

Special Issue: Successful Aging

How Could Lay Perspectives on Successful Aging Complement Scientific Theory? Findings From a U.S. and a German Life-Span Sample

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Purpose of the Study: This article investigates lay perspectives of the concept of successful aging in young, middle-aged, and older adults from 2 cultures, the United States and Germany, to potentially guide the development of scientific theories of successful aging. The empirical findings are embedded in a comprehensive overview of theories of successful aging and life-span development and offer implications for theory development.

Design and Methods: Two samples of young, middle-aged, and older adults from the United States ($N = 151$) and Germany ($N = 155$) were asked about definitions and determinants of successful aging. Codes were developed to capture common themes among the answers, resulting in 16 categories.

Results: Themes mentioned included resources (health, social), behaviors (activities), and psychological factors (strategies, attitudes/beliefs, well-being, meaning). There were striking similarities across countries, age, and gender. Health and Social Resources were mentioned most frequently, followed by Activities/Interests, Virtues/Attitudes/Beliefs, Well-being, and Life management/Coping. Age differences were limited to Growth/Maturation and Respect/Success, and gender differences were limited to Social Resources and Well-being. Educational and cultural effects were limited to psychological factors and Education/Knowledge, which were more often mentioned by U.S. participants and individuals with more education.

Implications: Young, middle-aged, and older lay persons from the United States and Germany have quite similar concepts of successful aging, which they view in far more multidimensional terms than do established scientific theories (Rowe & Kahn, 1998). Given evidence that factors mentioned by laypeople do promote successful aging, considering them in more comprehensive theoretical models may enhance our understanding.

Key words: Successful aging—Lay perspective—Qualitative interviews

Successful aging, generally understood as aging well or having a good old age, is a highly desirable phenomenon, individually as well as socially. Although the notion is used in slightly different variations across countries, the topic has received considerable attention from policy makers (European Innovation Partnership, 2011; United Nations, 2002; World Health Organisation, 2002; for review, see EuroHealthNet 2012), and scholars (P. Baltes & Baltes, 1990; Rowe & Kahn, 1998; Ryff, 1989). However, although the negative aspects of aging can be easily identified (e.g., illness, functional limitations, loss of autonomy), the characteristics of successful aging are more difficult to capture. In the early 1990s, P. Baltes and Baltes (1990) noted that there was no consensus on how to define successful aging, despite substantial research and scholarly discussion. Twenty years later, this still holds true (Depp & Jeste, 2006; Ouwehand, de Ridder, & Bensing, 2007). There is an urgent need to move forward, both theoretically and empirically. Public interest in scientific perspectives on successful aging has been kindled by projected growth in the older population. For instance, almost every third European will be older than 65 in 2060, and one in eight will be 80 and older (Eurostat, 2011). Similar trends are expected in the United States, with every fifth person being 65+ and 4% of the population reaching age 85 or older by 2060 (U.S. CENSUS Bureau, 2012). It is thus important to revitalize discussion of what successful aging means. In this article we first review existing definitions and models, then present our empirical findings on how laypersons perceive successful aging, and then discuss whether their conceptions are reflected in scientific models.

Definitions of Successful Aging

Research on successful aging has long been accompanied by debate about the meaning of the term, which combines *aging*—typically associated with retirement, reduced activity, and various forms of loss—with *success*, signifying strength, achievement, and productivity. The concept has been criticized for establishing an illusory standard and unrealistically encouraging older adults to maintain the achievement orientation of their youth. For instance, in their theory of successful aging, Neugarten, Havighurst, and Tobin (1961) initially argued strongly for maintaining

(middle aged) activity patterns in old age to counteract the socially induced retreat.

Definitions of successful aging proposed over the past 50 years reflect this dilemma: Should older adults be compared with younger individuals, or are different evaluative criteria necessary (Ryff, 1989)? Should successful aging be assessed with objective metrics (e.g., social participation; Cavan, Burgess, Havighurst, & Goldhammer, 1949) or subjective indicators (e.g., life satisfaction; Neugarten et al., 1961), or a combination of both (M. Baltes & Carstensen, 1996)? Other debates center on general versus specific criteria (e.g., satisfaction with life vs. particular life domains), single versus multiple criteria (e.g., longevity vs. health and cognition), and status versus process indicators of success (e.g., one vs. several measurement points; see Bowling & Dieppe, 2005; Freund & Riediger, 2003, for reviews). According to a review by Depp and Jeste (2006), the absence of disability and ill health was the most common criterion in definitions of successful aging, whereas psychosocial factors such as well-being or personal control were included less frequently. Some scholars also advocate a definition that centers on adaptation, arguing that successful aging involves individuals coming to terms with age-associated changes (Birren & Cunningham, 1985; Jopp & Smith, 2006; Steverink, Lindenberg, & Ormel, 1998) and that environmental factors should be considered in this process (e.g., person–environment fit; Lawton, 1989).

Models of Successful Aging

Early theories depicted successful aging in universal terms, suggesting that it could be achieved through identical means by all individuals. For instance, disengagement theory posited that withdrawing from society was the key to successful aging (Cumming & Henry, 1961), whereas activity theory advocated continuous engagement (Havighurst, Neugarten, & Tobin, 1963). However, these universalistic approaches were unable to account for individual differences. The second generation of theories proposed multiple styles of aging. Williams and Wirths (1965), for example, argued that depending on their lifestyles (e.g., emphasizing family, partnership, or work), individuals would have access to different behaviors for coping with age-related changes.

Although stronger emphasis was placed on individual differences and determining the styles most suitable for specific groups (e.g., for individuals with lifestyles centering around work vs. family), these typological approaches were difficult to replicate and the concentration on variable combinations obscured the role of specific factors.

The next generation of theories, representing correlate or resource models, brought these specific factors to the fore. The most popular approach was advanced by [Rowe and Kahn \(1998\)](#), who distinguished successful from usual aging. Usual aging was defined as being able to function well while being at risk for disease or disability, whereas successful aging was characterized by high cognitive and physical functioning, low probability of disease and disability, and active engagement with life. Thus, although maintenance of functional capacities and low risk for disease are very important, their combination with active engagement is considered central for defining successful aging. [Garfein and Herzog \(1995\)](#) argued for similar factors in their conceptualization of robust aging, stressing the importance of functional health, cognitive functioning, and productive activities, and also adding emotional well-being. Finally, in contrast to most models' focus on basic resources such as health and cognition, [Ryff \(1989\)](#) proposed that successful aging is related to psychological factors including self-acceptance, meaning in life, environmental mastery, personal growth, autonomy, and positive social relations. All of these models have advanced the study of successful aging significantly, especially by emphasizing specificity and differentiation. However, they have generally neglected relations between different factors and also have focused more on defining successful aging than on exploring contributing mechanisms in detail.

The current generation of models focuses on dynamic processes of adaptation by considering development across the entire life span. The most prominent models are the dual-process model of [Brandtstädter and colleagues \(Brandtstädter, 1999; Brandtstädter & Rothermund, 2002\)](#), the Selection, Optimization, and Compensation model of [P. Baltes and Baltes \(1990; Freund & Baltes, 1998\)](#), and the life-span theory of control by [Heckhausen and Schulz \(1995\)](#). Besides using different terms, these models are notable for centering on strategies, conceived either as active behaviors or as cognitions, and for addressing goal setting (e.g., selecting and changing goals), methods of goal pursuit (e.g., investing effort, recruiting others, using technical means), and changing attitudes to deal with restricted opportunities (e.g., disengagement, devaluing competing goals, protective attributions; for review, see [Boerner & Jopp, 2007](#)). Various studies support these models empirically, showing that strategic behavior and cognitions represent important mechanisms of successful aging. At the same time, although basic resources such as health are acknowledged, they have no

explicit role in these models. Meanwhile, two most recently developed models encompass both resources and strategies. [Steverink and coworker's \(1998\)](#) self-management theory argues that age-associated changes in both resources and goals need to be considered and that substitution and compensation of resources and goals represent central elements of successful adaptation. A second approach, by [Jopp and colleagues \(Jopp & Rott, 2006; Jopp & Schmitt, 2010; Jopp & Smith, 2006\)](#), suggests that it is the interplay between resources (e.g., health and social partners), strategies (e.g., life management and coping skills), and beliefs (e.g., cognitions about self) that fosters successful development over the life span, including old age.

In sum, research on successful aging has led to increasingly sophisticated models with multiple definitions and determinants. However, the question of whether these models resemble laypersons' understandings of successful aging has only been addressed more recently ([Dark-Freudeman, 2010; Fernández-Ballesteros et al., 2010; Tate, Swift, & Bayomi, 2013](#)).

Laypersons' Perspectives on Successful Aging

Lay perspectives on successful aging have been investigated much less often than theory-driven definitions ([Phelan, Anderson, Lacroix, & Larson, 2004](#)) but are important for a variety of reasons. For instance, they have policy and public health relevance: If scientific and lay perspectives differ widely, science-based policy may seem either incomprehensible or irrelevant to the public ([Bowling, 2006](#)). By contrast, policies and interventions that are congruent with lay conceptions are likely to receive increased public involvement and commitment. Consulting laypersons about their views on successful aging may also help to shape scientific discussion and inform the development of theoretical models ([Montross et al., 2006; Strawbridge, Wallhagen, & Cohen, 2002](#)).

Research on lay views includes an early study by [Fisher \(1995\)](#), who asked 40 members of a grandparent program, aged 61–92, what constitutes successful aging. Three fourths of the sample mentioned activities, especially social activities. The psychological factors proposed by [Ryff \(1989\)](#) were mentioned as well: Half of the sample cited making a contribution or having a sense of purpose, and 25%–40% mentioned autonomy, growth, or self-acceptance. About 40% also mentioned income and health resources. [Knight and Ricciardelli \(2003\)](#) reported similar findings with 60 Australians aged 70–101: Some of the factors proposed by Ryff were mentioned (i.e., growth, relationships, independence, appreciation/value of life), but health and activity were cited most often. Additionally, happiness/contentment was mentioned by 13% of the sample.

Using a large, more representative sample from the Manitoba Follow-Up Study (1,821 men averaging 78 years of age), Tate, Lah, and Cuddy (2003) found that successful aging was most often associated with health, satisfaction/happiness, and general activity. One fifth of participants also pointed out the role of family. Psychological factors were mentioned by 6% (being useful) to 19% (positive attitude). About 8% further indicated that having goals is important, mirroring suggestions by current successful aging approaches (Freund & Baltes, 1998; Heckhausen & Schulz, 1995).

Bowling (2006) extended the usual focus on older adults by including middle-aged individuals in her study, which involved interviews with 854 British adults aged 50–94. Supporting earlier findings, she reported a mix of attributes: Over two thirds of participants referred to basic resources such as health and functioning, and about half mentioned psychological factors (e.g., having an active mind, life satisfaction, positive outlook). However, there were also notable differences. Health and psychological factors were mentioned more often than in other studies, though this may be related to differences in how factors were categorized (e.g., combining psychological aspects into one broad category). Also, work emerged as a new category and independence was less important (i.e., mentioned three times less often than by Tate et al., 2003), which may reflect the younger age of the participants. Still, Bowling (2006) found only a few age differences: Finances/living circumstances were mentioned more often by middle-aged than older participants, whereas social roles/activities were mentioned more by older than middle-aged people. Bowling did not offer an explanation for these findings, but middle-aged people may have difficulty imagining what old age will be like (e.g., how will my health develop? Will there still be retirement pensions?) and thus focus on factors important in their current life stage (e.g., finances). If so, their expectations may shift as they actually enter into old age and learn firsthand about its particular opportunities and constraints (e.g., finances may be less of an issue than social inclusion). Further, the only gender differences found in Bowling's (2006) study were that men mentioned social roles/activities, relationships, and neighborhood less often than women. The limited scope of these differences is surprising as Western societies challenge men and women differently as they age (Smith & Jopp, 2005).

Cultural Differences and Similarities in Laypersons' Perceptions of Successful Aging

An emerging field is the examination of cultural variation in views on successful aging (Fernández-Ballesteros et al., 2008, 2010; Hilton, Gonzales, Saleh, Maitoza, & Anngela-Cole, 2012; Lewis, 2011). Studies have found some cultural differences, especially when comparing Eastern or

Asian versus Western cultures (Iwamasa & Iwasaki, 2011; Laditka et al., 2009). Keith, Fry, and Ikels (1990), for instance, found that although European Americans associated successful aging primarily with self-sufficiency, Hong Kong residents could not understand why one would want to live alone in old age. Substantial differences were also found in Japanese and American ratings of the importance of 20 attributes of successful aging (e.g., longevity, genes, good health, friends and family, loneliness, life satisfaction, and making choices). Elders living in Japan only rated one third of the attributes as important (Matsubayashi, Ishine, Wada, & Okumiya (2006), whereas Japanese Americans and White Americans rated almost two thirds of the same attributes as important (Phelan et al., 2004). On the other hand, most attributes rated as important by Japanese nationals were also rated as important by Americans, regardless of Japanese or other heritage.

Other studies, however, reported minor to no cross-cultural differences (Fernández-Ballesteros et al., 2008, 2010). One example is the study mentioned earlier, in which Phelan et al. (2004) found that Japanese Americans and White Americans rated the same attributes as important to successful aging. Fernández-Ballesteros and colleagues (2008, 2010) compared seven Latin American countries (Brazil, Chile, Colombia, Cuba, Ecuador, Mexico, and Uruguay) and three European countries (Greece, Portugal, and Spain) and found that across all of them, lay concepts of successful aging were multidimensional and emphasized physical, functional, psychological, and social conditions.

In sum, studies suggest that laypersons perceive successful aging as a combination of basic resources (e.g., health, finances, and social) and psychological factors, including cognitive and behavioral strategies (e.g., goal setting and activities) and beliefs (e.g., positive attitudes and purpose). Age, gender, and cultural differences seem less pronounced. Still, it is possible that including younger participants or other cultures would result in stronger differential patterns. Further, younger individuals' perceptions are important, given the impact of health behaviors on aging. Their views could also reveal critical gaps in knowledge (e.g., regarding the importance of environmental aspects) and therefore hint at potential educational interventions.

The Present Study

The present study investigated lay concepts of successful aging in young, middle-aged, and older Americans and Germans. Despite a shared Western cultural inheritance and similarities in history, religion, and degree of modernization, German and American views on aging may be different. According to Esping-Andersen's (1990) classification of welfare states, the United States represents a liberal system characterized by minimal state provision of welfare, which

results in higher individual responsibility for health and well-being. By contrast, Germany represents a corporative/conservative welfare state and offers more programs and benefits, which generates expectations that health care and social security should be guaranteed by the government/community at least to some extent. Consistent with these differences, Americans have been found to have younger age identities (Westerhof, Whitbourne, & Freeman, 2012) and a stronger tendency for self-enhancement than Europeans (Uotinen, 1998; Westerhof, Barrett, & Steverink, 2003). Thus, one could assume that Americans also may stress the active role of individuals in achieving successful aging, for instance through lifestyle choices. Considering that U.S. individuals also report less physical loss and more psychological growth as they age (Westerhof et al., 2012), one could further assume that they would mention psychological factors more frequently when describing successful aging than Germans do. At the same time, Germans might stress the role of the political and social environment in shaping successful aging more than Americans, given their expectations of government. In this study, we developed a coding scheme to identify central themes in German and American views of successful aging and tested whether mentioning specific themes was related to participants' age, gender, years of education, or cultural background. Findings were then linked to current theoretical models of successful aging.

Methods

Participants

The sample consisted of 306 individuals aged 15–96 ($M_{Age} = 46.19$, $SD = 21.56$), including 151 Americans and 155 Germans. Specifically, the sample included 103 young ($M_{Age} = 22.75$ years, $SD = 3.95$, range = 15–29 years), 92 middle-aged ($M_{Age} = 45.99$, $SD = 9.33$, range = 30–59 years), and 96 older individuals ($M_{Age} = 71.53$, $SD = 8.34$, range = 60–96 years; age and gender information was missing for 15 individuals). The U.S. sample was ethnically diverse, including 66% White/Non-Hispanic, 21% Black, 7% Asian, and 4% Hispanic participants. The German sample was 100% White, reflecting the more limited ethnic diversity of the total population. Study participants included high school students, undergraduate and graduate students of a U.S. and a German university, as well as individuals approached by graduate research assistants in public settings and other individuals recruited by word of mouth. To ensure inclusion of less physically well elders, a subgroup of older adults was approached through cooperating independent living facilities and nursing homes. Interviews were conducted in participants' homes, laboratory settings, and in other public places (e.g., a nursing home cafeteria). U.S. and German participants did not

differ in terms of age ($t(289) = 1.69$, ns) or gender distribution ($\chi^2(1, N = 291) = 0.20$, ns). They did differ in years of education ($t(303) = -5.18$, $p < .001$), with U.S. participants reporting an average 15 years of education, whereas German participants reported 13 years.

Measures

Assessment of Views on Successful Aging

Themes related to successful aging were assessed with two open-ended questions, asking participants how they defined successful aging (What is successful aging in your view?) and what they thought contributed to successful aging (What is involved in the process of successful aging?). Trained interviewers (native speakers of English or German, respectively) recorded answers without interrupting the participant. When the participant concluded, the interviewer summarized the answer by repeating its central elements and asked whether the participant could think of anything else. Such prompts were given twice for each question. If participants had difficulty understanding the questions, which rarely happened, interviewers repeated them using standard supplementary phrasings (i.e., replacing "successful aging" with "aging well"). Given the differential cultural understanding of successful aging, interviewers were instructed not to provide any additional cues.

Coding

Given that answers for both questions turned out to be very similar, data were combined for coding. Open answers were examined to identify current themes, using a qualitative analysis approach influenced by "open coding" in grounded theory (Glaser & Strauss, 1967), as well as "clustering" or "theme identification" as referred to in more eclectic approaches (Miles & Huberman, 1994). Guided by these approaches, we followed a stepwise procedure to develop the coding schema for the study. Specifically, we randomly chose 20 participants' answers out of the total data set and created a preliminary set of codes based on the themes they mentioned (e.g., functional health). Answers from another 20 randomly chosen participants were used to evaluate and refine the original codes and see if any further themes emerged. Because no additional major themes were apparent, we concluded that the saturation point had been reached and our revised codes were adequate for the data. We then trained staff to apply the revised codes to the entire data set. Subsequent coding was done by pairs of raters, who had excellent interrater reliability, with a Kappa value of $\kappa = 0.88$ (Cohen, 1960). In this procedure, rater agreement is calculated by taking into account that raters could choose similar codes by chance.

The final coding system, including major categories, subcategories, and examples, is described in Table 1.

Table 1. Definitions and Determinants of Successful Aging: Coding Categories, Frequency of Mentions (Definitions and Determinants Combined), and Examples

Code/theme	Subcategory	Examples
Health (81.7%)	Health in general (65.0%)	Being or staying healthy Absence of disease Good physical appearance
	Health behavior (43.8%)	Not smoking Not too much alcohol Healthy diet
	Physical fitness (29.4%)	Being physically fit Energy, vitality Not getting rusty
	Mental health (25.8%)	No dementia Mentally fit High mental capacity Being mentally active
Social resources (65.7%)	Care-related aspects (1.3%)	Getting the professional care needed
	Have social resources (52.9%)	Friends Family Good contacts A good spouse
	Feeling of social embeddedness/ belonging (20.9%)	Having support Not being lonely If others are happy, I also feel happy
	Social engagement/participation (13.1%)	Activities related to society, social groups Participating in society Social engagement Generativity
Activities/Interests (55.9%)	Activity without further specification (17.0%)	Being/remaining active Participating in life
	Cognitive activities (16.0%)	Learning Reading Keeping abreast Mental training
	Work/Job-related activities (15.4%)	Being able to work until the age of 67 Doing respected work Doing one's job well
	Sports (10.8%)	Regular exercise Engaging in sports until I am old
	Hobbies (9.8%)	Dancing Gardening
	Travel (6.2%)	Travel Travel by motor home
	Culture/Creativity (2.9%)	Attending cultural events Theater Creative activities
	Volunteering/Unpaid engagement (2.9%)	Working with a local club, group, party Volunteer work
Virtues/Attitudes/Beliefs (51.0%)	Virtues (15.7%)	Persistence Discipline Dedication
	Positive attitude about life (15.0%)	Positive thinking Valuing life Not worrying

Table 1. Continued

Code/theme	Subcategory	Examples
Well-being (49.3%)	Acceptance (14.7%)	Being at peace with oneself Finding balance Being honest with oneself Not being affected by disease
	Openness/curiosity (14.4%)	Accepting today's trends Remaining flexible Exploring new things
	Self-esteem, self-efficacy, be good to self (11.1%)	Being authentic Be secure with yourself Believe in your skills Take care of yourself
	Other psychological characteristics (5.9%)	Personality Have right mind-set Personal attitude
	Well-being/satisfaction/happiness/ fulfillment (33.7%)	Feeling good Being/remaining happy Satisfied with one's life
Life management/ Coping (35.9%)	Enjoying life (24.5%)	Having fun Living fully Having a calm, stress-free life
	Setting goals/having plans/planning for the future (16.0%) Realizing goals/working on tasks/ starting new things (21.6%)	Having goals Develop new aims in life Pursuing objectives Reaching toward goals Setting goals and working on them Taking up challenges Making use of opportunities
	Coping (active or passive; 8.2%)	Managing things Optimal stress reduction Minimizing stress Resolving difficulties
Financial Resources (31.4%)	Having money/wealth (22.2%) Financial security, retirement fund (8.5%)	Have financial resources Financial security Having a pension Having fund offered by employer
	Money/wealth not needed (1.0%) Acceptance of age/aging/death/dying (9.2%) Becoming old (8.2%)	Better to be (healthy and) poor than rich (and sick) Not wishing to be young again Not viewing age as a punishment Living for many years Reaching 80 years old Thinking about aging
Aging/Age as a topic (25.5%)	Thinking about/anticipating age/aging/ death/dying (4.6%) Remaining young (3.9%) Ignoring age/aging/death/dying (1.0%)	Staying young Not thinking about aging
	Independent without further specification (12.1%)	Managing life without help Being independent Taking care of oneself Having more freedom Taking responsibility
	Autonomy (4.9%) Physical independence/mobility (3.6%)	Being mobile Maintaining mobility
Meaning in Life (14.7%)	Religion (9.8%) A life worth living (5.9%)	To get old is a gift from heaven Volunteering in church Meaningful life

Table 1. Continued

Code/theme	Subcategory	Examples
Growth/maturation (14.4%)		Developing further Working on oneself Working on one's attitudes Not being egoistical Letting children go, stepping back
Respect/status (13.7%)		Respect given by society Status
Education/knowledge (12.1%)	Education (6.9%) Knowledge about life in general (5.9%)	Having a good education Graduating successfully (school, university) Understand the world Understand what it means to be an adult Profiting from experience at work
Microenvironment (9.5%)	Environment (not further specified or social; 6.2%) Positive role models (2.3%)	Growing up in a good environment To have a beautiful apartment Housing environment To grow old like one's own parents Having positive models
Society/macroenvironment (8.2%)	Family upbringing (1.0%) Social policy (health/work/education/ retirement policy; 4.2%) Policy/society (not further specified; 3.9%) Negative aging stereotypes (1.3%) Newspaper/TV (0.7%)	Receiving a good education within the family context Society responsible for good health care Able to retire before being completely spent Eliminating societal egoism
Other (2.3%)	Includes all topics that could not be coded otherwise	Elderly adults are not taken seriously as competent adults Media are counterproductive (e.g., complain about old individuals) Sharing one's life story To live

Notes. Percentages refer to the proportion of the total sample reporting a theme. As multiple themes were mentioned by each participant, numbers do not add to 100.

Additional Measures

Participants were also asked about their age, gender, and education. Data on educational degree (1 = *no degree* to 6 = *university degree*) were converted into years of education for better international comparability.

Procedure

Study procedures were approved by IRB. After obtaining informed consent, interviewers administered the open questions on successful aging. The additional questions followed. Participants did not receive any compensation.

Data Analysis

The coded data were used as categorical variables in SPSS (e.g., theme health mentioned *yes* = 1, *no* = 0). We also computed a variable representing the sum of themes mentioned per individual. Regression analyses were performed to determine whether participant characteristics (e.g., age, gender, education, and culture) were associated with the overall number of codes (linear regression was used given the continuous outcome) or with mentioning specific codes (logistic regressions were used to predict the likelihood of

mentioning particular themes). Regressions allow identification of the independent (unique) contribution of a specific variable in explaining individual differences in an outcome while concurrently considering the other predictors. Regression assumptions were met, and there was no indication of multicollinearity. Significance level was set to $p < .05$.

Results

Findings are presented in three sections. First, we report how many themes were mentioned per participant, which themes emerged, and how often participants reported these specific themes. Second, we examined whether the overall number of themes mentioned was related to age, gender, education, or cultural background, and third, whether specific topics mentioned were linked to these participant characteristics.

Successful Aging: Reported Themes

Participants mentioned 4.99 different themes on average ($SD = 1.89$, range = 1–12). The category Health was mentioned most often (81.7%) and was dominated by general

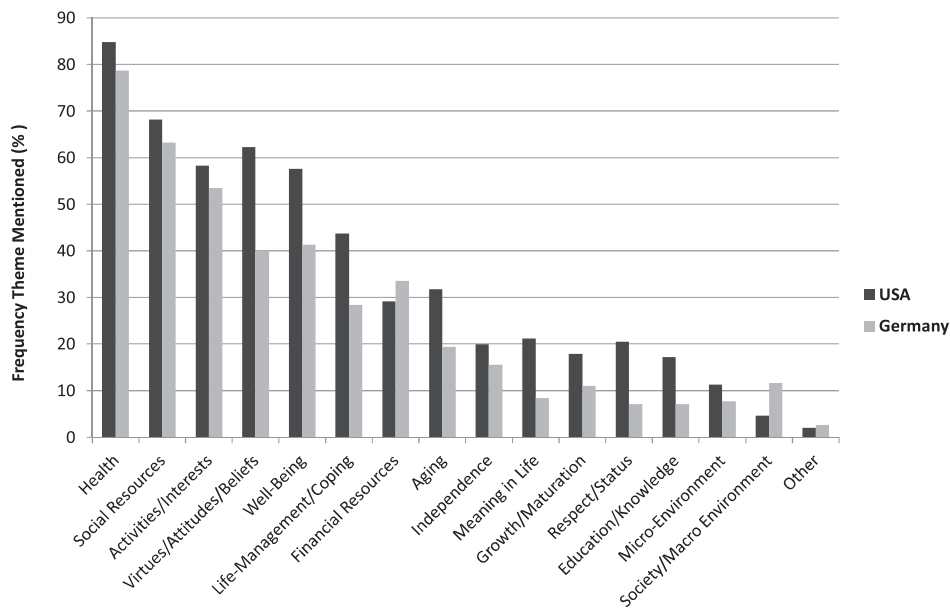


Figure 1. Frequency (percentage) of specific themes mentioned, split by German and U.S. participants (Germany: $N = 155$; United States: $N = 151$; multiple themes were mentioned, thus numbers do not add up to 100).

health conditions, followed by health behaviors, physical fitness, and mental health (see Table 1 for subcategory percentages). Social Resources, including having a social network, being socially embedded, and social participation, were mentioned second most often (65.7%), followed by Activities/Interests (55.9%) including cognitive activities, work/job-related activities, sports, hobbies, travel, culture, and volunteering. About half of the participants mentioned Virtues/Attitudes/Beliefs (51.0%). This category included five subcategories: Virtues, Positive attitude about life, Acceptance, Openness/curiosity, and Self-esteem/Self-efficacy/Be good to self. Another half of the participants mentioned Well-being (49.3%). Another third mentioned Life management/Coping (35.9%) and Financial Resources (31.4%) as important themes. One fourth of the sample mentioned Aging (e.g., reaching a specific age and dealing with aging) as an explicit theme (25.5%). Notably, only 17.6% mentioned Independence (e.g., autonomy and physical independence) as important. Meaning in Life and Growth/Maturation were each mentioned by 14.4%, while slightly fewer discussed Education/ Knowledge (12.1%) and Respect/Success in Life (13.7%). Several participants saw the environment as important for successful aging: Micro Environment (e.g., upbringing or living situation) was mentioned by 9.5%, and Society/Macro Environment (e.g., society's use of policy measures to enable successful aging) was mentioned by 8.2%. A total of 2.3% of the participants mentioned other themes that did not fit into any of the codes reported above.

It is of note that the rank order of the themes mentioned was about the same across American and German

participants. As shown in Figure 1, participants from both countries mentioned the same top five themes—Health, Social Resources, Activities/Interest, Virtues/Attitudes/Beliefs, and Well-being. In both countries, Health was considered as most important, followed by Social Resources. The sequence of ranks 3–5 varied slightly between countries. Thus, descriptive data show that themes mentioned include a variety of basic personal resources and psychological characteristics as well as environmental factors, and that the themes mentioned most often were similar for U.S. and German participants.

Relationship Between Total Number of Themes and Age, Gender, Education, and Cultural Background

We first examined whether age, gender, education, and cultural background were related to the total number of different themes mentioned. Zero-order correlations indicated that years of education had the strongest correlation to the total numbers of themes ($r = .42$), followed by cultural background ($r = .33$, $ps < .001$). The total number of themes mentioned was also negatively correlated with age ($r = -.14$) and positively correlated with gender ($r = .13$, $ps < .05$). A linear regression was performed next to examine concurrent effects for the four predictors. The regression model explained a total of 25% of variance ($p < .001$). Years of education was the strongest predictor ($\beta = .33$, $p < .001$) and explained 10% of independent (unique) variance. Cultural background

($\beta = .24, p < .001$) and gender ($\beta = -.12, p < .001$) were also significant predictors and explained 5% and 2% of unique variance, respectively. The effect of age was not significant ($\beta = -.08, p = .11$). Thus, findings indicate that mentioning a higher total number of themes was independently associated with having more education, being female, and being from the United States but was unrelated to chronological age.

Likelihood of Mentioning Specific Themes in Relation to Age, Gender, Education, and Cultural Background

To determine whether the likelihood of mentioning a specific theme was related to participant characteristics, we conducted logistic regressions for each theme (e.g., dependent variable: health *yes* = 1, *no* = 0) and the predictors age (continuous), gender (*males* = 1, *females* = 0), years of education (continuous), and cultural background (*U.S.* = 1, *German* = 0). Given that all predictors were used simultaneously, the significant findings reported subsequently were reliable while controlling for the other concurrent effects. Table 2 summarizes the results of the significant models; those predicting Health, Activities/Interests, Independence, Micro environment, and Other Themes had no significant overall model fit.

Age effects were found for only two categories: Growth/Maturation (odds ratio [OR] = 0.98, $p < .01$) and Respect/Success (OR = 0.98, $p < .05$). Follow-up analysis contrasting age groups revealed that the middle-aged and older adults together were about half as likely to mention Growth/Maturation, relative to the young age group. Older participants were 78% less likely to mention Respect/Success than young and middle-aged participants.

Gender effects were also found for only two themes: Social Resources (OR = 0.49, $p < .001$) and Well-being (OR = 0.48, $p < .01$). Men were only half as likely to mention social factors and well-being as important for successful aging relative to women.

Effects for years of education were found for several psychological themes. Individuals with higher education mentioned the following themes more often: Virtues/Attitudes/Beliefs (OR = 1.08, $p < .05$), Well-being (OR = 1.13, $p < .01$), Respect/Success (OR = 1.15, $p < .05$), and Life management/Coping (OR = 1.11, $p < .01$). In addition, participants with higher education were also more likely to mention Education/Knowledge (OR = 1.22, $p < .01$) and Aging as specific themes (OR = 1.09, $p < .05$).

Cultural background effects were found for psychological constructs. Although there was some overlap, the categories affected by cultural background were

Table 2. Significant Logistic Regression Models Predicting Specific Themes Mentioned (*yes* = 1, *no* = 0) With Age, Gender, Education, and Role of Cultural Background

Model predicting outcome (<i>yes</i> = 1, <i>no</i> = 0)	Age		Gender (Male)		Education		Culture (United States)		Nagelkerke R ²	χ^2
	OR	CI	OR	CI	OR	CI	OR	CI		
Social resources	1.00	0.99-1.47	0.49**	0.30-0.81	1.07+	0.99-1.15	1.15	0.68-1.95	0.057	12.06*
Life management/coping	0.99+	0.98-1.00	0.73	0.44-1.22	1.11**	1.03-1.20	1.63+	0.98-2.71	0.099	21.60**
Growth/maturation	0.98**	0.96-0.99	0.83	0.42-1.64	1.11+	0.99-1.25	1.49	0.75-2.94	0.088	14.75**
Virtues/attitudes/self-efficacy	1.00	0.99-1.01	0.62+	0.38-1.01	1.08*	1.01-1.16	2.54**	1.54-4.21	0.124	28.17***
Well-being	0.99	0.98-1.00	0.48**	0.30-0.80	1.13**	1.05-1.22	1.67*	1.01-2.76	0.145	33.08***
Aging	0.99	0.98-1.01	1.37	0.79-2.36	1.09*	1.01-1.19	1.66+	0.95-2.90	0.067	13.41**
Education/knowledge	0.99	0.97-1.01	1.46	0.70-3.03	1.22**	1.07-1.40	2.30*	1.06-4.97	0.128	19.98**
Respect/success	0.98*	0.96-0.995	0.80	0.39-1.65	1.15*	1.01-1.31	2.66*	1.24-5.68	0.135	21.82***

Notes. Only significant models are presented. CI = confidence interval; OR = odds ratio.
 * $p < .10$. ** $p < .05$. *** $p < .01$. **** $p < .001$.

not necessarily identical to those with education effects. Specifically, U.S. participants mentioned Meaning almost 3 times more often ($OR = 2.83, p < .01$) and Respect/Success ($OR = 2.66, p < .05$) and Virtues/Attitudes/Beliefs about 2.5 times ($OR = 2.54, p < .001$) more often than German participants. Well-being was also mentioned more often by U.S. participants ($OR = 1.67, p < .05$). Culture also affected mentions of one basic resource construct, Education/Knowledge, which was mentioned about twice as often by U.S. participants ($OR = 2.30, p < .05$).

Two additional effects are worth noting. In some cases, regression models including all four predictors were not significant but models testing specific predictors (e.g., age only) were. This was true of Health (Nagelkerke $R^2 = .030, \chi^2 = 5.98, p < .05$) and Society/Macro environment (Nagelkerke $R^2 = .068, \chi^2 = 5.13, p < .02$). Health was mentioned less often by young adults relative to middle-aged and older adults ($OR = 2.12, p < .001$), and U.S. participants were less likely to mention Society/Macro environment ($OR = 0.35, p < .05$) as important for successful aging than German participants.

Discussion

To our knowledge, this is the first study of lay concepts of successful aging comparing U.S. and German participants, and one of few studies assessing young, middle-aged, and older individuals. Findings can be summarized in five major points.

First, many of the themes mentioned by our study participants as important for successful aging are similar to those found in prior research, though there are some differences. Health was mentioned most often, paralleling earlier findings (Bowling, 2006; Knight & Ricciardelli, 2003; Phelan et al., 2004; Tate et al., 2003). About two thirds cited social resources, another topic reported often in other studies (Fisher, 1995; Knight & Ricciardelli, 2003; Matsubayashi et al., 2006; Tate et al., 2003), though social resources were mentioned more often by our sample than in prior studies. This could be related to the fact that we did not differentiate elements such as social roles and social relations—as, for example, Bowling (2006) did—which may have resulted in a larger overall category. Activities/Interests and Virtues/Attitudes/Beliefs were cited by more than half of our sample, representing higher percentages than reported earlier (Bowling, 2006; Fisher, 1995; Tate et al., 2003). Well-being was also mentioned by half of our sample, which was more than double the percentage found in prior studies (Knight & Ricciardelli, 2003; Tate et al., 2003). Reasons for these differences could be related to the assessment method. For instance, prior studies (Bowling, 2006; Tate et al., 2003)

have often asked participants for written definitions of successful aging, which may have lead to fewer topics and less detailed description. By contrast, the in-person interviews used in our study may have encouraged more reflection and increased reports of less obvious themes (e.g., psychological aspects).

Finances were mentioned by about 30% of the sample, a finding which is comparable to Bowling's (2006) and underscores the importance of this resource. Compared with Fisher's (1995) and Fisher and Specht's (1999) studies, we did not find much emphasis on personal growth or meaning in life. One reason for this could be sample composition: Although Fisher investigated special groups of older adults (i.e., surrogate grandparents and older artists) who may have had a strong focus on creating meaning in life, our sample could be more representative of the general population (as with Tate et al., 2003).

Participants also mentioned two themes that have been reported rarely in prior layperson studies, namely Education/Knowledge (i.e., education, work experience, and knowledge about life) and Society/Macro environment (i.e., policy, stereotypes, media, and health care). Mentions of Education/Knowledge could be attributable to the inclusion of young participants whose life phase is strongly dominated by school and the acquisition of knowledge. Although we found no age effect for this category, middle-aged persons who have been asked specifically about education/knowledge in other studies have been more likely to rate it as important for successful aging compared with older adults (Fernández-Ballesteros et al., 2010). Mentions of Society/Macro environmental themes could be related to cultural factors (Fry et al., 1997; Litwin, 2005; Torres, 2003), which would be supported by the fact that this theme was mentioned somewhat more often by German participants: As Germans have access to significant government support in multiple areas (e.g., child care and retirement benefits), they may be more likely than Americans (or others) to see society and political forces as influences on aging. However, as our lay participants mentioned both micro and macro environmental factors much less often than personal characteristics, it appears that successful aging is understood primarily as a private issue across both cultures.

Second, findings show that lay concepts of successful aging are multifaceted, reflecting the multidimensionality of the construct. This parallels findings from larger studies by Bowling (2006) and Tate and colleagues (2003). The themes mentioned by our participants mirror many determinants of successful aging proposed in extant theories. For instance, physical and mental health represent two of three components in Rowe and Kahn's (1998) model, and activities and interests may mirror the third factor,

engagement with life. However, our participants clearly believe that successful aging requires more than health and activity: They pointed to additional personal resources such as social relations and finances and to psychological factors such as Well-being, Virtues/Attitudes/Beliefs, and Life management/Coping. Such concepts are addressed by Ryff (1989) and in the life-span models of Brandstädter (1999), P. Baltes and Baltes (1990), and Heckhausen and Schulz (1995). Still, these latter theories do not consider basic personal resources (e.g., health) as explicit parts of their models. Thus, our findings challenge existing scientific successful aging models by showing that lay concepts of successful aging are much broader than traditional theories and suggest the inclusion of a wider variety of factors.

Third, we found only a few age and gender differences in views of successful aging. Although we had expected that our study's inclusion of younger individuals might yield additional perspectives on successful aging, this was not the case. Age groups differed only for Growth/Maturation, which was mentioned more often by older individuals, and Respect/Success, mentioned more by young and middle-aged individuals. These differences could reflect the importance of the themes for the current life situation; individuals may use the present as guidance when thinking about uncertain future developments such as their aging process. Gender effects were only observed for Social Resources and Well-being, which were mentioned more often by women. This is consistent with more general gender-specific socialization patterns (e.g., stronger communion orientation in women; Helgeson, 1994). Thus, extending prior research on individuals aged 50+ (Bowling, 2006), our findings suggest that young, middle-aged, and older men and women's understandings of successful aging are mostly similar.

Fourth, U.S. and German laypersons' views on successful aging were rather similar. Out of 16 categories, only a handful showed differences; these were mostly psychological characteristics (e.g., Virtues/Attitudes/Beliefs, Well-being, and Respect/Success), as well as Education/Knowledge. That U.S. participants were more likely to mention psychological factors may be related to American culture's greater emphasis on individual responsibility for success and lesser faith in governmental and societal support (Esping-Andersen, 1990); Americans may underestimate the influence of external forces (e.g., environment and policy) on successful aging. More frequent mention of psychological factors is also in line with findings showing that Americans are more likely to experience aging as psychological growth than Europeans (e.g., Dutch individuals; Westerhof et al., 2012), and that public discourse on aging seems to be not only more positive but also more differentiated in the United States than elsewhere (Kruse, 2009). At the same time, it is important to remember that

the likelihood of mentioning basic resources such as health, social relations, or financial means did not differ between cultures.

One surprising finding was that education was the variable with the strongest effect on lay perspectives of successful aging, explaining a substantial amount of individual variation in the overall number of themes. This suggests that greater richness of ideas about successful aging is associated with access and exposure to education. It could also be that better-educated individuals feel more responsible and in control for their life, including their aging process, and have higher expectations for their development in old age. Education was also related to the likelihood of mentioning several psychological strengths as important for successful aging (e.g., Life management/Coping, Virtues/Attitudes/Beliefs, Well-being, Aging, and Respect/Success). However, these effects were weaker than those of cultural background. Again, notably, mentions of basic resources such as health and social relations were not affected by level of education. Overall, these findings echo Steverink, Westerhof, Bode, and Dittmann-Kohli's (2001) results, which showed that individuals with higher education experienced aging as continuous growth rather than social loss. Well-being and psychological strengths may also play an enhanced role for well-educated individuals because their education is likely to protect them healthwise and to enhance their access to financial resources, leaving them with fewer worries about basic needs and a stronger sense of having choices.

Limitations

Several of this study's shortcomings should be noted. Our interviews were rather brief because participants were only prompted twice. If we had urged participants to reflect at greater length, some topics might have emerged more often. We nevertheless found a breadth of topics comparable to studies with more in-depth probing (Fisher, 1995).

In addition, to reduce the total number of coding categories, we combined themes that were mentioned less often based on theoretical considerations, and this could have affected our findings. For example, we combined goal setting, goal pursuit, and coping because all reflect mechanisms proposed by life-span developmental theories. This and other combinations merit further examination, alongside replication of our findings in other samples.

Compared with other studies of lay perspectives on successful aging (Bowling, 2006), our sample size may seem rather small. Also, the uneven distribution of background characteristics may have impeded determination of their effects, though larger studies have also found a lack of substantial differences by age and gender. The education

differences between U.S. and German participants were unexpected, and the finding that individuals with U.S. background and higher education were more likely to mention psychological strengths could indicate a sampling bias. At the same time, one could argue that years of education is not a good measure because the same number of years may not represent similar education levels. German students, for example, are separated into different types of schools with different curricula and levels of challenge between ages 10 and 12, whereas U.S. students remain in the same school track. Also, teasing apart cohort and age differences is not possible. Despite being unable to disentangle education, culture, and age/cohort effects, it must be stressed that significant effects were found for different themes and while controlling for the others.

Conclusions

We found that laypersons' views on successful aging exhibited a high degree of consensus: With a few exceptions, young, middle-aged, and older men and women from the United States and Germany shared similar understandings. Thus, the meanings of successful aging may be shaped more strongly by shared ideas than by differences in terms of life stage, gender, or culture. This suggests that scientific models that include the central components of successful aging identified here may be applicable across different cultures, ages, and genders, which should encourage the development of such models. In addition, the existence of a shared definition can be expected to facilitate communication about this important global issue among generations and cultures and to ease the advancement and promotion of intervention measures. Future studies should nevertheless investigate the extent to which other cultures (e.g., Asian) or subgroups within cultures (e.g., ethnic minorities) differ.

At the same time, laypersons' views of successful aging pose scientific challenges because they include a much wider variety of factors than are considered in most theoretical models. Given empirical relations between such factors and successful aging outcomes, theoretical models might usefully be broadened to include them. It is good news that laypersons from both the United States and Germany stressed the importance of psychological factors for successful aging, as it indicates awareness that individuals are able to influence the aging processes actively, not only in terms of health and lifestyle but also by relying on psychological strengths. This should encourage researchers in the field to adopt a biopsychosocial model of successful aging in order to connect theory, operational definitions, and lay perspectives. Such models should at a minimum include basic resources (health, social, and finances) as well as psychological strengths (strategies and beliefs), as

proposed by some of our prior work (Jopp & Rott, 2006; Jopp & Schmitt, 2010; Jopp & Smith, 2006).

That laypersons seem to have limited awareness of the influence of environmental conditions on aging mirrors parallel tendencies within the scientific community. Adding both micro (e.g., immediate living environment) and macro (e.g., retirement regulations and welfare provisions) environmental aspects is vital if discussion and research are to move beyond individualistic constructs and acknowledge that personal factors interact with larger societal conditions to shape the aging process (Riley & Riley, 1994). This is important not only to increase the validity of scientific models, but also to raise public awareness, which will in turn support policy efforts aimed at bettering the environmental and social circumstances in which people live and age. For instance, there is considerable evidence that the current overemphasis on individuals leads many countries to miss important opportunities to promote successful aging, for instance, by failing to provide easy and inexpensive interventions such as management of hypertension or diabetes to large segments of the population (Lloyd Sherlock et al., 2012). A greater emphasis on environment could also lead to the enhancement of successful aging through improvements to living conditions, for instance, by redesigning streets to facilitate mobility (Stahl, Horstmann, & Iwarsson, 2013) or reducing the air pollution responsible for premature death (World Health Organization, 2014).

Policy implications derived from this research include raising awareness by public discussion as well as facilitating research efforts that consider successful aging more broadly by addressing environmental aspects. Translational efforts should then follow to create environments that are not only more age friendly and assure full integration and participation of old and very old adults, but also allow more individuals to reach an advanced age. Environment should be considered broadly to include, for example, health resources (e.g., clean air, healthy food, health care, prevention and intervention programs), access to public spaces (e.g., public transportation and safety), and societal goods (e.g., information, education, technology, and culture). At the same time, societal efforts should aim at further enhancing the personal factors linked to successful aging, for example, by enabling research on psychological strengths (e.g., Jopp, Rott, & Wozniak, 2010). More studies are needed to identify the psychological mechanisms that underlie successful aging and how these can be fostered over the course of the life span. Encouraging development and ensuring access to prevention and intervention programs would also be important policy efforts to follow. Overall, adopting a multifaceted perspective by considering insights from disciplines such

as medicine, psychology, and sociology will not only result in more comprehensive models of successful aging with increased predictive value, but also in increased public discourse and, in the long run, better prospects for more individuals to experience successful aging.

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