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## **Successful development and aging: theory and intervention**

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### **Abstract**

The trend of population aging encourages a search for workable interventions to support older adults in aging successfully. Yet, the question remains: how can successful aging best be approached in interventions and policy? There is an increasing awareness that aging does not just encompass physical domains, but also social and psychological domains. Additionally, the possible strengths inherent in aging are being recognized, in addition to deficits. Four important models and theories incorporate these new insights: Ryff's model of Psychological Well-Being, the model of Selection, Optimization and Compensation, the Motivational Theory of Life-span Development, and the theory of Self-Management of Well-being. These models each add to a deeper understanding of aging well. However, the SMW theory is especially usable in interventions, because it is the most explicit about potential criteria of 'success' *and* it specifies concrete self-management abilities that – when explicitly linked to basic human physical and social needs – support successful aging. Interventions, based on the SMW theory, are discussed with respect to their applications in social and health care settings.

### **KEY WORDS**

Aging well, successful aging, theory, subjective well-being, social needs, self-management abilities, interventions.

## **Successful development and aging: theory and intervention**

### **Introduction**

Health and well-being, along with the question how to maintain them for as long as possible into old age, continue to intrigue scientists, policymakers, clinical professionals, as well as older adults themselves. The trend of population aging encourages a search for workable insights and interventions to support and serve increasing numbers of older adults. In the last decades phrases like 'healthy aging', 'aging well', 'active aging', and 'successful aging' have become guiding themes in both the scientific field of gerontology and in policy development concerning the aging population (e.g. WHO 2002).

Although there is still little consensus about the criteria of 'success' (Depp and Jeste 2006), a clear development in the field is that the common deficit approach to aging has been modified and the challenge has become how to understand the mechanisms by which aging individuals are able to remain healthy and happy for as long as possible. Today, it is generally accepted that aging successfully is not just a matter of having the right genes or having the right material resources; it is also a matter of how individuals actively regulate their life and their behaviors such that health and well-being are optimized. Knowing more about these self-regulatory aspects of successful aging will enhance the design of interventions and public health policies.

Two general trends underline the importance of knowing more about active self-regulation in the process of aging well. First, the still increasing numbers of older people and the related threat of an overloaded health care and welfare system make it increasingly important that older adults themselves are optimally able to stay healthy and happy for as long as possible. Second, increasing life expectancy, with more remaining years of life after retirement but few social structures and socially defined roles (Freund, Nikitin and Ritter 2009; Riley and Riley 1994; Walker 1999), urge older people to find their way in the life stage that has been called the 'third age'. Because increasingly more people reach this 'third age', more and more people need adequate self-

regulatory skills if they want to (keep) feeling well and living a meaningful life into old age. But how can successful development and aging be understood, and effectively become the focus of interventions and public health policy?

In the remainder of this chapter, first the question will be addressed of how successful development and aging is being approached in research and in the development of interventions. Next, a selection of existing approaches to successful development and aging will be reviewed. One of these approaches, the Self-Management of Well-being Theory, will be elaborated in more detail, because this theory has been shown to be useful as a basis for concrete and effective interventions aimed at the improvement of self-regulation and well-being in older adults. A short description of these interventions will be given. Finally, some suggestions for the future will be discussed.

### **Successful aging: a lifespan developmental perspective**

Many of the perspectives on aging that emerged in the last decades nuanced the dominant biological deficit-approach to aging by recognizing the importance of the multidimensionality of the aging process (i.e. aging is not just a biological process, but occurs also at social and psychological domains of functioning). Moreover, interest in the multi-directionality of the aging process grew (i.e. aging is characterized by gains and losses, many of which occur at individually different points and rates during the lifespan). The recognition of these two important insights resulted, first, in much more attention to the psychological and social phenomena of aging, and, second, in new ideas about the differences between 'usual' and 'successful' aging (Rowe and Kahn 1987). Both had specific implications for theorizing about aging, but also for the design of interventions aimed at supporting older adults in aging well.

With regard to the increased attention to the social and psychological domains of aging, it became much clearer that aging is not just a biological process. Rather, it covers also the social and psychological domains of life (Rowe and

Kahn 1987). Moreover, these domains interact with each other. For example, robust evidence is found that a diversity of social factors influence morbidity (Cohen 2004; House et al. 1988; Seeman 1996) and even mortality (Holt-Lunstad et al. 2010). The same holds for mental health outcomes (Steverink et al. 2011). Additionally, interacting aging-related changes and losses across several domains may result in self-reinforcing spirals of changes and challenges. For example, loss of mobility may negatively affect people's social life, which, in turn, may negatively affect one's mood, which then may undermine the energy to take care of one's physical health and condition. The latter may subsequently lead to a further decline in social activities, and may lead to loneliness, and so on. Thus, an initial (small) loss in one domain may affect resources in other, perhaps multiple, domains. When there is a declining reserve-capacity to compensate fully for certain resource losses, this process may be accelerated and lead to declines in well-being. The complex interplay of different life domains and interacting influences most likely hold for the entire lifespan, but seem to be accelerated in later life (Hawkey and Cacioppo 2007).

However, in addition to possibly negative spirals, positive spirals also seem to occur in aging. Important work in the field of positive aging has been done by Carol Ryff, who criticized the neglect of the possibilities for continued growth and development in old age (Ryff 1989). The field of positive psychology also identified a wide variety of human strengths that potentially increase during old age, such as serenity, wisdom, feeling more relaxed, developing new social relationships (e.g. with grandchildren), and having a broader capacity for the analysis of intellectual and social problems (e.g. Fernández-Ballesteros 2003). Additionally, recent studies showed the positive influence of happiness and subjective well-being on health and longevity (Veenhoven 2008). Although still relatively few studies exist on this matter, the findings consistently show that high levels of subjective well-being significantly lower the risk of mortality and disability, when controlling for other risk factors (e.g. Collins et al. 2008; Ostir et al. 2000). Therefore, the complex interplay of gains and losses in different domains of functioning deserves specific attention in aging individuals. Successful aging thus not only implies the management of

these interacting challenges and cumulative losses, but also the prevention or postponement of them in different domains of functioning, as well as the development and maintenance of strengths.

The second main insight – multi-directionality in the aging process – points to the fact that there is a substantial heterogeneity within age groups, and that there are many individual differences in the aging process, for multiple domains of functioning. This insight has also led to the differentiation between ‘usual’ and ‘successful’ aging (Rowe and Kahn 1987). ‘Usual’ aging refers to how most people age: to typical physical, cognitive and social processes. The other concept, ‘successful aging’, refers to relatively high levels of physical, cognitive and social functioning, as it is visible in individuals who do better than the general population. The latter perspective is appealing because it challenges older adults themselves, as well as clinical professionals and researchers, to address the optimal potential and possibilities for continued growth and resilience at later life stages, instead of focusing on decline and increasing losses. As such, the perspective of successful aging is a helpful construct, too, for designing interventions and policy. However, the phrase ‘successful’ (in SA) has often been criticized, because it would imply a value judgment, and it would imply that people who do not achieve or keep objective high levels of functioning could not age ‘successfully’. Therefore, it might be more acceptable to speak of “aging well”, and emphasize that the ultimate criterion of “aging well” must be the subjective experience of well-being and quality of life, not some objective indicators of high functioning (cf. George 2006). Ultimately, the key criterion of ‘success’ in successful aging can only be the subjective perception of well-being, because older adults who experience declines in physical and cognitive functioning, and who suffer from disability or who lack social engagement, still can rate their well-being as high. Conversely, older adults who show objectively high levels of physical, cognitive and social functioning still may not feel happy. So, the key criterion of ‘success’ ultimately can only be the subjective experience of well-being, not the mere sum of objective indicators of high functioning (see also Huber et al. 2011). Nevertheless, there may be specific objective antecedents and determinants that lead to the subjective experience of elevated well-being in

most people. Therefore, the challenge is to discover these universal determinants, in order to address them in interventions and policy.

But what are the antecedents and determinants of high levels of subjective well-being for most people at later ages? Several external and internal circumstances have been identified. For example, health, social integration and social support, and SES have been found to be important external determinants of high levels of subjective well-being (for a review see George 2006). Additionally, psychosocial characteristics – as internal circumstances - play a role, such as the individual's belief that he or she is in control, and is able to manage his or her own life. Moreover, often these psychosocial factors are found to have both direct effects on subjective well-being, as well as indirect effects via mediating the effects of objective circumstances on subjective well-being. So, aging with high levels of subjective well-being – and thus, aging successfully – is more likely when certain external circumstances are present, together with certain psychosocial characteristics and skills. In other words, successful aging is about both achieving and maintaining the right external resources and the right internal resources (psychosocial characteristics).

Because of the specific issues of multi-dimensionality and multi-directionality of the aging process, it may be especially important that older adults have a diverse repertoire of self-regulatory capacities to manage life proactively and break possible downward spirals. This repertoire should include abilities to reinforce one's strengths, thereby consolidating important resources for aging successfully. So the question is how, by what self-regulatory capacities and behavioral strategies, people are able to age successfully. This is the question of *how* (to age well). Moreover, we need to know what it means to be 'well'; this is the question of *what*. Only when we *understand* (i.e. by a theory that provides explicit *explanations*) *how* people age well, and *what* it means to be 'well', are we able to design interventions. As Bengtson et al. (1999) has stated it: "If you don't understand the problem, how can you fix it?" (p. 7).

Several models and theories exist that try to answer the questions of *what*

and *how*. In the following section we will briefly discuss some of the main models and theories, and see to what extent they are concrete and explicit about 'how' and 'what', and thus useful as a basis for the design of interventions.

### **Existing models and theories about successful development and aging**

Several important theoretical approaches to successful aging exist. Here we will discuss four important models and theories, the first being Carol Ryff's (1989) model of Psychological Well-Being, which is especially concrete about the 'what' question, i.e., what it means to be 'well'. The second and third models being especially concrete about the 'how' question, i.e. about the behavioral processes that lead to aging well. These are the SOC model (Baltes and Baltes 1990) and the Motivational Theory of Life-span Development (Schulz and Heckhausen 1996; Heckhausen et al. 2010). The fourth theory, finally, is a theory that is concrete and explicit about both the how *and* what questions: the Self-Management of Well-being theory (Steverink et al. 2005). The latter will be elaborated on in somewhat more detail.

#### *Carol Ryff's model of Psychological Well-Being*

The model of Psychological Well-Being of Carol Ryff c.s. (Ryff 1989; Ryff and Keyes 1995) is a general model of psychological well-being, which examines perceived thriving in the face of existential challenges over the lifespan. The model basically describes six dimensions of well-being: self-acceptance, positive relationships, autonomy, environmental mastery, purpose in life, and personal growth. These dimensions are based on the integration of insights from life-span developmental theories, clinical theories of personal growth, and mental health approaches (Ryff 1989; Ryff and Keyes 1995). The core assumption of this model is that well-being is not so much an outcome or end state, but rather a process of fulfilling or actualizing one's potentials. Living and aging well, according to this model, imply that people fulfill their potential, which will be visible in high levels on all six dimensions. As such, the six

dimensions of psychological well-being can be seen as criteria of 'success'. Ryff and colleagues have also developed a scale for measuring the six dimensions (Ryff and Keyes 1995).

### *The SOC model*

The SOC model (Baltes and Baltes 1990; Freund and Baltes 2007) is a general model of successful aging, which describes behavioral processes of adaptation throughout the lifespan. Due to the changing balance between gains and losses, including decreasing reserve capacity, selection, optimization, and compensation are assumed to be important processes if people desire to age with 'success'. Selection refers to the selection of and commitment to a specific goal or set of goals. Facing physical, social and cultural constraints, it includes concentration on a limited set of alternatives. Optimization refers to the acquisition, application, and investment of resources such that desired outcomes are attained in selected domains. Compensation refers to processes aimed at maintaining functioning in the face of impending or actual losses by substituting available resources as alternative means. The three processes of selection, optimization, and compensation are presumed to work in orchestration, and to lead to the experience of mastery and adaptability across the lifespan and into old age. Regarding the definition of 'success' in successful aging, the authors of the SOC model state that criteria for success are necessarily relative to social and cultural values. Therefore, they conclude that success can only be defined at a very abstract level, and they conceptualize successful aging as a process encompassing the simultaneous maximization of gains and minimization of losses (Freund and Baltes 2007).

### *The Motivational Theory of Life-Span Development*

The Motivational Theory of Life-Span Development (Heckhausen et al. 2010) is a recent integration of earlier theories on successful development and aging of the same authors (Heckhausen and Schulz 1995; Schulz and Heckhausen 1996). The new theory focuses on the major challenges faced by individuals

throughout the life course and on the motivational and self-regulatory processes that people use to meet these challenges. As in the SOC model, it is assumed that the individual needs to master two fundamental regulatory challenges: selectivity of resource investment, and compensation of failure and loss. When people succeed in this, a sense of control is maintained. The processes by which these challenges are mastered are, according to the Motivational Theory of Life-Span Development, processes of primary and secondary control. Primary control processes are conceptualized as being directed at bringing the environment into line with one's wishes, whereas secondary control processes are defined as changing the self to bring oneself into line with environmental forces (Rothbaum et al. 1982). Heckhausen et al. (2010) conceptualize the secondary control processes explicitly as auxiliary motivational processes that support short-term or long-term primary control striving, not as alternatives or even processes opposed to primary control. Somewhat different than the SOC model, the process of optimization is placed at a meta-level, referring to a higher level universal motivational process of maximizing control. With this latter aspect, the MTLSD is a more explicit motivational theory than the SOC model. Regarding the definition of 'success', the authors are clear that the criteria that differentiate adaptive from maladaptive outcomes of development should be specified. For them, the key criterion for adaptive development is the extent to which the individual realizes control of his or her environment (i.e. primary control) across different domains of life (e.g. work, family, health, leisure) as well as across the life span (Heckhausen et al. 2010, p.35).

### *The Self-Management of Well-being theory*

The Self-Management of Well-being theory (Steverink et al. 2005) basically is an extension of the SPF-Successful Aging theory (Steverink and Lindenberg 2006; Steverink et al. 1998), which in turn is based on the general theory of Social Production Functions (SPF theory; Lindenberg 1996; Ormel 2002; Ormel et al. 1999). In the following section the SMW theory will be described in more detail, because this theory is especially concrete and explicit about both the criteria of 'success' and about the behavioral mechanisms leading to

'success'. This makes this theory especially useful as a basis for the design of interventions. In the following first the basic premises of the theory of SPF will be briefly described, after which the subsequent elaborations that resulted in the integrated Self-Management of Well-being theory will be described.

## **The Self-Management of Well-being theory**

### *The origin: SPF theory*

Social Production Function theory, in its basic form, is a general theory of well-being, applicable to individuals of all ages. SPF theory integrates two core premises: one about human basic needs and related goals and resources, and one about basic behavioral and motivational processes. The first core premise of SPF theory describes a hierarchy of universal human needs, instrumental goals and resources. 'Needs' refer to specific basic physical and social needs that must at least be minimally fulfilled for an individual to experience a sense of well-being (see also Deci and Ryan 2000). The social needs – if fulfilled – provide social well-being, while the physical needs – if fulfilled – provide physical well-being. Together, social and physical well-being contribute to overall well-being. So, the better an individual's needs are fulfilled, the higher the individual's overall subjective well-being will be. In SPF theory, needs are by definition inherent, universal and relevant to people of all ages. Moreover, they are conceptually distinguished from goals and resources. The needs are on the top three layers in the hierarchy, and goals and resources – lower in the hierarchy – refer to the means and instruments by which the needs can be fulfilled. For example, a close relationship is a resource (lower in the hierarchy) to fulfill the need for affection (higher in the hierarchy). When, however, a close relationship has not yet been achieved, it can also be a goal. Goals and resources are thus two sides of the same coin. In addition to two basic physical needs (comfort and stimulation), the SPF theory identifies three basic social needs (affection, behavioral confirmation and status).

Insert Figure 1 here

*Comfort* refers to physical comfort, i.e. the satisfaction of basic physical needs such as food, drink, rest, warmth, the absence of pain, fatigue etc. Stimulation refers to the pleasant range of activation (physically and mentally), i.e. the absence of boredom and the right amount of exposure to novelty, challenges, and interesting events. Affection is the feeling that you are liked, loved, trusted and accepted, understood, empathized with, know that your feelings are reciprocated, feel that others are willing to help without expecting something in return, feel that your well-being is intertwined with others, and feel that others like to be either emotionally or physically close to you (e.g. to hug). Affection thus refers to the love you get for being who you are, regardless of your assets (status) or actions (behavioral confirmation). Behavioral confirmation is the feeling of doing the 'right' thing in the eyes of 'relevant' others and yourself; it includes doing good things, doing things well, being a good person, being useful, contributing to a common goal, and being part of a functional group. Behavioral confirmation thus results primarily from what you do, rather than what kind of person you are (affection), or what you have or can do (status). The final and third social need, status, is the feeling that you are being treated with respect and are being taken seriously, are independent or autonomous, achieve more than others, have influence, realize yourself, and are known for your achievements, skills or assets.

The physical needs are intuitively appealing and generally recognized as present and important, but the social needs also have received considerable support. For example, evolutionary theory has shown that human beings are not only biologically hardwired to connect to others in close relations, but also aspire to be confirmed by their group, and to strive for status within the group (for reviews see Baumeister and Leary 1995; Buss and Kenrick 1998; Reis et al. 2000). Additionally, there are empirical studies that support the idea of the five basic needs as proposed by SPF theory (Nieboer et al. 2005; Bruggen 2001).

The second core premise of SPF theory describes basic behavioral and

motivational processes, and states that human beings are basically motivated to improve their situation. This means, concretely, that there is a basic motivation to improve levels of physical and social need fulfillment. This premise largely overlaps with the notion of 'optimization' in the motivational theory of Heckhausen et al. (2010). Note that, although a basic motivation for improvement is assumed, this does not mean that individuals are always successful in this striving. Human cognitive functioning is subject to the effects of goal-framing, which makes them vulnerable to one-sidedness in their goal striving, and thus to failures (see Lindenberg 2013).

Because of the basic motivation for improvement, people will also try to substitute or compensate for the increasing difficulty of fulfillment of one need by an increased effort to fulfill other needs. For example, when the need for status becomes more difficult to fulfill, people will try to maintain overall social need fulfillment by concentrating more on fulfilling the other two social needs (i.e. behavioral confirmation and affection). As Nieboer and Lindenberg (2002) have shown empirically, people with difficulty achieving high status do, indeed, use their resources for the fulfillment of the needs for affection and behavioral confirmation more than people with accomplished high status do.

The processes of substitution and compensation also show how the physical and social needs of SPF theory overlap with, for example, Maslow's hierarchy of needs (Maslow 1970). Yet, the theoretical approach is basically different (for a detailed discussion see Lindenberg 1996), indeed because of the possibility of substitution and compensation in the fulfillment of different needs. In SPF theory, contrary to Maslow's hierarchy of needs, individuals need a certain minimum fulfillment of both physical and social needs, but beyond this minimum, they can substitute one need fulfillment by that of another need. Thus, individuals may be willing to sacrifice physical need fulfillment for an improvement in social need fulfillment. For example, adolescents are often willing to undergo physically painful initiation rites in order to be accepted by their group, and adults are often willing to sacrifice sleep and rest for working on their career.

From the two core premises of SPF theory (i.e. basic needs, and basic strivings, including maintaining need fulfillment by substitution and compensation) it becomes possible to analyze a) what happens with need fulfillment in the process of aging; b) what would be criteria of 'success' in aging healthy and well; and c) by what behavioral processes would 'success' be possible and likely. This we have elaborated in the Self-Management of Well-being theory. In the following sections this theory will be explained in more detail.

### *The SPF theory applied to aging well*

Applying the SPF theory to the question of how to understand the process of aging successfully, the two core premises of the theory are in need of some specification. First, does the basic premise of the importance of the five basic human needs for subjective well-being still hold when, due to increasing losses in resources, the fulfillment of these needs will become more difficult? Second, does the basic primary motivation as presumed in SPF theory – namely, improvement of need fulfillment – still hold when losses in resources increase in the process of aging and people can only try to maintain their resources as much as possible, or even to manage losses as much as possible? The Self-Management of Well-being theory, based on SPF theory, addresses both questions (Steverink et al. 2005).

### *Patterned change in resources and need fulfillments*

The first basic tenet of the Self-Management of Well-being theory is that, although the universal human needs basically remain the same across the entire life span, the relative ease with which they can be fulfilled changes because the opportunities and resources that are available for fulfilling them change and decline. Important resources include physical resources (such as energy, health, mobility, etc.) and social resources and opportunities. For instance, fulfillment of the need for status often depends on having a paid job, or being recognized for having specific assets or skills, such as being a top athlete or famous singer. At advanced ages, it often becomes relatively more

difficult to fulfill the need for status, not only because of retirement, but also because of age-related physical declines that may undermine specific skills. To a lesser degree, the same holds for fulfillment of the needs for behavioral confirmation and stimulation. The fulfillment of both the needs for behavioral confirmation and stimulation requires physical and social resources that may show age-related declines. Still, by and large, opportunities to fulfill both behavioral confirmation and stimulation decline more slowly with aging than those for fulfilling the need for status. For example, the need for behavioral confirmation can be fulfilled through voluntary work, or by helping others. Fulfillment of the needs for affection and comfort, finally, seems relatively easy to maintain, because these two depend much less on performance and physical strengths than the other needs so that, even when physical and social resources decline considerably, a person may still be able to fulfill the needs for affection and comfort to a certain extent.

So, an aging-specific process regarding need fulfillment must be considered, framed as the “patterned change” hypothesis (Steverink et al. 1998). This process refers to the fact that the availability of resources for the fulfillment of basic needs changes over the life-span, with, in general, resources for status need fulfillment declining first and fastest, and with resources for the fulfillment of affection and comfort declining last and slowest. This ‘patterned change’ hypothesis has been empirically supported: older adults indeed seem to lose their resources for needs fulfillment over time in a specific order: first their resources for status, then for behavioral confirmation and stimulation, and last (if at all) their resources for affection and comfort (Steverink 2001). The patterned change hypothesis also implies a specific process of substitution and compensation regarding the need fulfillments, due to the lifespan patterned changes in resources (Steverink and Lindenberg 2006; Steverink et al. 1998). This means that loss of status need fulfillment will (at least partially) be compensated by increased efforts to satisfy the needs for behavioral confirmation and affection, and loss of need fulfillment for behavioral confirmation will (at least partially) be compensated by increased effort to fulfill the need for affection. In the same vein, loss of need fulfillment for stimulation will be compensated by increased effort to fulfill the need for comfort.

### *The core self-management abilities*

As mentioned previously, the core tenet of the Self-Management of Well-being theory is that aging individuals are basically motivated to improve levels of physical and social need fulfillment, but in the process of aging it must be taken into account that this motivation increasingly will manifest itself as maintaining levels of need fulfillment, and managing failures and losses in need fulfillment. But how do people achieve, maintain, and manage resources such that need fulfillment – and thus overall well-being - remains to be optimized?

In the Self-Management of Well-being theory (Steverink et al. 2005), we identified six core self-management abilities that we consider to be key abilities for managing resources in such a way that need fulfillment is achieved and maintained, and that losses are managed optimally. These six abilities together make up overall self-management ability as the orchestrated use of various active self-management abilities. According to the theory of Self-Management of Well-being, the achievement and maintenance of well-being over the life-span depends on whether people have adequate resources for fulfilling their basic physical and social needs, and, more importantly, whether they have the skills or abilities to manage these resources such that these resources are indeed achieved and maintained, and eventually compensated or restored during the life-span. Thus, overall self-management ability is defined as a generative capacity (consisting of several sub-abilities) to take care of one's own important resources, i.e., resources that help to fulfill the five basic needs that thus contribute to wellbeing.

What abilities have been specified? This can be made clear most easily by an example. Let us take friendship, as a resource for fulfillment of the need for affection, to explicate the six sub-abilities and illustrate the explicit link between the abilities and concrete need fulfillment. Prerequisites in achieving and maintaining friendship are the ability to take initiatives in making friends and the ability to be self-efficacious with regard to one's own behavior in

making friends and being a friend. The maintenance of a friendship furthermore requires the ability to invest in the friendship, which, in turn, is helped by the ability to have a positive frame of mind with regard to this friendship in the future. Moreover, there is a self-management ability that helps to create synergetic effects and thus optimize the outcome of friendship for well-being: The ability to achieve and maintain multifunctionality in a friendship. A multifunctional friend is a person who can satisfy one's need for affection, but at the same time supports the fulfillment of other important needs such as the need for stimulation, for example by jointly participating in interesting activities. The underlying assumption is that the synergetic effects created by mutually reinforcing activities yield more overall well-being than unifunctional activities (Nieboer and Lindenberg 2002). Finally, there is a self-management ability that reduces the negative effects of loss on well-being: The ability to take care of variety with regard to friendship. Ensuring variety simply means not putting all of one's egg in one basket, i.e. to have a variety of friends. If something happens to one friendship, there are others to buffer the negative effect.

Although these six abilities can be specified theoretically as distinct abilities, in reality they will relate to each other and mutually reinforce each other. For instance, self-efficacy reinforces the taking of initiatives, and a positive frame of mind reinforces investment behavior, and vice versa. Moreover, the theoretical derivation of these six abilities does not imply that other abilities may not also be important for ageing successfully. But from the resource- and basic needs-based approach presented here, these six abilities emerge as interacting key abilities. In the literature, most of these abilities have commonly been analyzed and investigated separately (see Steverink et al. 2005, for a review). Here, we integrate them into a larger framework of Self-management of Well-being because it is likely that they are jointly important for sustainable well-being, especially when they are directed at fulfilling the five basic needs (Steverink and Lindenberg 2008). So, although each of the six sub-abilities is considered important in itself, it is the combined and orchestrated use of all six which makes people better self-managers in the process of achieving and maintaining higher levels of resources for the

fulfillment of well-being needs in the process of ageing (Steverink and Lindenberg 2008). The confirmatory factor-analyses that were executed in the development studies of a scale measuring this orchestrated concept of self-management ability showed that, indeed, overall self-management ability could be measured reliably as a composite concept of inter-related abilities (Schuurmans et al. 2005; see also Cramm et al. 2012).

### *Criteria of “success” in the Self-Management of Well-being theory*

With the explicit notions about basic human needs and core self-management abilities, the Self-Management of Well-being theory is very explicit about what aging successfully means and, moreover, what the key criterion of ‘success’ should be. Individuals are most likely to age successfully if they are able to maintain – by using the core self-management abilities - important resources for the fulfillment of the five basic needs; need fulfillment will lead to the experience of overall subjective well-being. ‘Success’, thus, is the experience of subjective well-being that results from the fulfillment of the five basic physical and social needs: comfort, stimulation, affection, behavioral confirmation, and status. For the measurement of these five need fulfillments – together being conceptualized as overall subjective well-being – a scale has been developed (Nieboer et al 2005).

This criterion also implies that the most important external circumstances that contribute to overall well-being are clear and concrete: important external circumstances are those that deliver resources for the fulfillment of the needs for comfort, stimulation, affection, behavioral confirmation, and status. It is this specificity of needs and resources that makes the Self-Management of Well-being theory most explicit about the criteria of ‘success’ and, together with the concreteness of the core self-management abilities, especially suitable as a basis for the design of interventions.

### **Implications for practice**

Effective interventions aimed at supporting older adults in aging successfully

become ever more important with the still increasing numbers of older adults in the population. Effective interventions in the realm of successful aging must be interventions that fit the characteristic processes that are typical at the later stages of life. As argued above, these processes are characterized by multi-dimensionality and multi-directionality. This means that interventions are needed that cover these multiple dimensions, as well as the diversity and heterogeneity of the aging process. So far, most evidence-based interventions in the realm of supporting older adults in managing aging-related challenges are unidimensional. Moreover, they are often focused only on the physical domain. For example, many effective self-management interventions exist that address specific health-related problems, such as chronic diseases (Lawn and Schoo, 2010).

In the psycho-social domain as well, evidence-based interventions exist, but much fewer in number. These are basically also unidimensional, for example interventions for managing depression (e.g. Serrano et al. 2004) or loneliness (e.g. Routasalo et al. 2008). Yet, as argued in the previous section, aging individuals often face multiple challenges (physical, social and psychological) simultaneously, which could be better managed simultaneously. For example, mobility loss may lead to isolation, which may lead to loneliness or depression, which then may further affect mobility loss, etc. So, aging-related changes and losses often accumulate and interact, creating downward spirals of decreasing resources. Moreover, often people's self-regulatory capacity itself is decreasing with such accumulating losses. Ironically, people need their self-regulatory capacity most just when losses loom larger than gains, including the loss of self-management ability itself. Therefore, self-management interventions aiming at successful aging should not just focus on one specific physical health problem, or one specific mental health problem, but cover all core aspects of well-being, including maintaining or regaining self-management ability itself. In other words, integrative and proactive interventions are needed, focusing on several important dimensions of well-being at the same time, and on effective self-management abilities that have reactive and proactive functions at the same time. So far, such integrative and proactive interventions – addressing not only health, but also social and

psychological well-being – are relatively scarce (cf. Pinquart & Sörensen 2001). Moreover, relatively few interventions are designed to explicitly focus on the achievement and maintenance of overall well-being in later life, by teaching preventive and (pro)active self-regulatory skills for aging successfully. What seems to be especially needed are effective self-management interventions that provide older adults with a general repertoire of cognitive and behavioral abilities for dealing with different and interacting aging-related challenges, and at the same time, reinforce their strengths for achieving their wellbeing.

The first thing that is needed for the design of effective integrative interventions is adequate theory (Bengtson et al. 1999; Hendricks et al. 2010; Putney and Bengtson 2008). This is not different for larger programs than for individualized interventions. The SMW theory, as presented in the previous section, is indeed such an integrative theory. This theory can be, and has been, used for the design of integrative and proactive interventions. The interventions based on the SMW theory aim to improve self-management abilities as well as overall well-being by focusing on multiple domains of well-being, including both physical and psycho-social domains. Additionally, they include proactive strategies.

The interventions based on the SMW theory run under the names of GRIP & GLEAM (in Dutch: GRIP & GLANS). The GRIP & GLEAM (G&G) courses are intended for older people who have lost – or are at risk of losing - resources in several domains of functioning, which may lead to a diminished capacity for managing new losses or changes. The interventions thus deal with the issue of the multiple challenges that we discussed earlier. Moreover, the G&G approach is based on an explicitly positive concept, in the sense that they focus on what individuals are still able to do and not only on abilities they have lost. Additionally, the self-management abilities taught are not only intended as a response to loss but also as a tool to be used before loss has occurred. The G&G approach is therefore also strongly proactive and preventive in nature.

The G&G interventions are driven by the application of the theory of the Self-Management of Well-being, as explicated above (Steverink et al. 2005). This theory postulates that if people lose resources, they are not only at risk of losing well-being, but also of losing self-management capacity. Therefore, self-management abilities need to be strengthened together with important resources for physical and social well-being. If people have good self-management abilities – that is, skills enabling them to adequately handle their physical and social resources – it can be expected to lead to physical and social well-being, and subsequently to overall psychological well-being. The Self-Management of Well-being theory defines five core domains of well-being and six core self-management skills. Both the dimensions of well-being and the self-management abilities are explicitly linked, as shown in Figure 2.

Insert Figure 2 here

This matrix of abilities and domains of well-being basically states that each of the six abilities needs to be applied to each of the five dimensions of well-being in order to yield overall well-being (see Steverink et al. 2005 for more details). As such, the matrix basically constitutes the ‘blueprint’ for the design of the G&G interventions and thus also for the concrete ingredients of the interventions. In order to be able to also evaluate the effectiveness of G&G interventions, the ‘blueprint’ has also been used as the basis for the development of a measurement instrument to measure the level of self-management ability, the Self-Management Ability Scale (SMAS-30; Schuurmans et al. 2005). This scale, and also a shorter version of it (Cramm et al. 2012), measures the six self-management abilities as separate abilities, and also provides an overall index of overall self-management ability. The scale is being applied widely in intervention research (e.g. Alma et al. 2012; Frieswijk et al. 2006; Kremers et al. 2006; Martina et al. 2012; Schuurmans 2004). Additionally, the scales have been used in other research projects and surveys (e.g. Cramm et al. 2013; Schuurmans et al. 2004; Steverink & Lindenberg 2008).

The G&G courses have been evaluated in randomized controlled trials and

have proven to be effective regarding the improvement of self-management ability and wellbeing in different groups of older people. Schuurmans (2004) evaluated the G&G home visits course in frail older community-dwelling people. Kremers et al. (2006) evaluated the G&G group course in lonely older women. Frieswijk et al. (2006) evaluated the G&G self-help method in slightly frail community-dwelling older people. In all three studies positive effects were found on both self-management ability and subjective well-being. These effects were still present after four to six months.

Two specific strengths of the G&G approach need to be mentioned explicitly. First, the G&G approach not only addresses the improvement of concrete self-management abilities (i.e. behaviors and strategies), but explicitly also what the self-management abilities should be directed at (i.e. the important domains of well-being). Self-management abilities can only be 'efficient' when they are directed at core dimensions of well-being – both the physical and psycho-social dimensions. Therefore, both the abilities and the dimensions of well-being are being addressed in orchestration. A second specific strength of the G&G approach is that, although the basic approach is integrative and general, at the same time it allows every individual older adult to apply it to his or her unique personal situation and preferences. Thus, the general character of the universal needs makes it possible to apply the interventions to a wide range of different people in a personalized way. For example, all five needs are universal, but perhaps not all needs require intervention: one can choose which need fulfillment to work on. Then, when for example selecting to work on the need for affection, people can choose their personal way of how to go about fulfilling this need: one older adult can choose to improve her contact with a specific grandchild, another can choose to buy a dog. It is this latter aspect what makes the interventions particularly well-tailored for clinical applications.

## **Summary**

The trend of population aging makes it crucial to search for workable insights and interventions to support and serve increasing numbers of older adults in

their ability to age successfully. Both the growth in numbers of older people and the related threat of an overloaded health care and welfare system, together with ever-increasing life expectancy, make it increasingly important that older adults themselves become good self-managers in their own aging process. This is all the more urgent because life expectancy is increasing without an adequate increase in socially defined roles for older adults. This urgency is also in line with the expressed desire of many older people: they wish to remain in control of their own lives and of their own well-being for as long as possible. Supportive interventions for self-management ability and well-being thus seem a valuable tool regarding the health and welfare for older people. Yet, the question remains as to how successful development and aging can best be understood and approached in interventions and policy.

In the last decades, the biological deficit-approach to aging has become less dominant through an increasing recognition that successful aging is a phenomenon that covers multiple domains, ranging from societal and social to physical and psychological domains. Moreover, the finding that 'usual' aging can be distinguished from 'successful' aging inspired many to look at possible strengths and at resilience in aging rather than just deficits, leading to the search for adequate theories about the behavioral and social pathways to successful aging that could guide the development of interventions and policy.

Four important models and theories on successful development and aging that take the new perspectives on aging into account are Ryff's model of Psychological Well-Being (PWB), the model of Selection, Optimization and Compensation (SOC), the Motivational Theory of Life-span Development, and the theory of Self-Management of Well-being (SMW theory). Three of the four models partly overlap in their behavioral and motivational aspects, because they all consider optimization as the most general basic motivational drive, and selection and compensation as strategies to cope with changes and losses or failures. With regard to interventions, however, it also is essential to be as concrete as possible about what the 'success' in 'successful aging' might mean. Ryff's model is explicit about the criteria of 'success', but does

not specify behavioral aspects. Only the SMW theory is explicit on both the behavioral and motivational aspects *and* the criteria of 'success', because it specifies the goals at which the adaptive and proactive behavioral processes should be directed in order to arrive at 'success'. Concretely, these goals are directly related to the five basic needs, as proposed by the theory of SMW. In other words, the SMW theory not only specifies behavioral processes, but also specifies what people should select and optimize, and what they should find compensation for if they aim to age successfully. In addition, the SMW theory is explicit about the core self-management abilities, which, in turn, have to be related to the fulfillment of basic needs. It is this concreteness of goals (related to basic needs) and self-management abilities that makes the SMW theory most explicit about the criteria of 'success' and thereby especially suitable as a basis for the design of interventions.

Indeed, concrete interventions have been developed on the basis of the SMW theory: the GRIP & GLEAM (G&G) interventions (in Dutch: GRIP & GLANS). The G&G interventions are theory-driven and they are innovative, because they cover the whole spectrum of well-being rather than just one specific aspect, as most other interventions do. Moreover, they are basically positive and proactive, focusing on what people still have and are willing to do and develop, rather than on losses and problems. Broad self-management interventions such as the G&G interventions are also important for prevention. Aging healthy and happy often requires that people learn already at younger ages how to manage their resources adequately. Therefore, the G&G interventions – addressing the broad spectrum of self-management ability in orchestration with core aspects of well-being – are not only a tool in reactive management (i.e. addressing losses that already occurred), they are also a tool in positive (i.e. building on one's strengths) and proactive management (i.e. building resources before losses occur). Finally, the G&G interventions are evidence-based, and research is in progress on the implementation of the interventions in Dutch health and social care organizations, and on their cost-effectiveness (Kuiper et al. 2012). Many indications exist that psycho-social interventions can save medical costs. Thus, interventions such as the G&G interventions may be an important complementary tool in health and social

care for older adults.

## **Future outlook**

The field of psychosocial interventions that support older adults in aging successfully is growing. Such clinical approaches, as do the G&G interventions, usually take an individual-centered focus. This has been shown to be beneficial to many older people. However, the insight is growing that individuals are inherently social beings (Cacioppo and Patrick 2008), and their ability to self-manage depends largely on their social connections and social networks. Consequently, it becomes increasingly clear that in the end interventions might be more effective when not just the individual older adult, but also his or her social network is taken into account in the intervention process. So far, approaches to incorporate social networks into programs of self-management are mostly found in the field of chronic disease self-management (e.g. Vassilev et al. 2010). However, aging-related self-management, if it is to be successful, may in the end be a matter of how the individual together with others in the informal social network is co-producing successful outcomes, just as they might do to increase livability in neighborhoods (see Frieling et al. 2012). So, future developments of interventions may benefit from new insights about the role of others and of the wider social network in adequate self-management during the process of aging. Paying more attention to the build-up of self-management ability and well-being, both in older and in younger people, together with attention to the social environment of individuals, may lead to higher levels of successful aging in both individual older adults and their social networks and groups, and so for society as a whole.

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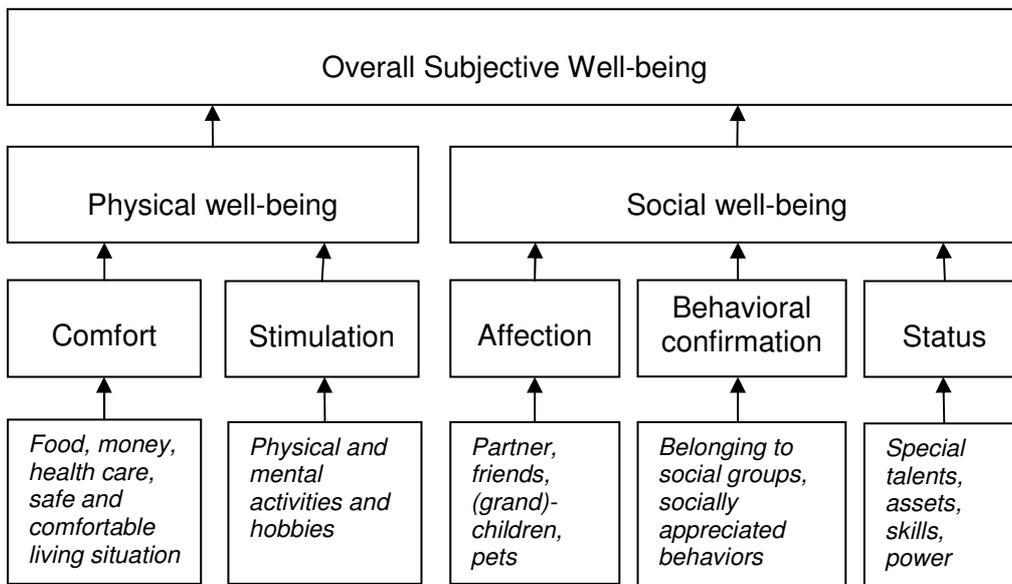


Figure 1 The hierarchy of basic physical and social needs (upper three layers) as specified by the theory of SPF, and *examples of resources* in the lowest (fourth) layer.

Dimensions of Well-being ►	Comfort	Stimulation	Affection	Behavioral confirmation	Status
Self-Management Abilities ▼					
Self-efficacy beliefs					
Positive frame of mind					
Taking the initiative					
Investment behaviour					
Multifunctionality of resources					
Variety in resources					

Figure 2 The matrix of the six Self-Management Abilities and the five Dimensions of Well-being as specified by the Self-Management of Well-being theory (source: Steverink et al. 2005).