

# Successful Aging in the Oldest Old

## Who Can Be Characterized as Successfully Aged?

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**Background:** Successful aging is a worldwide aim, but it is less clear which indicators characterize elderly persons as successfully aged. We explored the meaning of successful aging from 2 perspectives.

**Methods:** Analysis of data from the first cross-sectional part of the longitudinal Leiden 85-plus Study, conducted in Leiden, the Netherlands. All inhabitants of Leiden aged 85 years were eligible. Data were obtained from 599 participants (response rate, 87%). Successful aging from a public health perspective was defined as a state of being. All participants were classified as successful or not successful based on optimal scores for physical, social, and psychocognitive functioning and on feelings of well-being, using validated quantitative instruments. Qualitative indepth interviews on the perspectives of elderly persons were held with a representative group of 27 participants.

**Results:** Although 45% (267/599) of the participants had optimal scores for well-being, only 13% (79/599) had optimal scores for overall functioning. In total, 10% (58/599) of the participants satisfied all the criteria and could be classified as successfully aged. The qualitative interviews showed that most elderly persons viewed success as a process of adaptation rather than a state of being. They recognized the various domains of successful aging, but valued well-being and social functioning more than physical and psychocognitive functioning.

**Conclusions:** If successful aging is defined as an optimal state of overall functioning and well-being, only a happy few meet the criteria. However, elderly persons view successful aging as a process of adaptation. Using this perspective, many more persons could be considered to be successfully aged.

*Arch Intern Med.* 2001;161:2694-2700

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**S**UCCESSFUL AGING is a worldwide aim. Demographic changes challenge policy makers to put increasing effort in dealing with the consequences of an aging population.<sup>1</sup> Many research programs, conferences, and political reports deal with the subject of successful aging, healthy aging, or other variants of a positive way of growing old. The concept of successful aging, however, lends itself to more than one interpretation. Two main perspectives exist: one that looks at successful aging as a state of being, a condition that can be objectively measured at a certain moment; and one that views it as a process of continuous adaptation. Rowe and Kahn<sup>2</sup> hold the former view and describe successful aging as the positive extreme of normal aging, while others<sup>3</sup> use definitions such as the elite of healthy elderly persons or robust aging. In these definitions, successful aging is a better than normal state of being old. Several population-based studies<sup>4-8</sup> on successful aging have adopted this concept. Others, like Baltes and Baltes,<sup>9</sup> see successful aging as

a successful adaptation of the individual to changes during the aging process. In a similar view, Havighurst<sup>10</sup> and Keith et al<sup>11</sup> define successful aging as reaching individual goals or experiencing individual feelings of well-being.

Successful aging as an optimal state implicates more than physical well-being and fits the World Health Organization's definition of health as a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.<sup>12</sup> However, the internal relationships between these domains are disputed, and there are no operational definitions for assessment. This problem holds equal when using other models, like the International Classification of Impairments, Disabilities, and Handicaps model.<sup>13</sup> As a consequence, measuring health or, parallel to that, measuring successful aging reflects the individual preferences of scientists.

To gain a deeper insight into the concept of successful aging, we will describe successful aging from 2 perspectives. In a quantitative approach, we defined suc-

## PARTICIPANTS AND METHODS

The Leiden 85-plus Study is a population-based prospective follow-up study on functioning and well-being in a delineated cohort of 85-year-old persons. The aims of the present study are to investigate determinants and preventable causes of unsuccessful aging and to explore the possibilities for investing in successful aging. The study was approved by the institutional medical ethical committee, and informed consent was provided by the participants or, in case of severe cognitive impairment, by the most significant other.

### RESPONSE RATE AND GENERAL DEMOGRAPHICS

All the inhabitants ( $n=705$ ) of Leiden, the Netherlands, born between September 1, 1912, and September 1, 1914, were invited for this study shortly after their 85th birthday. There was no exclusion on health, cognitive functioning, or living situation. Fourteen persons died before they could be enrolled, and 92 refused to participate. Data were obtained from 599 participants; the response rate was 87%.

The **Table** shows the demographic characteristics of the participants. The proportion of women was 66%, more than half of the participants (58%) were widowed, and 18% of all participants were institutionalized. Demographic characteristics are representative for the general Dutch population of 85-year-old persons.<sup>14</sup>

### QUANTITATIVE MEASUREMENTS

According to the World Health Organization's definition of health, the domains of physical, social, and psychocognitive functioning were assessed as was the domain of general well-being. Established quantitative instruments were chosen after consultation with researchers from other studies of elderly persons. Trained physicians and research nurses

visited the participants twice at home, and assessment took place in face-to-face interviews.

Physical functioning in daily life was measured using the Groningen Activity Restriction Scale (GARS).<sup>15</sup> This is a unidimensional questionnaire that assesses disability in the area of the basic and instrumental activities of daily living (self-care, mobility, and housekeeping).

Social functioning was measured with the Time Spending Pattern Questionnaire (TSP), which lists regular involvement in social and leisure activities, leading to a sum score for 10 social activities (eg, receiving visitors, visiting others, contact by telephone, and participation in church and associations).<sup>16</sup>

Psychocognitive functioning was measured with the Mini-Mental State Examination (MMSE) as a screening instrument for severe cognitive impairment and dementia<sup>17,18</sup> and the short Geriatric Depression Scale<sup>19</sup> as a screening instrument for depression.

Well-being was assessed by the Cantril ladder,<sup>20</sup> a visual analog scale on perceived quality of life varying from 1 to 10 points, and by a general question: "Are you, in general, satisfied with your present life?" Answers varied from 1 (very unsatisfied) to 5 (very satisfied).<sup>21</sup> Loneliness was screened by a questionnaire developed by de Jong-Gierveld and Kamphuis.<sup>22</sup>

In case of severe cognitive impairment, defined by a score of 18 or less on the MMSE, depression and loneliness could not be assessed.

### CLASSIFICATION OF SUCCESSFUL AGING

We defined successful aging as the optimal state of overall functioning and well-being. **Figure 1** gives an overview of this classification. Criteria for each domain were based on the quantitative scores at the moment of measurement. Cutoff points were chosen at the 33rd percentile to include the best third for each domain in addition to standard cutoff values. This led to the following quantitative criteria for classification.

Continued on next page

cessful aging as an optimal state of being. In a qualitative approach, the aging process as experienced by elderly persons was the point of departure. Therefore, we measured the optimal functioning and well-being with established quantitative instruments in a community-based sample of 85-year-old persons, and conducted in-depth interviews with a representative number of participants. We explored the differences between the state of being, which mimics a public health perspective, and the perspective of the elderly persons themselves.

## RESULTS

### PHYSICAL FUNCTIONING

#### Quantitative Findings

Physical functioning varied from total dependence of bedridden participants (GARS score, 72) to total independence (GARS score, 18). The median GARS score was 28. Poor physical functioning was reported by 20% of the

participants who were dependent in 1 or more basic activities, mainly dressing and washing the whole body. The best third, a total of 203 persons, had a GARS score of 23 or less and were classified as having an optimal state of physical functioning. This subgroup reported only minor disabilities in instrumental activities, meaning that they were independent in daily living but experienced minor difficulties in some activities like heavy housework and cutting toenails.

#### Qualitative Findings

Participants compared their functioning with the functioning of peers. Most elderly persons talked about health at this age as the maintenance of basic functions (vision, hearing, and mobility) and the absence of life-threatening diseases, such as cancer. The multidimensional process of adaptation to changes (eg, to the slowing of pace and the diminishing of strength) was found to be inherent in aging. Elderly persons who were limited in their functioning, as shown in case 1, stated that acceptance and ad-

### Optimal State of Overall Functioning

The optimal state for physical functioning included minor physical disabilities (GARS sum score at the 33rd percentile or less); for social functioning, regular social activities (TSP sum score at the 33rd percentile or greater); and for psychocognitive functioning, the absence of cognitive impairment (MMSE score greater than 18), and the absence of marked depressive feelings (Geriatric Depression Scale score of less than 4).

### Optimal State of Well-being

The optimal state for well-being included a good quality of life (Cantril ladder score at the 33rd percentile or greater), satisfaction with present life (score of 5-point question at the 33rd percentile or greater), and the absence of marked feelings of loneliness (Loneliness Scale score of less than 4).

### Alternative Criteria

To investigate the influence of the previously mentioned cutoff at the 33rd percentile on the outcome of successful aging, we used alternative criteria as well. Optimal physical functioning was defined as having no disabilities in the basic (self-care) activities of daily living. Optimal social functioning was defined as having at least 4 social activities within 2 weeks. Optimal well-being was defined as being satisfied with one's present life and awarding a pass mark of 7 or higher on the Cantril ladder, without being lonely.

### QUALITATIVE MEASUREMENTS

The anthropologist (M.F.) held in-depth interviews with 27 participants. The central research questions focused on the experience of growing old and being old, the perception of the concept of successful aging, and the role of health in successful aging from the perspective of the elderly persons. The unstructured and open-ended interviews enabled the researcher to discover motivations, ideas, and determinants from the perspective of the elderly persons.<sup>23,24</sup> Experiences and

opinions of the elderly participants were not limited to the moment of measurement; past and present experiences and expectations about the future were included.

Participants were selected in consultation with the other researchers of the study (A.B.W. and E.E.), irrespective of the outcomes of the questionnaires and functional scales, as we were not interested in an "on average" view of the elderly population.<sup>23</sup> Criteria for selection were a representative proportion of men and women. We interviewed participants with different physical conditions and in different housing situations. These participants turned out to be representative compared with the overall study group. Their demographic characteristics are presented in the Table. Persons with severe cognitive impairment were excluded because their impairment would prevent them from taking part in an in-depth interview. Most of the participants were visited twice or more often. Observation of the participants in their home situation was a complementary tool.

All interviews were recorded on audiotape and transcribed. In the analytic process, data were coded, closely examined, and compared for similarities and differences. Concepts such as health, successful aging, and social functioning were elaborated in terms of their properties, dimensions, and relationships.<sup>25</sup>

In this article, the perceptions of the elderly persons about physical, social, and psychocognitive functioning and well-being are compared with the quantitative measurements at baseline to see whether these are concordant.

### TEAM DISCUSSION

To evaluate the classification of successful aging, the findings of the first 150 participants were the subject of multidisciplinary discussions. In a standard procedure, participants were discussed on an individual basis to clarify patterns, new determinants, and discrepancies. Arguments for and against the classification of successful aging were recorded. The team consisted of a nurse, an anthropologist (M.F.), a geriatrician (A.M.L.), a general practitioner (J.G.), and 2 research physicians (A.B.W. and E.E.).

aptation are essential in maintaining a feeling of well-being. Those who enjoyed good health said they had been lucky and did not regard their health as a personal "success." Persons tended to influence their functioning by anticipation (like moving to live near children), risk-avoiding behavior (like stopping cycling to prevent falling and breaking a hip), and investing in a good physical condition (like using a home trainer or doing gymnastic exercises). Optimal physical functioning was perceived as an ideal situation but conflicted with the common knowledge that afflictions may occur unexpectedly at the age of 85 years.

### Case 1

"I am disabled, but I feel healthy." Reinier Baan, a friendly man, lives on his own. (To preserve the privacy of informants, all names are chosen by the anthropologist or the informants themselves.) For a long time, he took care of his parents and he never got married. He is confined to a wheelchair after having experienced a stroke, al-

most 24 years ago. He has arranged many supportive aids in his home, and although limited, he feels healthy and independent. It takes him all morning to put clean sheets on his bed, but he is proud to be able to do so without assistance. In his view, acceptance and adjustment to physical limitations is a characteristic of successful aging: "I am dependent in some aspects of my life, nobody can ever change that. But in other aspects, I will try to remain independent as long as I can."

### SOCIAL FUNCTIONING

#### Quantitative Findings

Social functioning varied from no involvement in any of the social activities (TSP score, 10) to regular involvement in various activities (TSP score, 29). The median score was 18. Poor social functioning was reported by 40% of the participants who were regularly involved in only 1 or 2 activities, mainly having visitors. The best third, a total of 218 persons, had a TSP score of 20 or greater

and were classified as having an optimal state of social functioning. They reported regular involvement in more social activities, especially visits and telephone calls, playing round games, going to clubs, and attending church services.

### Qualitative Findings

Most elderly persons perceived social functioning as essential for well-being and successful aging. A significant group stated that the social contacts in old age reflected their investments at an earlier age. Notions of reciprocity, individual character, and the importance of choices influenced their statements. Investments in social contacts were perceived as coping mechanisms to avoid loneliness. While social activities might have decreased as a consequence of physical dysfunction, social contacts continued to be important and influenced positive self-esteem. In case 2, the couple evaluated their social functioning not as individuals but as a joint venture. Furthermore, one missing contact could count more than many existing ones, as case 3 shows.

#### Case 2

"We are successful together, but when the other dies . . ." Joost van der Meer feels fortunate that he and his wife can still live together. They complement each other well. Mr van der Meer is a good listener and has a special relationship with one son and one grandson. His son and his grandson have a mental illness. They often come to visit him, and he gives them moral support. His wife has special contact with one of their other grandchildren. As a couple, they have many social contacts. Marian van der Meer takes the initiative by making telephone calls to friends, relatives, and acquaintances in their neighborhood. Mr van der Meer accompanies his wife on visits, because she has difficulty walking.

#### Case 3

Appearances are deceptive. Klaas and Vera Philipsen are well-to-do, live in a beautiful house with a garden, and have many social contacts. Their ability to stay in control and to adjust to old age is well illustrated in their decision to adopt a young dog. When the anthropologist (M.F.) asked Ms Philipsen whether she regarded herself as successful in her life, she said she was not. Years ago, there had been a conflict between her husband and her daughter. At the time, she chose her husband's side and since that incident the daughter has severed all contacts with them. The fact that she has lost all contact with her daughter gives her a continuing feeling of loss. All her successes in life are overshadowed by this failure.

## PSYCHOCOGNITIVE FUNCTIONING

### Quantitative Findings

Severe cognitive impairment (MMSE score,  $\leq 18$ ) was found in 99 persons (17%). Marked depressive feelings (Geriatric Depression Scale score,  $\geq 4$ ) were found in 118 per-

### Demographic Characteristics of the Participants\*

Characteristic	All Participants (N = 599)	Selected for Qualitative Interviews (n = 27)
Sex		
Women	397 (66)	18 (67)
Men	202 (34)	9 (33)
Marital state		
Married	198 (33)	10 (37)
Widowed	345 (58)	14 (52)
Divorced or unmarried	56 (9)	3 (11)
Housing		
Independent	329 (55)	18 (67)
Sheltered	162 (27)	7 (26)
Institutionalized	108 (18)	2 (7)
Income		
State allowance	112 (19)	5 (19)
Higher income	483 (81)	22 (81)
Missing	4 (1)	0
Education		
Only primary school	386 (64)	16 (59)
Higher education	207 (35)	11 (41)
Missing	6 (1)	0

\*Data are given as number (percentage) of participants. Percentages may not total 100 because of rounding.

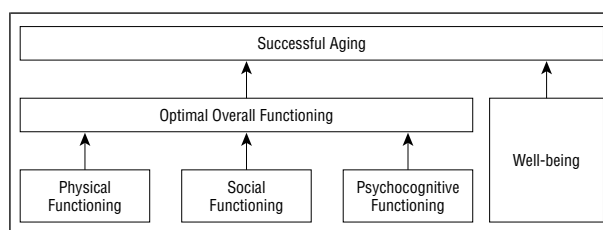


Figure 1. Quantitative model of successful aging.

sons, 24% of 500 participants without severe cognitive impairment. The median MMSE score was 26, and the median Geriatric Depression Scale score was 2. Instead of selecting the best third, persons were excluded based on severe cognitive impairment or depressive feelings. This left 382 persons (64%) who met the criteria for classification of optimal psychocognitive functioning.

### Qualitative Findings

Physical functioning and cognitive functioning were perceived as part of health. Most participants feared cognitive decline because dementia is perceived as losing one's personality. They felt lucky to have good cognitive functioning, and some tried to invest in maintaining this level by memory-training activities.

Temporarily, 3 participants felt sad and downcast because of the loss of a loved one. Two other participants had depressive feelings. Feelings of depression could be linked to facts and factors beyond their cognitive and emotional personality, like the social context, as case 4 shows.

#### Case 4

"They have put a lock on my mouth." Elizabeth Kooistra lives in a sheltered home. Her husband died 3 years



ago. She has already lost 4 of 6 children. At night, when she cannot sleep, she talks to their portraits in the living room. Ms Kooistra has limited mobility due to chronic pain and, therefore, spends most of her time in her apartment. She feels depressed, not only because of her pain and the loss of her loved ones but most of all because she cannot tell others what is on her mind. Her son lives far away in France. Nobody wants to listen to complaints. One day, her son reacted: "Mother, stop it now! I want to hear no more sad stories, I want to have a happy mother!" Ms Kooistra wants emotional support and sympathy from family and peers, but they show little understanding for her depressed mood.

## WELL-BEING

### Quantitative Findings

Well-being varied from very unsatisfied (score, 1) to very satisfied (score, 5) with one's present life; the median score and the 33rd percentile score were both 4. Scores on the Cantril ladder varied from 1 to 10; the median score and the 33rd percentile score were both 8. Marked loneliness (Loneliness Scale score,  $\geq 4$ ) was measured in 81 persons, 16% of 500 participants without severe cognitive impairment; the median score was 1. The best third, 290 persons, were satisfied with their present life (score, 4 or 5) and had high scores ( $\geq 8$ ) on the Cantril ladder; 23 were excluded based on marked feelings of loneliness. This left 267 persons (45%) who were classified as having an optimal state of well-being.

### Qualitative Findings

For most elderly persons, well-being was equivalent to successful aging. The ability to adjust to circumstances, counting one's blessings like social contacts, and focusing on gains instead of losses were said to be crucial (eg, case 1). At the same time, adjustments had to be within certain limits to be in line with self-image and individual personality. Character and personality were mentioned as influencing factors in achieving and maintaining feelings of well-being. Cases 5 and 6 show that the actual feeling of well-being could also relate to earlier life experiences or anticipation of life after death. Being content despite one's limitations was influenced by religious and cultural values.

## Case 5

"I thank God that I don't have to wait too long before I see my wife again!" Frans and Johanna van Lijn, married for almost 62 years, had moved from their house to a home for elderly persons. After a few months, Ms van Lijn died in the hospital after surgery. Mr van Lijn had to move again, this time to a single room. Despite these major changes and several increasing health complaints, his feeling of well-being remains high. He is grateful to God for the happy years he shared with his wife, and is expecting to meet her again. His life perspective includes life after death.

## Case 6

This was an example of a happy present vs a traumatic past. Maartje Verbeek compares her present situation with the difficult and traumatic period of her youth. Powerlessness and fear due to an incestuous relationship with her father dominated her life as a child. After that miserable period, a happy marriage followed in which she was able to come to terms with her past. Now, in her old age, she enjoys the affection of her children and grandchildren. She considers herself a happy person. Her positive evaluation of her present situation is closely linked to the memories of her youth. For Ms Verbeek, her physical limitations are of minor importance. She has invested during her life in social contacts with relatives and friends.

## SUCCESSFUL AGING

### Quantitative Findings

Successful aging as a state of optimal overall functioning and well-being was defined by before-mentioned domains, as shown in Figure 1. Of all the participants, 26% failed to meet the criteria of any of the functional domains, whereas optimal states in overall functioning were assessed for 79 persons (13%). An optimal state of well-being was assessed for 267 persons (45%). In total, 58 persons (10%) had an optimal state of overall functioning and well-being and were, thus, classified as successfully aged. Elderly persons living in institutions were rarely classified as successfully aged (2 of 102 participants). The demographic characteristics of sex, marital state, income, and education were not associated with the outcome of successful aging (data not shown).

Outcomes were not materially different when using alternative criteria (see the "Alternative Criteria" subsection of the "Participants and Methods" section). The proportion of those who could, thus, be classified as successfully aged varied between 9% and 16%.

### Qualitative Findings

Of the 27 elderly participants who were interviewed, 22 described themselves, individually or as a couple, as content with their lives and successfully aged.

Many older persons made no clear distinction between physical and cognitive functioning as a part of health. Both were perceived as important factors in successful aging, but only necessary for functioning on a desired social level. When physical or cognitive functioning had decreased, the decrease was usually accepted as an unavoidable result of growing old, which had nothing to do with a person's own achievement. In contrast, some participants who functioned well on a physical level did not feel successful, because of conflicts in the social context.

Participants believed that keeping in touch with friends and relatives was their own merit and that contacts reflected investments at an earlier age in their role of parent, family member, friend, neighbor, or colleague. The quality of social contacts proved to be more

important to elderly persons than the quantity of contacts, as one missing contact could count more than many existing ones.

From the perspective of the elderly persons, aging and successful aging are adaptive processes that are personal and context bound. In all domains, participants made reference to their personal life history and their social environment. Character and attitude (making the best of it) were mentioned as the main instruments in overcoming limitations.

### Team Discussion

The team discussions were held to evaluate the classification of successful aging. Discussions focused on those who gave the impression of being successfully aged but were not classified as such. The researchers had divergent judgments, based on their conversations and observations, that were not part of the various instruments. Main topics of discussion concerned the specific domains and the classification in general.

In the domain of physical functioning, a discrepancy was found between independence and poor physical functioning. Various persons with a disability could manage their affairs well. Some did so without any help, while others with financial means arranged assistance. Other discrepancies in the scores for physical functioning were influenced by sex roles. Married men regularly reported disabilities in household activities that were due to inexperience rather than physical incapability. In addition, enabling factors, such as nearby shops, or disabling factors, such as stairs, influenced physical functioning.

In the domain of social functioning, the discrepancy between passive and active social functioning dominated team discussions. Most team members believed that activities on one's own initiative should be judged differently from participating in activities arranged by others. Social activities that might be important for this age group were missed in the questionnaire, like ordinary conversation within a joint household, with neighbors, or with storekeepers. The quality of activities was not taken into account. Some participants were content with few social activities and preferred to be left alone to do things they enjoyed. It was argued that it was inappropriate to classify these participants as less successful because of their lower scores for social functioning. Furthermore, the focus on social activities instead of social contacts and interaction was debated.

Regarding the exclusion of elderly persons with a severe cognitive impairment or marked depressive feelings, it was remarked that some participants with dementia felt well and were not bothered by their cognitive impairment. Furthermore, cases of depressive feelings as a way of coping with negative life events sparked team discussions. Coping abilities were found to be important for psychocognitive functioning and were missed as part of the classification.

In the domain of well-being, discussions focused on assessing the marks of the Cantril ladder. While some persons would never award themselves 10 points, others easily gave themselves 9 or 10 points. The frame

of reference of the participants was missed in understanding the mark they gave themselves on the Cantril ladder.

In discussions on the classification of successful aging in general, it was often argued that using the same set of strict criteria did not leave any room for flexibility on personal, environmental, or temporary circumstances. Especially, the moment of measurement was believed to limit the individual classification. Some elderly persons had lower scores on the domains of functioning because of temporary reasons beyond their control, like the illness of a partner or a holiday period. Interestingly, team members sometimes confused the question, "Is this person successfully aged?," with the question, "Do you want to be like this yourself when you're old?"

### COMMENT

We described successful aging from 2 perspectives. In the quantitative part of the study, successful aging was defined as a state, a condition at the moment of measurement, which mimics a public health perspective. This approach made it possible to select a few elderly persons who were successful by all means. In total, 10% of all participants could be classified as successful, having an optimal state of overall functioning and well-being. This selective group of the oldest old had only minor physical disabilities, regular social activities, good psychocognitive function, and high feelings of well-being. Even when we used alternative criteria in the domains of functioning and well-being, the proportion of the elderly persons who could be classified as successful remained similarly low. The classification for an optimal state of overall functioning turned out to be more selective than the classification for an optimal state of well-being. Almost half of the oldest old reported an optimal state of well-being. Many persons were satisfied with their recent life despite limited functioning. This phenomenon is known as the "disability paradox," prevalent in all age groups.<sup>26,27</sup>

The qualitative part of the study showed that the proportion of elderly persons who perceived themselves as successfully aged was much higher. From the perspective of participants, the different domains constituting successful aging were recognized. However, they regarded social contacts as the most important condition for well-being and—as a consequence—for successful aging. The absence of limitations and losses does not constitute one's success at old age; rather, success is measured by the way these limitations and losses are integrated into one's attitude to old age.<sup>28</sup> Successful aging is not so much a matter of objectively measured physical functions but—seen as a process—the successful adaptation to physical limitation; successful in the sense of satisfactory to the person concerned.

A life span perspective helps us to understand people's appreciation of success in old age. From the qualitative analyses, a different model for successful aging was hypothesized, as shown in **Figure 2**. The domains of functioning and well-being are not equally important, as assumed in the quantitative research, but there is a hierarchy of domains in the experience of successful ag-

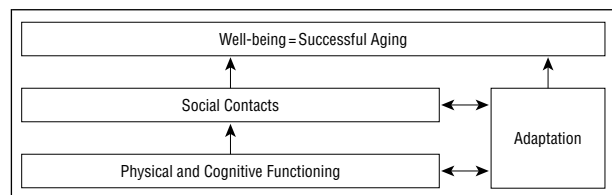


Figure 2. Qualitative model of successful aging.

ing. The process of adaptation is added to this model. The relative weight that elderly persons assign to the various domains of functioning and well-being explains the disability paradox. Specific for elderly persons is that they expect deterioration of physical functioning because of their chronological age.<sup>29</sup> In this respect, the hierarchy of the different domains may change during a life span, as hypothesized by the social production function theory.<sup>30</sup>

The main benefit of this research lies in showing the “relativity” and “qualification” of the results.<sup>31</sup> To our knowledge, we are the first to provide insight into the process of measuring successful aging within the elderly population. Other studies<sup>4-8</sup> on successful aging are primarily focused on physical aspects. These studies find other proportions of the outcome of successful aging, using other criteria for successful aging in younger study populations. They aim to show determinants of the outcome rather than describe the outcome itself.

The team discussions showed many shortcomings in the assessments and classification of the participants. Aspects that appeared to be important, like character, social contacts, and contextual factors, had not been measured or were only limitedly measured. Participants and team members believed that coping was an important part of successful aging. However, coping was not measured because existing questionnaires tended to be too abstract or too long in combination with the other questionnaires. Because we emphasized the importance of adaptation in successful aging, we stress the importance of developing coping questionnaires suitable for an assessment in a general population of the oldest old.

The implications of the present research concern physicians, researchers, and policy makers. We did not aim to reach a consensus between the different perspectives or to give a gold standard for successful aging. A focus on success by all means is unrealistic and ignores the value of adaptation to limitations and losses that are inherent to aging. We do, however, stress physicians to be aware that physical and cognitive functioning are perceived as the means for functioning on a desired social level. Researchers should be challenged to investigate more than the easy-to-measure physical aspects. Finally, policy makers have the responsibility to consider not only medical goals, like health as an optimal state, but also more personal goals, like well-being, when putting effort into dealing with the consequences of demographic changes in their societies.

Accepted for publication April 18, 2001.

This study was funded in part by the Dutch Ministry of Health, Welfare, and Sports, The Hague.

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