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Finding a useful conceptual basis for enhancing the quality of life of nursing home residents

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Abstract

In this article it is depicted that before nursing home staff can effectively contribute to optimising the quality of life (QOL) of nursing home residents, it has to be clear what exactly QOL is and how it can be enhanced. The aim is to identify a QOL framework that provides tools for optimising QOL and can form the basis for the development of guidelines for QOL enhancement. For that purpose, a framework should meet three basic criteria: (1) it should be based on assumptions about comprehensive QOL of human beings in general; (2) it should clearly describe the contribution of each dimension to QOL and identify relationships between the dimensions; (3) it should take individual preferences into account. After the criteria are defined, frameworks identified from a literature search are discussed and evaluated according to these criteria. The most suitable framework appears to be the QOL framework of the theory of Social Production Functions. The implications of this framework in understanding the QOL of nursing home residents are described and recommendations for further research are discussed.

Key words: Nursing homes, Quality of life, SPF theory, Theoretical models

Introduction

This article focuses on the quality of life (QOL) of elderly people whose problems in the physical, social and psychological domains of life are so severe that they have to live in a nursing home. These people, in particular, are a significant group because, due to their frailty, they probably need help to maintain a high level of QOL. Moreover, many residents are not able to communicate to others their wants, needs or satisfaction. This makes it especially important for caregivers and relatives to know what constitutes QOL in this population and how it can be maintained or increased. This knowledge provides them with tools to support the residents adequately in optimising their QOL. Furthermore, it can serve as a conceptual basis for the development of effective guidelines on which the nursing home staff can base their QOL-enhancing policies.

In the literature there is widespread agreement that QOL concerns wellbeing in a broad sense, and that it consists of various dimensions. However, for effectively optimising QOL, it is necessary to know what these dimensions are and what they include, what their specific sub-dimensions are, and also how different (sub-)dimensions combine to constitute QOL. For example, do all (sub-)dimensions contribute to QOL to the same extent, can QOL still be high when one or more (sub-) dimensions are impaired or have been lost, and, do losses in one (sub-)dimension also affect the contribution to QOL of other (sub-)dimensions?

The aim of this article is to review and evaluate existing QOL frameworks that focus on the en-

tire elderly nursing home population, in order to determine whether these can provide practical tools for QOL-enhancement and serve as a basis for guidelines to assist the nursing home staff in optimising QOL. The existing frameworks or approaches will be evaluated according to three criteria that are deemed essential for frameworks serving as a basis for QOL-enhancement in nursing home residents.

The first criterion is the prerequisite that any framework should be based on assumptions about the *comprehensive* QOL of *human beings in general*. A basically restricted view on QOL that is not comprehensive (such as health-related QOL) may result in erroneously excluding relevant aspects of QOL. Furthermore, to have a universal base, thus, to start with human beings in general (instead of, for instance, patient-specific or group-specific QOL) is necessary to thoroughly evaluate the relevance of different (sub-)dimensions of the broader concept. Although differences between groups in the relative importance of certain (sub-) dimensions may exist, at present there is no evidence to show that QOL in nursing home residents is *fundamentally* different. When starting from a perspective that is both comprehensive and based on human beings in general, i.e. has a universal base, it is possible to determine which dimensions are affected by the resident's condition, and which are still intact and may therefore contribute to the resident's QOL. As intact dimensions may serve as 'strengths' that compensate for losses in other dimensions, tools for optimising QOL should not only focus on impaired or lost dimensions, but also on intact dimensions. Hence, a framework of QOL should focus on both.

The second criterion is that a framework should not only define the dimensions of QOL, but should also explain how and to what extent each (sub-) dimension contributes to QOL and how these dimensions are inter-related. For instance, if QOL is considered to consist of a physical, a psychological and a social dimension, it should be clear whether each dimension contributes to QOL to the same extent, or if, for instance, the physical dimension is more important than the other two dimensions. It should also be clear how the other dimensions and QOL in general change when a certain dimension of QOL is affected. Can QOL remain stable or be recaptured? For example, when a resident loses her[1] spouse, the framework should explain what (sub-)dimensions are affected, how this affects her QOL, and whether and how she can influence it.

The third and final criterion is that a framework should also provide insight into how inter-individual differences can be represented. When trying to optimise QOL, the nursing home staff must be able to take the individual preferences of a resident into account. At the individual level there may be considerable differences in the relative significance and content of a (sub-)dimension. Social support, for instance, may be a specific sub-dimension of a social dimension, but individuals may differ in their need for support and from whom they would want it (a spouse, a child, a priest, or nursing home staff). Thus, to achieve effective QOL enhancement that is tailored to individual residents, the framework should take individual preferences into account.

Summarising, only a QOL framework that is based on a broad and universal perspective, that illustrates how (sub-)dimensions contribute to QOL, how (sub-)dimensions are inter-related, and how individual preferences relate to specific dimensions, can provide the nursing home staff with the necessary tools to decide on how to support the residents in optimising their QOL. This framework can also be used as a tool to evaluate existing QOL measurement instruments with regard to their applicability to the nursing home setting, or to structure the development of an instrument that can be used to evaluate QOL-enhancing interventions in nursing home care. Ultimately, it can be the basis in the development of guidelines for effective QOL-enhancement in nursing homes.

This paper first describes the search strategy that was used to identify the frameworks. Subsequently, the identified frameworks will be briefly discussed and evaluated according to the criteria mentioned above. Although this brief description will probably not do justice to all that has been written about the frameworks, the aim is to explicate their essence, so that the evaluation process is transparent. In the discussion of the frameworks, the original terminology will be adhered to. For instance, the (sub-)dimensions of QOL are

[1]As female nursing home residents are in the majority, persons and individuals are referred to in the feminine form to simplify reading. Ofcourse, male residents are also included.

referred to as sectors, domains, factors, etc. Finally, the framework that meets the criteria best will be described in more detail, the conclusions will be summarised and recommendations for future research will be discussed.

Search strategy

Published literature on frameworks relating to the elderly nursing home population or to frail or disabled elderly persons was considered relevant. As authors use different names for their theoretical frameworks, several keywords were used in addition to 'frameworks' in the search. The keywords *approach*, *model*, *framework* or *theory* in combination with *QOL* and *frail* or *disabled elderly*, or *nursing home*(*s*); *care home*(*s*); *residential home*(*s*); *long-term care facility*(*-ies*) or *long-term care institution*(*s*), were applied to all available Psychinfo (1887-), Pubmed/Medline (1966-) and Sociofile (1974-) databases running until April 2001. In total, 791 references were identified. First, it was checked which of these needed to be excluded because the abstract unmistakably showed that the publication was not about a framework for QOL. It appeared that many utilized QOL as an outcome measure of a behavioural or pharmaceutical intervention or epidemiological study, which led to exclusion. Another group of publications was excluded because these pertained to quality of care and care methods, and QOL was only mentioned as one of the relevant goals. Then the abstracts of the remaining 34 publications were checked to determine which of the frameworks clearly did not apply to the nursing home population in the broadest sense but to a specific selection, such as dementia patients, stroke patients or people with developmental disabilities. This led to the exclusion of 23, which left 11 publications of which the complete text was retrieved [1–11].

After reading the publications and related research carried out by the authors, another five publications were excluded. Albrecht and De Vlieger's [8] study was excluded because the mean age of their study population was 53. Such a young population will, in general, not be comparable to the older nursing home population, which is characterised by multiple pathology and loss of functions. The research carried out by Kivnick [5], in collaboration with Erikson and Erikson [12], was excluded because it appeared to refer to QOL only implicitly. Finally, the Raphael et al. study [11] was excluded because it focuses on community-dwelling elderly people and is not applicable to *frail* elderly people without further elaboration (D. Raphael, personal communication). Consequently, six potentially suitable frameworks could be examined in further detail on the basis of the three criteria.

Describing and evaluating the frameworks

In the following, first the reports on the six frameworks will be briefly summarised, in chronological sequence of publication. Each framework will then be evaluated according to the three criteria that a QOL framework should meet if it is to serve as a basis for QOL-enhancement. The criteria will be numbered, to facilitate reading.

Lawton's four sectors of the good life

Lawton [2, 13] adapted his original framework of *the good life* [13] to include frail elderly people [2] and dementia patients [14, 15]. He defines the QOL of frail elderly people as '*the multidimensional evaluation*, *by both intra-personal and social-normative criteria*, *of the person–environment system of an individual in time past*, *current*, *and anticipated*' ([2, p. 6]; see Figure 1). On theoretical grounds, he distinguishes four sectors of QOL that partly overlap. He considers every sector as an independent possible indicator for QOL measurement: (1) *behavioural competence*, i.e. the individual's ability to hold her own in functional and social respect. Behavioural competence is a hierarchy of competence categories that is based on a system view of human beings. It represents social normative evaluations of the person's functioning in the health, cognitive, time-use and social dimensions. (2) *Domain-specific perceived QOL* is considered to be a person's subjective evaluation of function in the behavioural competence dimensions. The method of itemisation determines the specific content of the sector, as is the case with the behavioural competence sector. Lawton considers behavioural competence and perceived QOL to be the central sectors of QOL. The other two are not central sectors, but essential components of '*a*

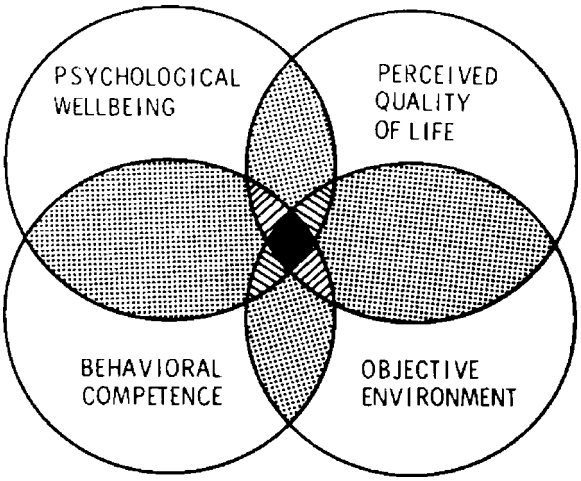

Figure 1. Lawton's four sectors of the good life: Republished with kind permission of the Gerontological Society of America from 'environment and other determinants of well-being in older people' by M.P. Lawton, The Gerontologist 1983, 23, p. 355; permission conveyed through Copyright Clearance Center, Inc.

loose causal model' [2, p. 10]. (3) *Objective environment* consists of both physical and inter-personal domains. What aspects of the objective environment are relevant to a particular person depends on their relevance to both behavioural competence and domain-specific perceived QOL. Some aspects are prerequisites to, i.e. building blocks for, dimensions of behavioural competence or domain-specific perceived QOL, others are catalysts. (4) *Psychological wellbeing* is '*the ultimate outcome in a causal model of the open type*' [2, p. 11]. It is defined as '*the weighted evaluated level of the person's competence and perceived quality in all domains of contemporary life*' [2, p. 11]. A structure that integrates past, present and future experiences, *the self*, does this weighting.

Criteria

(1) *Comprehensiveness and universality*: The first criterion is met by Lawton's framework. In one of his first publications on the good life [13], Lawton mentions QOL as '*a grandiose construct, presuming to account for all of life which subsumes all that we define as legitimate personal and social goals. Its sectors together include every aspect of behaviour, environment and experience*' [13, p. 349].

(2) *Inter-relatedness*: The contribution of the (sub-)dimensions to QOL and the inter-relations of the (sub-)dimensions are ambiguous in Lawton's sector approach. Firstly, he considers the sector psychological wellbeing to be the ultimate outcome, but it remains uncertain as to whether this is the same as QOL. Secondly, although he regards psychological wellbeing to be the weighted evaluation of the two central sectors (behavioural competence and perceived QOL) and thus suggests a hierarchical approach with behavioural competence and perceived QOL as determinants, this relationship is not represented in his visualisation of the framework as four overlapping circles (see Figure 1). The statement that objective environment (sector 3) is a prerequisite or catalyst for behavioural competence and domain-specific perceived QOL (sectors 1 and 2) does not correspond with Figure 1 either. Moreover, he states that domain-specific perceived QOL is the subjective evaluation of behavioural competence. How that relates to psychological wellbeing as the weighted evaluation of the two is not clear. It is also not clear if and how losses in one of the sectors influence other sectors.

(3) *Individual preferences*: In Lawton's view, the sectors of behavioural competence and perceived quality are weighted into psychological wellbeing, which is dependent on the (interpretation of the) individual. Therefore, it appears that psychological wellbeing, the central outcome, is dependent on individual preferences and circumstances. He also states in his 1991 publication that '*the intra-personal aspects of QOL express one essential ingredient of a comprehensive conception, that each individual has internal standards and evaluations of life that are idiosyncratic and not totally accountable to any external standard*' [2, p. 7]. Clearly, Lawton attributes importance to individual preferences. However, it is not clear to what '*intra-personal aspects*' he refers. Moreover, because it is not clear how these aspects are related to other 'aspects' of QOL, there are no indications as to how to use them to optimise QOL.

Faulk's board and care home hierarchy of needs

In 1988, Faulk [3] introduced a hierarchical model of QOL factors relating to board and care homes for the elderly (see Figure 2). The model is based on Maslow's hierarchy of human needs [16] and Tyne's adaptation of it to mentally handicapped

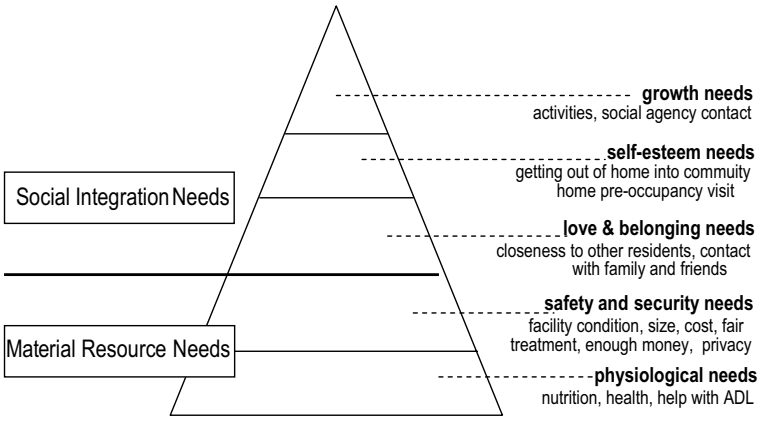

Figure 2. Faulk's board and care home hierarchy: From Faulk LE. Quality of life factors in board and care homes for the elderly: A hierarchical model. Adult Foster Care Journal 1988, 2, p. 104, © Human Science Press. Reprinted with kind permission of Human Science Press.

people in residential settings [17]. In Maslow's view, human beings strive to realise their inner potential, so-called *self-actualisation*. Visualised as a pyramid, beneath self-actualisation there are four other kinds of needs. From bottom to top, these are: physiological needs (food, water); safety needs; needs for belongingness and love; and esteem needs. People place a greater value on higher-order needs, but will only strive for those when lower-order needs are satisfied. Higher-order needs produce more desirable subjective results, such as more profound happiness [18, 19]. Tyne [17] divided the various levels of Maslow's pyramid into two kinds of need-levels: the lower-level resource needs (physiological and safety needs) and the higher-level needs for social integration. Faulk uses Tyne's ideas to formulate his board and care home hierarchy of needs (see Figure 2). He assumes that board and care residents will need assistance in meeting their *material resource needs* as well as their *social integration needs*. The level of QOL for these residents will thus be dependent on the degree to which they are able, with assistance, to meet those needs.

Faulk tested his model empirically by measuring the degree to which material resource needs and social integration needs were met, and operationalised the five categories of needs with resident-specific needs for which there was considerable policy and theoretical interest at that time (see Figure 2). His assumption that '*the more one settles for only meeting lower level resource needs*, *the less one influences QOL*' [3, p. 114], was supported by the data.

Criteria

(1) *Comprehensiveness and universality*: As Faulk adapts Maslow's universal and comprehensive hierarchy to include the special needs of board and care residents, his approach meets criterion one. This is also made explicit in his statement that '*what distinguishes board and care residents most from other persons is not that they have different needs*, *but that they require some assistance in meeting their own needs*' [3, p. 102].

(2) *Inter-relatedness*: In Faulk's approach QOL depends on the degree to which the residents are able, with assistance, to meet their material resource needs and their social integration needs. The fulfilment of each need will contribute positively to QOL. According to Maslow, meeting needs start with the lowest level, and when those needs are met, the next level is addressed. Clearly, this is a one-way direction ending in growth. The question remains what happens when a lower-level need is not met: does this influence the level of QOL, are the higher-level needs still important and achievable, have they become unattainable, or do they then no longer exist? This is crucial, because if meeting higher-level needs is highly important for achieving QOL, and if they can be met despite the fact that a lower-level need is not met, resident care policies may choose not to address a particular lower-level need but to instead target a higher

need. Furthermore, Faulk does not elaborate on the needs within one level, which levels are interrelated and how they relate; the levels of the hierarchy need to be further developed.

(3) *Individual preferences*: It is not clear if and how there is room for individual variation in the levels of the hierarchy, for instance whether the relative importance of different needs can vary between persons.

Hughes' QOL-network

Green and Cooper [6] applied Hughes' framework for QOL in gerontology to the nursing home [20], but did not adapt it. Therefore, this paper will discuss Hughes' framework itself.

Hughes aimed to identify the components of QOL that are central and universal. In her view, the concept of QOL is multidimensional and the definition of QOL may vary, depending on the type of research (e.g. theoretical, applied, policy), but QOL cannot be reduced to a series of objectively defined standards, nor can it be encompassed entirely by the subjective satisfaction expressed by the individual [20, see also 21]. She proposes a network approach, '*an interacting system of factors, which together define and assess QOL*' [20, p. 54]. She identified eight factors that can be linked to subsystems: personal autonomy; expressed satisfaction; physical and mental wellbeing; social–economic status; quality of the environment; purposeful activity; social integration and, lastly, cultural factors (see Figure 3). No clear definition of the eight factors is given, but it is stated that each factor contains a sub-system of related factors that have to be defined and translated into operational indices by the researcher. She gives examples of these sub-systems of related factors (Figure 3). All factors in the network are related directly or indirectly to one another. Their integration determines the level of QOL for an individual.

Criteria

(1) *Comprehensiveness and universality*: Given Hughes' aim to identify the components of QOL that are central and universal as well as her opinion that the quality of a good life for elderly people cannot be considered to be intrinsically different to that of the rest of the population, criterion one appears to be met.

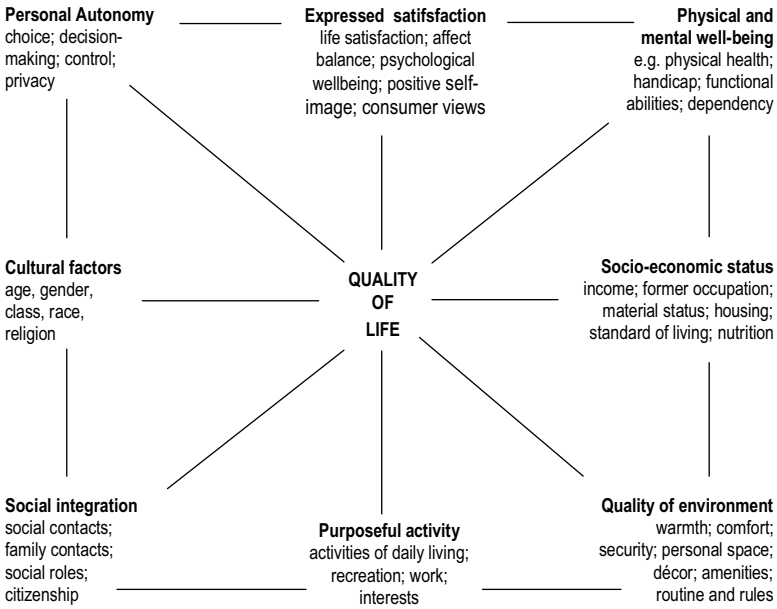

Figure 3. Hughes' quality of life network: From Hughes B. Quality of Life. In: Peace SM (ed.), Researching Social Gerontology: Concepts, Methods and Issues, London: SAGE, 1990, p. 55, © SAGE Publishers. Reprinted with kind permission of Sage Publishing Ltd.

(2) *Inter-relatedness*: Hughes places QOL in the centre of a network of interacting factors that together define QOL (Figure 3), which suggests that these factors determine QOL. The question that remains, however, is: how? Moreover, although she states that factors can form sub-systems, the relationships are not clear.

(3) *Individual preferences*: Although Hughes attaches importance to a person's entire life experience and the probability of common aspects in old people's lives, it is not clear how the individual aspects are involved.

Katz and Gurland's challenges to adaptation

In the book edited by Birren et al. [1], Katz and Gurland wrote a chapter on the concept of holism, which proposes that the quality of the lives of older people is made up of an irreducible combination of three parts: (1) the elders themselves (i.e. their make-up in terms of body, mind and spirit), (2) their animate and inanimate environments, (3) their life experiences in space and time, and the functions or powers created by the interwoven parts. They are of the opinion that, in order to understand the QOL of elders, one must understand the network of the combined parts, as the process of living is not explained by one of the parts alone. This network provides the '*structure within which the individual performs the required developmental tasks at various stages of life*; *and the degree of success with which tasks are performed*, *and crises met*, *spells the difference between good and impaired health*' (Bennett, cited in [22, p. 340]).

Katz and Gurland [22–24] regard QOL as an individual's ability to adapt and is explained by objective (observable) and subjective (internal state) features that are independent of each other. Intact QOL is regarded as emanating from adaptive responses, and impaired QOL from maladaptive responses. The severity of maladaptation is determined by its *intensity*, i.e. the level of impairment, and by it's *extensity*, i.e. the degree to which impairment pervades the elder's daily life. The execution of adaptive tasks is seen as the integration of skills, each of which can be arranged in a hierarchy reflecting an increasing potential for adaptation. The successive level of adaptability requires the lower-order skills to be intact. On the basis of previous research on (measurement instruments for) QOL they formulated 19 domains. The domains consist of '*distinctive challenges to adaptation*, *as well as sets of responses that reflect the elder's efforts to meet each challenge*' [23, p. 197], thereby focussing in particular on functional skills. The domains are inter-connected, and have to be taken into account in order to obtain a complete and authentic picture of QOL.

Criteria

(1) *Comprehensiveness and universality*: Katz and Gurland apply the idea that QOL is a holistic phenomenon to the elderly, making reference to the work of Bennett and Cath [22]. Therefore, it can be concluded that they founded their work on the concept of comprehensive QOL applying to human beings in general.

(2) *Inter-relatedness*: It remains unclear how the domains, i.e. adaptive tasks, relate to the hierarchy of skills, and whether these skills are also components of QOL. As a consequence, it is impossible to determine what the effects of not completing a certain adaptive task are on the other domains and on the level of QOL.

(3) *Individual preferences*: When formulating a specific definition of QOL in dementia [23], Katz and Gurland apparently recognised that the concept of QOL may vary across specific population groups. Whether it also varies between individuals is not clear.

The QOL approach based on the theory of social production functions

Two publications that were identified focus on the theory of social production functions (the SPF theory) as a comprehensive theory for QOL [9, 10]. Initiated by Lindenberg [25, 26], regarding human beings in general, Ormel et al. [9, 10] used the theory as the conceptual framework in their survey of elderly people in the community, Steverink applied the theory to a population of frail elderly people [27], as well as to successful ageing in general [28].

According to the SPF theory [25, 26], every individual's behaviour is aimed at being well. An individual strives to 'realise' wellbeing through reaching particular universal and more specific goals, within the constraints she faces. The theory proposes a hierarchical approach to goals (see

Top level	Subjective Wellbeing				
Universal goals	Physical Wellbeing		Social Wellbeing		
First-order instrumental goals	Stimulation/ Activation (optimal level of arousal)	Comfort (absence of physiological needs; pleasant and safe environment)	Status (control over scarce resources)	Behavioral Confirmation (approval for 'doing the right things')	Affection (positive inputs from caring others)
Activites and endowments (means of production for instrumental goals) (examples)	Physical and mental activities producing arousal	Absence of pain, fatigue, thirst, hunger; vitality; good housing, appliances, social welfare, security	Occupation, life style, excellence in sports or work	Compliance with external and internal norms	Intimate ties, offering emotional support
Resources (examples)	physical & mental effort	food, money, health care	education, social class unique skills	social skills, competence	spouse, empathy, attractiveness

Figure 4. Quality of Life hierarchy of the SPF theory: From Ormel J, Lindenberg S, Steverink N, Verbrugge L. Subjective well-being and social production functions. Social Indicators Research 1999, 46, p. 67, © Kluwer Academic Publishers. Reprinted with kind permission of Kluwer Academic Publishers.

Figure 4). From bottom to top, each level in the hierarchy is instrumental to the level above. High in the hierarchy, the goals are assumed to be universal, i.e. referring to all human beings. It is assumed that subjective wellbeing (i.e. QOL, or psychological wellbeing [29]) is the ultimate and overall goal for an individual and is the result of the realisation of physical and social wellbeing. The more social and physical wellbeing that can be achieved, the higher the level of QOL will be. Physical and social wellbeing are considered to be universal goals that are aimed for and achieved by realising other, lower level goals. On the first level below the universal goals there are five first-order instrumental goals. Two are formulated for physical wellbeing: *stimulation* is a pleasant amount of stimulation and activation; *comfort* refers to the satisfaction of basic physical needs and the absence of health complaints, unsafety and fear. There are three first-order goals for social wellbeing: *affection* refers to being loved as a person by oneself and by others; *behavioural confirmation* refers to doing the right thing in the eyes of oneself and others; and s*tatus* is the accomplishment of appreciation from oneself and others as a consequence of having certain positive distinctive characteristics.

All goals in the hierarchy are realised by using resources, which are considered as things that people have and do to achieve goals. Lower in the hierarchy, when goals have been achieved, they can subsequently be used as resources to achieve higher goals. However, resources are held to be scarce, which implies that the individual is limited in achieving her goals. Steverink [27, 28] described that with increasing age, an individual is probably confronted with losses, and is not always able to maintain all five first-order instrumental goals. A goal that is costly and depends on many or specific resources will be discarded first. By substituting (i.e. compensating for) lost resources and instrumental goals with other, as yet available resources or attainable goals, an individual may still be able to achieve a high level of physical and social wellbeing. Physical and social wellbeing are not entirely inter-changeable; it is assumed that a certain amount of each is necessary in every individual. In recent years, several studies have provided empirical evidence to support the SPF theory [27, 30–32].

Criteria

(1) *Comprehensiveness and universality*: As the SPF theory is a comprehensive approach to the QOL of human beings in general, the first criterion is met.

(2) *Inter-relatedness*: In the SPF theory, QOL, or subjective wellbeing, is the ultimate goal of human behaviour, and is at the top of a hierarchy of goals ((sub-)dimensions) which are instrumentally related from bottom to top, which explains the contribution of the (sub-)dimensions to QOL. With regard to their inter-relatedness, the SPF theory states that personal resources can be used to achieve multiple (first-order) goals and that both resources and goals are interchangeable and can be used to compensate for losses of other resources or goals, although people do need a minimum amount of both physical and social wellbeing.

(3) *Individual preferences*: QOL, physical wellbeing and social wellbeing are universal goals. However, the lower they occur in the hierarchy, the more specific and idiosyncratic, i.e. individually variable, the goals and resources of an individual will be. The SPF theory assumes that, although the aim is to achieve all five first-order goals, an individual will focus on the goals that can still be achieved when it is no longer possible to achieve all the goals. Therefore, the first-order goals may, to a certain extent, also vary across individuals.

Ball's QOL domains

Ball et al. [7] interviewed residents and observed life in 17 assisted living facilities in order to conceptualise QOL in such facilities. They support the consensus of opinion that QOL is a multidimensional construct with both subjective and objective components. Based on empirical research, Ball et al. identified 14 domains of QOL. The domains represent the combined internal perceptions of residents with regard to what is important to them. Considerable differences were found between residents with regard to the personal significance of each domain. QOL evolved as a subjective, complex and multidimensional construct with interacting and overlapping domains. Ball et al. mention a clear primacy of five domains for most residents: psychological wellbeing; independence and autonomy; social relationships and interactions; meaningful activities; and care provided by the facility.

Ball et al. accept Lawton's view that *psychological wellbeing* is the ultimate outcome and include in this domain the residents' general satisfaction with life in the facility and their emotional states. *Independence* refers to the residents' ability to take care of their own needs. Ball et al. found that independence enhanced the residents' self-esteem, helped them to maintain their remaining functional ability, and provided them with meaningful activity. *Autonomy* refers to the residents' control over their everyday environment and choice of options that are significant for the individual. With regard to *social relationships*, for most residents the relationships with their family and in particular with their children, were vital to their QOL. *Meaningful activities* were also a key component of the residents' QOL, and what activities were found to be meaningful varied between individual residents. The positive evaluation of the *care provided by the facility* depended on the attitude of the caregivers.

A key factor in whether residents defined their lives as having quality was the quality of fit between the resident and the facility's social and physical environment, more specifically, between the resident and the structure and process of the care provided, with which most domains had an obvious relationship.

Criteria

(1) *Comprehensiveness and universality*: Ball et al. aim to be comprehensive, but their method (asking the residents), does not ensure that all important aspects were identified. Furthermore, it is not based on the QOL of human beings in general. This is unfortunate, because it is therefore not clear how residents of residential homes differ from other people, so possible changes or differences that apply to them cannot be addressed.

(2) *Inter-relatedness*: Ball et al. only address the relationship of psychological wellbeing to QOL. They follow Lawton in his approach, i.e. that psychological wellbeing is both a domain of QOL and the ultimate outcome in an open causal model. Yet, it is still not clear how this 'central outcome' contributes to QOL and relates to other (sub-)dimensions. Although Ball et al. found that most domains had an obvious relationship with the so-

Table 1. Comparison of the frameworks

Criteria	Lawton	Faulk	Hughes	Katz & Gurland	SPF-theory	Ball et al.
1. Comprehensiveness	+	+	+	+	+	–
2. Inter-relatedness	–	±	–	–	+	–
3. Individual preferences	±	–	–	–	+	–

+: Framework meets criterion, ±: Framework does not meet the criterion entirely, –: Framework does not meet criterion.

cial and physical environment of the facility, these findings do not explain how each domain relates to the others.

(3) *Individual preferences*: In aiming to do justice to individual preferences, Ball et al. started with individual views on important domains of QOL. Yet, they subsequently elaborate on five domains that were considered to be important by most residents, thereby moving away from the perspective of the individual.

In Table 1 the six frameworks are compared, and it can be concluded that they differ with regard to meeting the predetermined criteria. Only the SPF theory meets all three criteria. The framework of Ball et al. is not based on assumptions of QOL for human beings in general, so, in our view, it is fundamentally flawed. The other four frameworks are not flawed, but they lack clarity on criteria 2 and 3, and need to be further developed before they can be considered useful as a conceptual basis for QOL-enhancement. The framework of the SPF theory, according to the three criteria applied, appears to be the most suitable as a basis for understanding QOL, to provide nursing home staff with tools to enhance QOL, and eventually to serve as a basis for the development of guidelines for QOL-enhancement. The possible implications of this theory, when applied to nursing home residents, are discussed below.

Understanding the QOL of residents in terms of the QOL approach of the SPF theory

Following the SPF theory, QOL would increase with the number of first-order instrumental goals (wellbeing goals) that are achieved. In other words: the more comfort and stimulation (for physical wellbeing) and the more affection, behavioural confirmation and status (for social wellbeing) residents are able to realise, the higher their level of QOL will be. At this point, in view of the impaired cognitive status of many nursing home residents, it should be noted that the realisation of one's wellbeing is, in terms of the SPF theory, not necessarily a conscious process but related to an intrinsic motive to strive for improvement of one's condition [33]. This motive is assumed to apply to all human beings.

Through the mechanism of *substitution* between resources and goals, the level of QOL can still be relatively high, even when people can no longer realise one or more of the five wellbeing goals. Loss of status, for instance, can be substituted by putting more effort into achieving the other two goals of social wellbeing, i.e. affection and behavioural conformation, without losing much QOL. Furthermore, the SPF theory is not only explicit about the mechanism of substitution (and thus about the relationships between (sub-)dimensions of QOL), it also assumes a *patterned change* in substitution processes when people lose resources due, for instance, to ageing processes [28]. It is predicted that status is probably the first goal that has to be discarded. When further losses occur, stimulation and behavioural confirmation will be the next to go. The goals of comfort and affection can be maintained relatively easily, although eventually these may also become threatened. When the last remaining resources for comfort and affection become threatened, QOL is seriously endangered, and people will do everything in their power to prevent further losses. This stage is called the *critical phase* [27].

Nursing home residents have, in general, lost many physical and social resources. From the SPF theory and its sub-theory of the critical phase it can be derived that care-providers who aim to optimise the QOL of nursing home residents must at least provide a satisfactory level of comfort and affection. However, the QOL of residents would be enhanced if attention were also paid to stimula-

tion, behavioural confirmation and status. So, nursing home residents will perceive higher levels of QOL if they not only realise comfort and affection, but also stimulation and behavioural confirmation, and even more so when they are able to realise status.

When relating the theoretical insights of the SPF theory to everyday life in the nursing home, the five goals of wellbeing appear to be compatible with and, to some degree, already considered in nursing home practice. The patterned change prediction that comfort and affection can be maintained the longest seems to be quite plausible. Comfort and affection are the ultimate care-targets in nursing home care. *Comfort* can be considered as the basis of care: in the eyes of the nursing home staff, the first priority is to make the resident comfortable. In times when the workload is very heavy, comfort is the most paramount, and sometimes the only focus of care that must be maintained at all costs. *Affection* is also important, and is a primary care-target in the nursing home, especially when a resident's functioning has deteriorated to the extent that being kind – sometimes only through the touch of a hand – may be the only means of making contact. *Stimulation* and *behavioural confirmation* are, for instance, represented in the emotion-oriented care-approaches to demented residents, including validation [34, 35], reminiscence [36], sensory activation or 'snoezelen' [37], and integrated emotion-oriented care [38, 39]. In these care-approaches, an attempt is made to link up with the experiences and perceptions of the person with dementia. Expressing affection and stimulating the resident in reliving, structuring, integrating and exchanging memories (reminiscence) or various sensory perceptions and experiences (snoezelen), are common, and highly significant. Moreover, in the interactions with the residents, behavioural confirmation through endorsing their behaviour and supporting their initiatives is an important target, especially in validation and integrated emotion-oriented care [39]. Furthermore, the assumption that stimulation is important is in line with the tradition that is upheld in nursing home care, i.e. to stimulate the resident and to provide pleasant activities, for instance by employing occupational and recreational therapists [6, 40]. *Status* is difficult to uphold, because many of its resources are of a societal nature. However, being different from other residents and maintaining a personal identity is still feasible, and possibly very important for a resident. For instance, a resident who had been a professional ballet dancer appeared to feel much happier after enlarged photographs of her dancing had been hung on the walls of her ward. Therefore, status can also be a target in the optimisation of QOL in nursing home residents. In sum, nursing home practice appears to have important links with the theory of SPF. Nevertheless, the advantage of using the framework of the SPF theory is that it systematises these practices into a whole of QOL-enhancing procedures, and thus provides insight into which QOL goals are already targeted and which still need to be addressed. Moreover, it can be used as a heuristic to find new ways of helping residents to realise the goals of wellbeing.

Nursing home residents have lost resources in various (sub-)dimensions, and an important question is: how do they succeed in realising a high level of QOL? By knowing what resources are left it is possible to gain insight into the potentials and abilities that a resident (still) has to realise QOL and thus contribute effectively to enhancing that QOL. Instead of focussing only on problems and disabilities, the care-targets should also include the resident's specific, vital resources. Given the prediction that not only comfort and affection, but also behavioural confirmation, stimulation and status are essential when aiming for insight into and optimisation of QOL, the focal point should be achievement of these goals of wellbeing.

According to the SPF theory, the people in the environment of the residents are important sources from which they can obtain comfort, affection, stimulation, behavioural confirmation and status. Nursing home staff can help residents to achieve their goals by participating extensively in providing them with the necessary resources. An important implication of this mechanism is that the care that is provided must be optimal in order to contribute effectively to QOL-enhancement. When the nursing staff does not have enough time to assist them in this way, the residents are in danger of having a low level of QOL. This applies, in particular, to residents who have lost almost all their personal resources for realising their own wellbeing, for instance those who are severely demented.

Discussion

In this paper, the aim was to find a framework for QOL in nursing home residents that explains what QOL is and how a high level of QOL can be achieved, and can therefore serve as a basis for QOL-enhancement in the nursing home setting. It was argued that a QOL framework is suitable for that purpose if it meets at least three criteria. A search in the literature yielded several QOL frameworks applied to elderly nursing home residents (or frail elderly people), which were briefly described and evaluated. The framework that appeared to meet all three criteria, the SPF theory, was discussed in detail.

Some points of discussion and suggestions for further research must be mentioned. The first point concerns the completeness of the three predetermined criteria, which were formulated specifically to evaluate the suitability of each framework as a basis for QOL-enhancement and the possible development of guidelines for nursing home staff. As such, they should be considered as the minimal requirements of a framework suitable for that purpose. Nevertheless, there may be other relevant criteria, for instance pertaining to the empirical basis of the framework. These were not included, as they could have led to the exclusion of new frameworks that may be promising but still need empirical testing. However, an empirical test of the validity of any framework is the only test that can provide evidence of its tenability and suitability to function as a basis for guidelines for QOL-enhancement.

A second point, which is closely related to the first, is the need for more empirical research. So far, the SPF theory has been applied empirically to frail elderly people, but not specifically to the nursing home population. Therefore, it should be investigated whether the hypotheses about QOL that follow from the theory do, in fact, apply to the nursing home population. Thus, it should be empirically established whether residents do, indeed, experience more subjective wellbeing when they have a higher level of affection, behavioural confirmation, status, comfort and stimulation, or whether the loss of certain goals can be substituted by other goals. Moreover, as the different causes of the residents' conditions lead to highly varied resident characteristics, it should be investigated whether there may be specific sub-groups (e.g. demented residents) for which the basic assumptions of the SPF theory are no longer valid. It is possible that for some specific groups the achievement of certain first-order instrumental goals (e.g. status or stimulation) no longer contributes to QOL. This aspect should be investigated, as it may have implications for the validity of this theory as a basis for QOL- enhancement in the nursing home setting.

Finally, further research is needed with regard to the selection or development of appropriate measurement instruments. These instruments should closely fit the framework in order to test it adequately. Moreover, it should be investigated, in close collaboration with the nursing home staff, how the components of the framework can be measured most appropriately (directly or indirectly; objectively or subjectively; by observing behaviour or interpreting other known facts; etc.).

Summarising, it appears that the SPF theory can be used as a suitable conceptual basis for understanding QOL in the nursing home, and can subsequently form the basis for the development of guidelines for QOL-enhancement in nursing homes. When it can be shown empirically that this framework can, indeed, improve our understanding of QOL in nursing home residents, this will open the door to individually tailored QOL-enhancement interventions – based on the same framework – to be developed in the format of guidelines. A special point of interest in the development of guidelines would be the extent to which others, e.g. nursing home staff or the resident's children, can help the resident to effectively realise a high level of QOL. Most residents are dependent on the nursing home staff for the provision of important resources for QOL. Moreover, they may be unable to express or even determine what really is important to them. More insight into the QOL of nursing home residents, how it can be improved, and its implications for the quality of care, will increase the effectiveness of approaches to the care, and thus the QOL of residents.

References

1. Birren JE, Lubben JE, Rowe JC, Deutchman DE. The Concept and Measurement of Quality of Life in the Frail Elderly. San Diego: Academic Press, 1991.

2. Lawton MP. A multidimensional view of quality of life in frail elders. In: Birren JE, Lubben JE, Rowe JC, Deutchman DE (eds), The Concept and Measurement of Quality of Life in Frail Elders, San Diego: Academic Press, 1991; 3–27.
3. Faulk LE. Quality of life factors in board and care homes for the elderly: A hierarchical model. Adult Foster Care J 1988; 2: 100–117.
4. Goode DA, Hogg J. Towards an understanding of holistic quality of life in people with profound intellectual and multiple disabilities. In: Goode DA (ed.), Quality of Life for Persons with Disabilities: International Perspectives and Issues, Cambridge, MA, US: Brookline Books, 1994; 197–207.
5. Kivnick HQ. Everyday mental health: A guide to assessing life strengths. Generations 1993; 17: 13–20.
6. Green S, Cooper BA. Occupation as a quality of life constituent: A nursing home perspective. Br J Occupational Ther 2000; 63: 17–24.
7. Ball MM, Whittington FJ, Perkins MM, et al. Quality of life in assisted living facilities: Viewpoints of residents. J App Gerontol 2000; 19: 304–325.
8. Albrecht GL, De Vlieger PJ. The disability paradox: High quality of life against all odds. Soc Sci Med 1999; 48: 977–988.
9. Kempen GIJM, Brilman EI, Ormel J. Groningen Longitudinal Aging Study: Een onderzoek naar het dagelijks functioneren, het welbevinden en de zorgbehoefte van ouderen./The Groningen Longitudinal Aging Study (GLAS) on functional status, well-being and need of care: Objectives, design and preliminary results. Tijdschrift voor Gerontologie en Geriatrie 1998; 29: 141–149.
10. Ormel J, Lindenberg S, Steverink N, Vonkorff M. Quality of life and social production functions: A framework for understanding health effects. Soc Sci Med 1997; 45: 1051–1063.
11. Raphael D, Brown I, Renwick R, Rootman I. Quality of life: What are the implications for health promotion? Am J Health Behav 1997; 21: 118–128.
12. Erikson EH, Erikson JM, Kivnick H. Vital Involvement in Old Age. New York: W.W. Norton & Company, 1986.
13. Lawton MP. Environment and other determinants of well-being in older people. Gerontologist 1983; 4: 349–357.
14. Lawton MP. Assessing quality of life in Alzheimer disease research. Alz Dis Assoc Dis 1997; 11(Suppl 6): 91–99.
15. Lawton MP. Quality of life in Alzheimer disease. Alz Dis Assoc Dis 1994; 8: 138–150.
16. Maslow AH. Toward a Psychology of Being. 2nd ed. New York: Van Nostrand Reinhold, 1968.
17. Tyne A. Measuring quality of life in residential services for mentally handicapped people. In: Robertson A, Osborn A (eds), Planning to Care: Social Policy and the Quality of Life, Aldershot, England: Gower Publishing Company, 1985; 77–88.
18. McAdams DP. The Person: An Introduction to Personality Psychology. 2nd ed. Orlando: Harcourt Brace & Company, 1994.
19. Maslow AH. Motivation and Personality. 2nd ed. New York: Harper & Row, 1970.
20. Hughes B. Quality of life. In: Peace SM (ed.), Researching Social Gerontology: Concepts, Methods and Issues, London: SAGE, 1990; 46–58.
21. George LK, Bearon LB. Quality of Life in Older Persons: Meaning and Measurement. New York: Human Sciences Press, 1980.
22. Katz S, Gurland BJ. Science of quality of life in elders: Challenge and opportunity. In: Birren JE, Lubben JE, Rowe JC, Deutchman DE (eds), The Concept and Measurement of Quality of Life in the Frail Elderly, San Diego: Academic Press, 1991; 335–343.
23. Gurland B, Katz S. Quality of life and mental disorders of elders. In: Katschnig H, Freeman H, Sartorius N (eds), Quality of Life in Mental Disorders, New York: John Wiley & Sons, 1997: 193–212.
24. Scheibel AB, Morgan DG, Grady CL, Rapoport SI, Gurland B, Katz S. Neuroscience and aging. In: Birren JE, Sloane RB, Cohen GD, et al. (eds), Handbook of Mental Health and Aging, 2nd ed. San Diego: Academic Press, 1992; 147–248.
25. Lindenberg S. The paradox of privatization in consumption. In: Diekman A, Mitter P (eds), Paradoxical Effects of Social Behavior, Heidelberg/Wien: Physica-Verlag, 1986; 297–310.
26. Lindenberg S. Continuities in the theory of social production functions. In: Ganzeboom H, Lindenberg S (eds), Verklarende sociologie: opstellen voor Reinhard Wippler [Explanatory Sociology: Essays for Reinhard Wippler], Amsterdam: Thesis Publishers, 1996; 169–184.
27. Steverink N. When and why frail elderly people give up independent living: The Netherlands as an example. Ageing Soc 2001; 21: 45–69.
28. Steverink N, Lindenberg S, Ormel J. Towards understanding successful ageing: Patterned change in resources and goals. Ageing Soc 1998; 18: 441–467.
29. Ormel J, Lindenberg S, Steverink N, Verbrugge L. Subjective well-being and social production functions. Soc Indic Res 1999; 46: 61–90.
30. Bruggen A van. Individual Production of Social Wellbeing: An Exploratory Study. Amsterdam: Thela Thesis, 2001.
31. Eijk L van. Activity and Well-being in the Elderly. Amsterdam: Thesis Publishers, 1997.
32. Nieboer AP. Life events and well-being: A prospective Study on Changes in Well-being of Elderly People due to a Serious Illness Event or Death of the Spouse. Amsterdam: Thesis Publishers, 1997.
33. Lindenberg S. Social rationality versus rational egoism. In: Turner JH (ed.), Handbook of Sociological Theory, New York: Kluwer Academic/Plenum Publishers, 2001; 635–668.
34. Feil N. Validation: An empathic approach to the care of dementia. Clin Gerontol 1989; 8: 89–94.
35. Feil N. Validation therapy with late-onset dementia populations. In: Jones GMM, Miesen BML (eds), Caregiving in Dementia: Research and Applications, London/New York: Routledge, 1992; 199–218.
36. Rossaert I. Reminiscentie: Leven en werken met herinneringen. Tijdschrift voor Gerontologie en Geriatrie 1989; 20: 167–168.

37. Achterberg I, Kok W, Salentijn C. 'Snoezelen': A new way of communicating with the severly demented elderly. In: Jones GMM, Miesen BML (eds), Caregiving in Dementia, Vol 2, London/New York: Routledge, 1997; 119–129.
38. Dröes RM. In Beweging: Over Psychosociale Hulpverlening aan Demente Ouderen. Utrecht: De Tijdstroom, 1991.
39. Finnema EJ, Dröes RM, Ribbe MW, van Tilburg W. The effects of emotion oriented approaches in the care for persons suffering from dementia: A review of the literature. Int J Geriatr Psych 2000; 15: 141–161.
40. Teri L, Logsdon RG. Identifying pleasant activities for Alzheimer's disease patients: The pleasant events schedule-AD. The Gerontologist 1991; 31: 124–127.

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