environment, behavioural competence (including health), perceived quality of life, and psychological well-being (including life satisfaction). He suggested a loose causal model, in which objective environment influences behavioural competence. Behavioural competence, in turn, influences the perceived quality of life. Psychological well-being is the ultimate outcome.

Lawton's (1991) view raises some crucial questions concerning quality of life. First, should all these areas be included in the concept or should some of them be

viewed as factors contributing to quality of life? Is health, for instance, a dimension of quality of life or should health be viewed as a factor contributing to quality of life, as an antecedent to quality of life? Hulter Åsberg (1990 p. 111) included health in quality of life, but then said 'Physical and mental health are important conditions for a good quality of life', and "Health can never be the *goal* of life, but it is an important *means* for achieving what one wants in life' (our translation). Hulter Åsberg's view is circular, since health cannot be an aspect of quality of life and a contributing factor or antecedent at the same time.

Thus, there seems to be confusion and differences in opinion as to which factors are to be seen as aspects of quality of life and which are to be seen as antecedent conditions. The position taken here is that those aspects that are chosen to define quality of life should be aspects without which it would be impossible, or at least very difficult, to talk about a good life. We propose that there are three aspects of quality of life: a sense of *well-being*, of *meaning*, and of *value or self-worth*. A person who experiences a reasonable degree of well-being can see some meaning in life, and a person who experiences himself as a person of value can thus be said to have a reasonably good life. A life filled with pain, meaninglessness and no sense of value can hardly be conceived as good. Health and socio-economic conditions are seen as factors that may enhance or prevent these experiences, but good health and a good socio-economic situation do not guarantee a good quality of life.

The choice of well-being, meaning and value as the core variables in quality of life is based on Frankena's (1973) and Nordenfelt's (1991a, b) philosophical discussions and on Frankl's (1978) conception of man as a meaning-seeking and meaning-creating being. The concepts are not directly deduced from Erikson's (1997) view of ageing and old age adopted in this study, but they can be considered as consistent with his and Joan M. Erikson's view.

Well-being refers to the hedonistic aspect of life. According to this criterion a good life is a life that includes pleasure, joy and satisfaction (Nordenfelt 1991a, b). The opposites of these are different forms of pain, suffering and dissatisfaction. However, as Frankena (1973) points out, life does not need to be totally free from pain and suffering in order to be called good. What this criterion implies is that there must be at least some amount of pleasure and satisfaction in a person's life, if his quality of life is to be judged as good. Maximization of pleasure does not guarantee a good life, but there has to be a balance between pleasure and pain.

The hedonistic aspect, however, is not a sufficient description of the good life. Nordenfelt (1991a) proposed meaning as another important criterion. Man has sometimes been characterized as a being that tries to find or

create meaning and optimize meaning in life (Frankl 1978, Royce & Powell 1983). The experience of purpose or meaning can thus be seen as an important aspect of man's life, constituting a dimension of quality.

The third criterion, a sense of value or self-worth, has to do with the experience of oneself as a person of value or as a person involved in worthwhile activities. In his discussion about the good life, Frankena (1973) complemented the hedonistic criterion with the criterion of excellence. What makes many activities good in themselves, he said, is not just the enjoyment and pleasure they provide, but the fact that they involve the exercise of skills or ability, the attainment of excellence by some standard. Man creates standards and goals for himself and tries to develop excellence in meeting these demands. The areas where excellence can be developed and attained may vary from one individual to another. Frankena mentioned areas like athletic activities, artistic creation and science. A person's ability to live and act in accordance with his own standards is a crucial factor determining what Rosenberg (1985) called conditional self-respect. Rosenberg claimed that a person with strong conditional self-respect tends to have high self-esteem, while a person with weak conditional self-respect tends to have low self-esteem (Stenbock-Hult 1993).

The factors that influence a person's sense of well-being, meaning and value are called *conditions* for quality of life and can be classified into *intra-individual* and *external* conditions. Health, functional capacity and coping mechanisms then could be classified as intra-individual conditions for quality of life, while environment, work, housing conditions and social network, for example, could be viewed as external conditions for quality of life. The relationships between these factors are initially assumed to be such as described by Lawton (1991) and Nordenfelt (1991a). A loose causality is assumed, meaning that the external conditions influence the intra-individual conditions, and quality of life is the ultimate outcome. The influence may, however, go in both directions. If a person experiences his life as meaningful and himself as a person of value, it may well be that this experience influences his health, functional capacity and coping mechanism, that is, his intra-individual conditions. Furthermore, his health, functional capacity and coping mechanisms may also influence the way in which he organizes his environment. A model describing these relationships was developed by the authors and it was used as a frame of reference for the empirical study (Figure 1).

## THE EMPIRICAL STUDY

The purpose of the empirical study was to describe quality of life among elderly people in terms of a sense of well-being, meaning and value, and to do preliminary testing of the model presented in Figure 1.

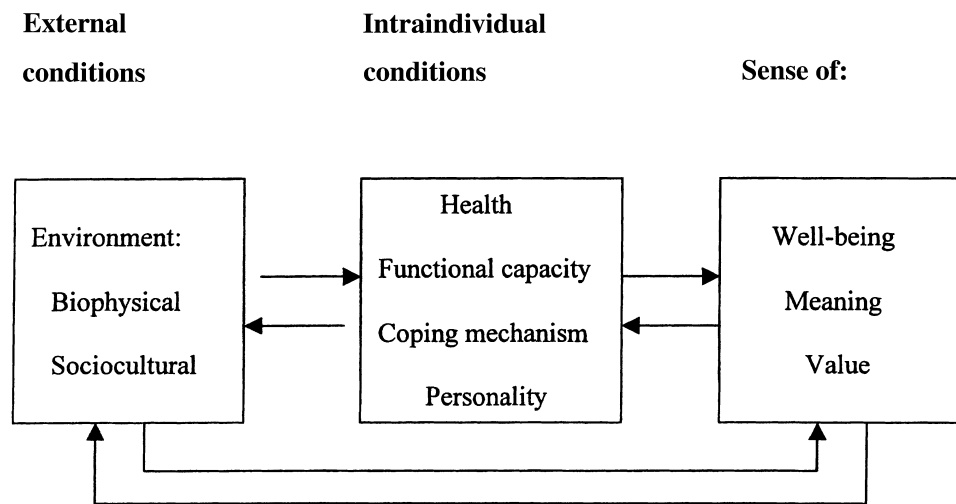


Figure 1 Aspects of quality of life and some factors related to quality of life.

### Methods and material

The study was carried out in a medium-sized city in Finland. The criterion for choosing the particular city was that the age distribution and educational level matched the whole country quite well. The study was approved by the social board of the city.

The study was designed as a cross-sectional survey study with an age stratified sample. The age groups were 75–79 years, 80–84 years, and 85 years or more. The subjects were chosen randomly from each age group. The social welfare office carried out the sampling from their population register. The sample was restricted to people living in non-institutional settings (e.g. their own homes or houses for elderly people). Because elderly people in institutions usually have more health problems and lower functional capacity than elderly people living in their own homes, they might have difficulties in completing a long interview. The researchers sent a letter to the informants, describing the purpose of the study, and then contacted them by telephone to set a date for the interview. The goal was to get a sample of 300, 100 in each age group. When 426 persons had been contacted, 300 had agreed to participate. Those 126 who were not included in the study either did not want to participate or could not be reached. The participation rate was thus 70%.

A group of 24 interviewers conducted the interviews during a period of 4 months. The interviews took place in the subjects' homes and they lasted between 45 minutes and 4 hours. Some interviews were long because the interviewees also wanted to talk about other things, show pictures of the grandchildren, and serve coffee. The large number of interviewers was needed in order to get the data collected within a reasonable time. The interviewers were students and professionals in the health and social field. They were all experienced in interviewing clients and they were instructed by the research director.

### Operationalizations and instruments

The structured interview consisted of 60 questions including sub-questions related to different aspects of life. The instrument was originally constructed by a group of Nordic researchers in order to use the same instrument in different Nordic countries. Most of the questions were based on previously tested instruments, while some were constructed by the group members. The reason for choosing previously tested instruments was to guarantee initial validity and reliability. In this part of the study, 26 questions, including sub-questions, were used. Since this first testing of the model is preliminary, only some indicators and instruments were chosen to operationalize and measure the variables in the model.

*Well-being* was stipulated as satisfaction with different aspects of life and measured by five questions concerning satisfaction with living area, economic situation and health. These questions were devised specifically for this study.

The sense of *meaning* was stipulated as a sense of purpose in life, a sense of intelligibility and manageability. This aspect was measured by two instruments, Crumbaugh and Maholick's (1964, Crumbaugh 1968) Purpose-in-Life Test (PIL) and Antonovsky's (1987) Sense of Coherence Test (SOC). The PIL was developed from Frankl's (1978) theory of purpose in life. It consists of 20 items on a 1–7 scale, the summed scores ranging from 20 to 140. High scores indicate a clear sense of purpose in life. In previous studies the reliability scores have varied from 0.81 to 0.92. Construct validity and concurrent validity have also been tested (Crumbaugh & Maholick 1964, Crumbaugh 1968, Meier & Edwards 1974, Reker 1977). Antonovsky (1987) has developed his test to measure the capacity to cope with stress. He characterizes the individual's sense of coherence as a general resistance resource, which helps the individual to see life as meaningful, intelligible and manageable. In this study, the shorter 13-item version was used. The scores range from 13 to 91 and high scores indicate a strong

sense of coherence. SOC could be seen as either an aspect of quality of life or as an intra-individual condition, i.e. as a coping mechanism. Since the instrument has a strong emphasis on dimensions that in this study have been defined as the meaning-aspect of quality of life — life as meaningful and intelligible — it was chosen as an indicator of meaning. In previous studies the internal consistency of the test has varied from 0.84 to 0.93 (Antonovsky 1987).

The sense of *value* or *self-worth* was stipulated as self-esteem and measured with Rosenberg's (1965) Self-Esteem Scale (SES). It is a 1–4 scale with 10 items, the sum scores ranging from 10 to 40. High scores indicate a strong sense of self-esteem. In previous studies the reliability varied from 0.72 to 0.93 (Ward 1977, Lee & Shehan 1989). The convergent validity has been tested by correlating the scores with other self-esteem scales and with variables that can theoretically be assumed to be associated with self-esteem, such as depression and anxiety (Rosenberg 1965). Essex & Klein (1989) and Salminen (1988) have used SES to study self-esteem in elderly people and they concluded that it is suited for all age groups.

*Health*, as an intra-individual condition for quality of life, was measured by questions concerning objective and subjective health. *Objective health* was stipulated as absence of disease and measured by a question concerning which diseases the respondents had suffered from during the past 6 months. Each disease received two points. The points were summed up and the scale reversed so that high scores indicated good objective health. *Subjective health* was stipulated as absence of psychosomatic symptoms, measured by Andersson's (1981) Psychosomatic Symptoms Scale (PSS). The PSS is a 12-item scale, measuring

how often the informant has suffered from symptoms such as headache, dizziness, back pain, anxiety and melancholy. The answers are graded 1–4, the sum scores ranging from 12 to 48. High scores indicate absence of symptoms, that is, in this study, a high level of subjective health.

*Functional capacity* was defined as ADL-capacity and sensory-motor capacity.

The ADL-capacity was measured by Hulter Åsberg's (1988) ADL-ladder, which is an extended version of the Katz *et al.* (1963) ADL-index. Hulter Åsberg added four activities to Katz's six (cooking, public transportation, shopping, cleaning). The answers are scored from 1 to 3 (1 = dependent, 2 = partly dependent, 3 = independent). In this study the instrument was used as a Likert-type scale with sums ranging from 10 to 30. Higher scores indicate a high degree of independence in carrying out daily activities. Those that scored 10–16 were classified as dependent, those that scored 17–23 as partly dependent and those that scored 24–30 were classified as independent. Sensory-motor capacity was measured by four questions concerning the elderly person's ability to see, hear, speak and move. The four questions were constructed as an index with a score of 4–14, where low scores indicated sensory-motor impairment.

The external conditions for quality of life were measured by questions concerning living area (town centre or suburb), the standard of housing (equipment, facilities and conveniences), accommodation (alone or living with someone), family (spouse, children), and number of social contacts.

The variables and instruments are summarized in Table 1, which also shows Cronbach's alpha coefficients obtained in this study.

**Table 1** Variables, operationalizations, and instruments

Variables	Operationalizations	Instruments	Cronbach's alpha
<i>Quality of life</i>			
Well-being	Satisfaction with various aspects of life	Questions concerning living area, health, economic situation	Not tested
Meaning	Purpose in life	Crumbaugh and Maholick's (1964) Purpose-in-Life Test	0.86
	A sense of meaning, intelligibility, and manageability	Antonovsky's (1987) Sense of Coherence Test	0.78
Value	Self-esteem	Rosenberg's (1965) Self-Esteem Scale	0.75
<i>Intra-individual conditions</i>			
Objective health	Absence of disease	Questions concerning diseases	0.74
Subjective health	Psychosomatic symptoms	Andersson's (1981) Psycho-somatic Symptoms Scale	0.79
Functional capacity	Activities of daily life	Hulter Åsberg's (1990) ADL-ladder	0.80
	Sensory-motor system	Questions concerning hearing, eyesight, speech	Not tested
<i>External conditions</i>			
Biophysical environment	Living area and housing	Questions concerning living area and housing	Not tested
Sociocultural environment	Social network	Questions concerning living arrangements and social contacts	Not tested

## Methods of analysis

The data were analysed by means of distributions, means, variances, correlations and regressions. They were tested with chi-square, *t*- and *F*-tests on levels  $P < 0.05^*$ ,  $P < 0.01^{**}$  and  $P < 0.001^{***}$ . The analyses were conducted at the computer centre of the University of Helsinki by the BMDP, SAS and SPSS programs.

## RESULTS

### Description of the sample

The interviewed group consisted of 300 persons, aged 75–97 years, 100 in each age group. The majority of the participants were women who were widows living alone. Most of the interviewees had children (Table 2).

There was a significant difference in marital status between men and women: 67% of the men but only 13% of the women were married or lived with someone, while 60% of the women but only 30% of the men were widows or widowers (chi-square = 89.233, d.f. = 3,  $P < 0.001$ ).

### Well-being, meaning and value

The informants were generally satisfied with their living area, their economic situation and their health. On a four graded scale (very good/very satisfied, quite good/quite satisfied, quite bad/dissatisfied, very bad/very dissatisfied), 94% assessed their living area as quite good or very good for old people, 94% were quite or very satisfied with their economic situation and 80% were quite or very satisfied with their health. There were no differences in these results with respect to age, gender or

**Table 2** Description of the sample

	%
<i>Gender</i>	
Men	29
Women	71
<i>Marital status</i>	
Married, cohabiting	29
Unmarried	16
Divorced	4
Widow, widower	51
<i>Living arrangements</i>	
Living alone	62
Living with someone	38
<i>Children</i>	
Yes	77
No	23

$n = 300$ .

**Table 3** Purpose-in-life, sense of coherence, and self-esteem

Scale	Potential range	Actual range	Mean	SD
<i>Meaning</i>				
Purpose-in-life	20–140	43–136	103	17.6
Sense of coherence	13–91	32–91	65	11.5
<i>Value</i>				
Self-esteem	10–40	16–40	31	4.9

marital status. Since the degree of satisfaction was so high, the singular items were not formed to a sum variable. Such a variable would in this case have no discriminatory power.

The results concerning the informants' sense of meaning (PIL, SOC) and value (SES) are presented in Table 3.

The scores on the PIL-test indicate a positive skewness. Since the scores on this test usually have this tendency, Crandall & Rasmussen (1975) recommended a classification of 20–91, 92–112 and 113–140. Scores in the lowest class indicate lack of purpose and meaning while scores in the highest class indicate a clear sense of purpose in life. Classified in this way, the results in this study approximated normality. Almost one-third of the elderly people had a clear sense of purpose in life, while just over one-fifth seemed to experience no purpose.

The sense of purpose in life scored lower in the higher age groups: in the age group 75–79 years the mean was 106, in the age group 80–84 years it was 103, and in the age group 85 years or older 99. The difference between the age groups was significant ( $F = 3.99$ , d.f. = 2,  $P < 0.05$ ). There were no differences in sense of purpose with respect to gender or marital status.

The scores on the SOC-scale also indicated positive skewness. When the empty class (scores 13–31) was omitted, however, the remaining scores were classified into even classes and the remaining scores approximated the normal distribution. There were no differences in sense of coherence with respect to age, gender or marital status.

Self-esteem was higher in the age group 75–79 years (mean = 32) than in the two older groups (mean = 30). The difference was significant ( $P < 0.05$ ). There were no differences in self-esteem with respect to gender or marital status.

### Intra-individual conditions

The question concerning *objective health* showed that about one-fourth (24%) of the respondents had suffered from many diseases (6–9), about half (53%) from some (2–5) and about one-fourth (23%) from one disease or none (none = 12%). The most prevalent diseases were

heart diseases (35%) and high blood pressure (27%). The number of diseases experienced during the previous 6 months was not related to age, gender or marital status.

The question concerning *subjective health* showed that the most common psychosomatic symptoms experienced during the last 6 months were muscle pain (55%), dizziness (51%) and palpitation of the heart (49%). Five respondents (2%) had experienced no psychosomatic symptoms lately. The women had experienced psychosomatic symptoms more frequently than the men ( $P < 0.05$ ). There was no difference in the experience of symptoms with respect to age or marital status.

Most of the respondents scored high on the *ADL-ladder*. The majority of the respondents (82%) were classified as independent, 15% as partly dependent and 3% as totally dependent. The oldest group was significantly more dependent than the two younger groups ( $P < 0.001$ ). There were no differences between men and women or with respect to marital status. Very few (1.7%) had speech problems while about 25% had problems moving, seeing and hearing.

### External conditions

About two-thirds of the participants (66%) lived in the central parts of the city, the rest in different suburbs. The majority (72%) lived in apartments, the rest in detached or semidetached houses. Almost all of them (94%) had all the modern facilities they needed, that is running warm and cold water, central heating, toilet inside the house, bathroom, refrigerator. Most of the participants (62%) lived by themselves. The rest lived with a spouse (28%), a child (5%), a sibling (3%), a grandchild (1%), or with some other relative (1%).

Contacts with children dominated the social network. More than half of the respondents (55%) met with one of their children at least once a week. About one-third met with friends (35%), neighbours (34%) and grandchildren (31%) every week. Contacts with siblings and other relatives were more scarce.

### Relationships between aspects of quality of life, intra-individual and external conditions

The analysis of the relationships between the main variables revealed significant correlations (Table 4).

The correlations between the quality of life variables meaning and self-esteem were significant. The intercorrelations between the intra-individual conditions, that is, objective health, psychosomatic symptoms and degree of independence in activities of daily life, were significant. The intra-individual conditions correlated significantly with the quality of life variables. The external condition of social network correlated significantly with both the intra-individual conditions and the quality of life variables.

When the social network was divided into family network (contacts with children, grandchildren and siblings) and other network (contacts with other relatives, friends and neighbours), some differences in the relationships were found. PIL correlated more significantly with family network ( $r = 0.23^{***}$ ) than with other network ( $r = 0.12^*$ ), while SES correlated more significantly with other network ( $r = 0.20^{***}$ ) than with family network ( $r = 0.13^*$ ). Objective health correlated with family network ( $r = 0.18^{**}$ ) but not with other network, while subjective health correlated with other network ( $r = 0.19^{**}$ ) but not with family network. SOC correlated with family network ( $r = 0.16^{**}$ ) but not with other network.

In order to analyse more specifically what explained the main quality of life variables, regression analysis was conducted. The best explanatory models were developed for SES, PIL and SOC. Because of the non-discriminatory properties of the satisfaction variable, it was not included in the analysis. The analysis was not based on a preconceived model, but all variables were included in order to explore all possible explanations. Age and gender were not controlled. SOC was best explained by subjective and objective health. PIL was best explained by ADL, contacts with family and relatives, and objective health, while SES was best explained by a functioning sensory-motor system and by contacts with friends and neighbours (Table 5).

**Table 4** Intercorrelations between quality of life variables, intraindividual and external conditions

	PIL	SOC	SES	Objective health	Subjective health	ADL	Social network
PIL	—	0.55 <sup>***</sup>	0.62 <sup>***</sup>	0.30 <sup>***</sup>	0.26 <sup>***</sup>	0.30 <sup>***</sup>	0.27 <sup>***</sup>
SOC		—	0.54 <sup>***</sup>	0.31 <sup>***</sup>	0.42 <sup>***</sup>	0.19 <sup>**</sup>	0.18 <sup>**</sup>
SES			—	0.28 <sup>***</sup>	0.31 <sup>***</sup>	0.27 <sup>***</sup>	0.25 <sup>***</sup>
Objective health				—	0.40 <sup>***</sup>	0.25 <sup>***</sup>	0.23 <sup>***</sup>
Subjective health					—	0.19 <sup>**</sup>	0.21 <sup>***</sup>
ADL						—	0.20 <sup>***</sup>

<sup>\*\*\*</sup> $P < 0.001$ ; <sup>\*\*</sup> $P < 0.01$ . PIL = purpose-in-life; SOC = sense of coherence; SES = self-esteem scale; ADL = activities of daily life.

**Table 5** The best explanatory models for purpose-in-life, sense of coherence, and self-esteem

Explaining variable	Regression coefficient	Standard error	t-value	P
<i>Purpose-in-life</i>				
ADL	0.78	0.33	2.34	0.02
Family network	0.71	0.31	2.28	0.02
Objective health	0.81	0.40	2.01	0.05
<i>Sense of coherence</i>				
Objective health	0.61	0.30	2.04	0.04
Subjective health	0.51	0.11	4.47	0.00
<i>Self-esteem</i>				
Other network	0.18	0.08	2.17	0.03
Sensory-motor system	0.47	0.14	3.39	0.00

## DISCUSSION AND CONCLUSIONS

In this study, quality of life was defined as a sense of well-being, meaning, and value or self-worth. In the empirical study of quality of life among elderly people, well-being was high in terms of satisfaction with living area, economic situation and health. According to the unclassified PIL-scores the informants had a quite clear sense of purpose in life, but when Crandall and Rasmussen (1975) recommended classification was adopted, only about one-third of the informants could be said to have had a clear sense of purpose. The results on the Sense of Coherence Test, which also measured meaning, supported the view that the informants generally viewed their life as meaningful, intelligible and manageable. They also seemed to have a strong sense of value or self-worth in terms of self-esteem.

The correlational analysis and the regression analysis gave preliminary support to the model. There were statistically significant correlations between all the variables included in the analysis. The PIL-test and the SOC-test were both used to measure the degree to which the informants experienced meaning in their lives, but there were differences between them with respect to explaining variables. The Sense of Coherence was closely associated with health, while the experience of Purpose-in-Life was also associated with ADL and family network. Self-esteem seemed to be more dependent on contacts with other relatives, friends and neighbours than on contacts with family members. These results indicate that not all social contacts have the same function. Family contacts seem to provide meaning in life, while other relatives, friends and neighbours have a different function. Since the design was cross-sectional, no inferences can be drawn considering causality.

The reliability of the instruments was good in terms of internal consistency. The inter-rater reliability, however,

might have been jeopardized by the large number of interviewers and this reliability was not tested. It was controlled, to some extent, by common professional backgrounds and instruction.

The validity has to do with how well the instruments measured the sense of well-being, meaning and value in elderly people. The main instruments used in this study have been tested previously with respect to validity and reliability, but they have not been developed specifically for measuring quality of life in elderly people, which can be seen as a threat to validity. On the other hand, other researchers too have considered PIL and SES as instruments measuring quality of life in elderly people, although they have not been validated for this purpose (George & Bearon 1980, Dean 1992), and at least the SES has been found suitable for all age groups (Salminen 1988, Essex & Klein 1989). Furthermore, the results of the analyses partly supported the model, which can be seen as an indicator of validity, that is, the variables were related to each other in the way they were theoretically supposed to be.

The sample was restricted to community dwelling elderly people. This probably explains the relatively high level of quality of life. Community dwelling elderly people tend to have relatively good health, and a good functional capacity and sensory-motor system. The conditions are thus favourable for attaining a good quality of life. It is also possible that those who did not want to participate were those whose health, functional capacity and quality of life were not very good, in which case the results reflect the situation of those who are best off in this respect. The results cannot be generalized automatically to all elderly people. Quality of life in long-term institutions, for instance, may look very different. Also, elderly people in different cultures may have quite different views of what makes life good.

We find the definition of quality of life, as well as the model, fruitful and worth developing further. In further studies more attention must be paid to how the sense of well-being, meaning and value are measured and to what extent the definition of quality of life corresponds to elderly people's own conception of what constitutes a good life. The model must also be tested in different kinds of samples and in different contexts. A consequent study is already being conducted with the purpose of describing quality of life from the viewpoint of elderly people living in service houses and group dwellings. By testing the model further we wish to achieve results that help nurses and other health care personnel to maintain and improve quality of life for elderly people.

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