Lay perceptions of successful ageing: findings from a national survey of middle aged and older adults in Britain

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Abstract The main aim of the research presented here was to identify perceptions of successful ageing among people in middle and older age groups. The method was a British population survey of 854 community-dwelling men and women aged 50 or more. Just over three-quarters of respondents rated themselves as ageing successfully (“very well” or “well”). Respondents’ definitions of successful ageing, and the reasons given for their self-ratings, based on open-ended questioning, illustrated the multidimensionality of the concept. Definitions varied with respondents’ characteristics. Self-rated health status and quality of life consistently retained significance in the multivariate models of predictors of self-rated successful ageing, while self-rated quality of life made the greatest contribution to the models. Reporting a longstanding, limiting illness was not significant. The overall models explained about a third of the variation in self-rated successful ageing. Lay definitions of successful ageing were multidimensional. A biomedical perspective of successful ageing therefore needs balancing with a psycho-social perspective, and vice versa. This is particularly relevant for biomedical approaches which have largely ignored the rich tradition of social and psychological research on this topic. Self-rated successful ageing should be included in measuring instruments to enhance social relevance. This research, with the use of open-ended questioning, makes a novel methodological contribution to the literature, is unique

in questioning middle aged as well as older people, and provides a British perspective on a largely US and German topic.

Keywords Successful ageing · Ageing · Quality of life · Health status

Introduction

Population ageing and increases in life expectancy in the developed world have led to clinical, public health and policy interest in how to age “successfully”. But what is ? An agreed definition is needed in order to identify its effective precursors. But agreed by whom? A recent systematic review by the author of models of successful ageing (Bowling 2006) showed that many investigators fail to define this concept, that outcomes and constituents of successful ageing are not distinguished, and most existing theoretical models of successful ageing are discipline and culture specific. Rarely do definitions reach across disciplines, and rarely are lay people consulted about their perspectives. The consequence is likely to be that any policy actions will have less relevance to the lives of older people themselves.

The biomedicalisation of successful ageing began largely with the MacArthur study of successful ageing in the USA (Rowe and Kahn 1987, 1998). Successful ageing was defined in terms of the absence of risk of disease and disease-related disability, high mental and physical functioning, and active engagement with life. These studies have focused mainly on onset of poor biological health, physical disability, physical performance, functional decline and their predictors

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(“productivity”, prior exercise behaviour, social ties and support); cognitive performance and predictors, associations between cognitive and physical performance; and predictors of mortality (Berkman et al. 1993; Glass et al. 1995; Kubzansky et al. 1998; Schoenfeld et al. 1994; Seeman et al. 1994, 1995, 1996a, b, 1999, 2001; Tabbarah et al. 2002; Unger et al. 1999). Other MacArthur studies have focused narrowly on biological, immunological and genetic components (Bretsky et al. 2003; Reuben et al. 2003), although the studies overall support the potentially powerful influence of health and lifestyle factors over genetic influences for successful ageing. Vaillant and Mukamal (2001) in their overview of successful ageing, argued that future geriatric psychiatry will need to focus on health as much as disease. They emphasised longitudinal evidence of the plasticity of the ageing process, showing that older people, even over the age of 75, are mentally and physically able, and most, regard themselves as in average or good health. However, the biomedical approach largely ignores the long tradition of research on successful ageing from the social and psychological sciences.

Theoretical approaches to successful ageing in sociology and psychology have emphasised the amount of activity, ability to disengage, social engagement and contact, satisfaction with life, maturity or integration of personality, balanced exchange of energy between the individual and the social system, quality of life, life satisfaction and well-being, adaptation and other psycho-social parameters (Lawton 1946; Williams and Wirths 1965; Havighurst 1957, 1961; Rupp et al. 1967; Palmore 1979; Herzog and House 1991; Moen et al. 1992; Fisher 1992; Starr et al. 2003; Menec 2003; Ryff 1982). Another, although less theoretical, focus has been on environmental engineering and individual counselling to optimise ability and adjustment (Fozard and Popkin 1978). Current theoretical approaches to successful ageing, include an emphasis on personal growth, and psycho-social resources, such as self-actualisation, optimisation, compensation, and the use of effective adaptive strategies (i.e., minimisation of losses and maximisation of gains through adaptation, mastery and effective coping strategies) (Baltes and Baltes 1990; Ryff 1982). In relation to the latter, Clark et al. (1996), explored the views of a small sample of older people and developed a typology of adaptive strategies (including adaptation to activities of daily living, environment, use of free time, illness and death, finances, maintenance of health and mobility, safety, well-being, and relationships). The importance of personal meaning, and the adaptive benefits of reminiscence, has also been emphasised for successful

ageing, although with inconsistent research results (Butler 1974; Wong 1989; Wong and Watt 1991). Of all the psycho-social approaches, life satisfaction, and dimensions of quality of life (e.g., happiness, adjustment, morale, health, survival, subjective well-being, aspirations, achievements) have been the most widely studied, although the Berlin Ageing Study emphasised successful ageing as selective optimisation and compensation (Baltes and Baltes 1990).

The few, published investigations of lay views of successful ageing have indicated that they are far more multi-domain than existing theoretical models, crossing the boundaries between the physical, psychological and social self (Fisher 1992, 1995; Fisher and Specht 1999; Guse and Masesar 1999; Bergstrom and Holmes 2000; Von Faber et al. 2001; Charbonneau-Lyons et al. 2002; Knight and Ricciardelli 2003; Tate et al. 2003; Phelan et al. 2004; see Bowling and Dieppe 2005). However, not all of these studies asked older people for their own views, with some asking people simply to rate researchers’ definitions (Phelan et al. 2004). And, as the age groups included in the studies varied (e.g., people under or over 65), or the ages of respondents were not always specified (e.g., other than labelling the sample as “seniors” or “long term residents”), and the studies used different methodologies, it is unclear whether perceptions of successful ageing vary with increasing age.

Lay definitions have included mental, physical and social health, functioning and resources, psychological outlook, life satisfaction, having a sense of purpose, financial security, learning new things, accomplishments, physical appearance, productivity, contribution to life, sense of humour, and spirituality. Moreover, it has been reported that while half of older people can be categorised as having aged successfully in terms of their own criteria, just under a fifth can be so categorised with a medical model of successful ageing (Strawbridge et al. 2002).

The aims of the research presented here were to identify perceptions of successful ageing in a sample aged 50 and over, to compare these perceptions by age group (those who are ageing and those in older age groups), and to compare the main elements of lay and theoretical models.

Methods

Survey design

The data were derived from a national interview survey of adults aged 16 and over, conducted by the

Office for National Statistics (ONS) for their Omnibus Survey in Britain (<http://www.statistics.gov.uk>). The Omnibus Survey is conducted approximately every two months and enables independent researchers (alongside government departments) to include a small number of questions in distinct topic modules. Although the questions were necessarily limited in number, inhibiting measurement of a wider range of theoretically relevant variables, the Omnibus Survey provides a valuable opportunity to reach a national random sample of adults.

The sampling frame used for the Omnibus Survey was the British postcode address file of “small users”. This file includes all private household addresses. Postal sectors were stratified by region, the proportion of households renting from local authorities, and socioeconomic status (Goldthorpe 1980, 1997). One hundred postal sectors were selected with probability proportional to size. Within each sector, 30 addresses were selected randomly with a target sample size per survey of 2,000 adults aged 16 and over (one person per sampled household is selected for interview, with the use of a random numbers table). Because only one household member is interviewed per household, people in households containing few adults had a better chance of selection than those in households with many. A weighting factor was applied to correct for this unequal probability of selection.

We aimed to identify all respondents aged 50+, living at home, to an Office for National Statistics (ONS) Omnibus Survey in Spring 2005. Interviewers identified these respondents during the Omnibus interviews and administered our module to those consenting to participate. The large random, population sample, and the inclusion of middle aged as well as older aged people are unique in relation to this topic, and enabled analysis of differences in perceptions by age group (i.e., the “growing older” middle aged as well as the older age groups).

Response rates

The survey interviews with Omnibus Survey respondents aged 50+ took place in their own homes in March–April 2005. The Omnibus Survey response rate was 62%; 27% refused to participate and 11% were not contactable during the interview period. This gave 1,703 achieved interviews overall (adults of all ages). Of these, 854 were aged 50+ and all were successfully administered the successful ageing module. The overall survey response rate is comparable with other major population surveys of ageing in Britain (Marmot et al. 2003). The Office of National Statistics does not collect

information about the non-responders. They inform users simply that the responders are broadly representative of mid-year population estimates, but provide no other information. One problem in making further comparisons is that population estimates are not available for the study year (only the year before or the year after). The characteristics of the sample are shown later.

Measures

Successful ageing was measured by an unprompted, open-ended question on perceptions (“What do you think are the things associated with successful ageing?”). Responses were recorded verbatim by the interviewers. These free texts were subjected to a content analysis by the author to develop themes. A detailed thematic coding frame was produced after reading all the transcripts, and making constant comparisons between responses. The coding was then carried out by staff at ONS. Regular reviews were held with the author in order to assess any new themes which emerged. Overall themes as well as detailed sub-themes were coded. Responses usually contained more than one type of theme and were therefore multi-coded. The tables here present analyses by number of respondents (not number of times the theme was mentioned). They were analyzed using SPSS version 12. The more detailed sub-themes were also analysed separately using this process. This content analysis and categorisation of open-ended survey responses should not be confused with qualitative research which employs smaller samples in order to provide deeper insights into people’s lives and perspectives. The analysis of open-ended responses is more limited. However, the approach can provide a wide range of understandings and interpretations of the concepts of interest (Bowling et al. 2003; Bowling and Dieppe 2005).

The open-ended questions were followed by a self-rating of successful ageing, using a similar question to that used in the Manitoba follow-up study (Tate et al. 2003): “Thinking of all the things you think are associated with successful ageing, would you say you are ageing successfully so far?”. A five-point, Likert response category was designed, with the wording designed to be meaningful to the concept: “Yes, very well”, “Yes, well”, “Yes, alright”, “No, not well”, “No, not very well”.

Respondents were also asked for their reasons for their self-assessment (“Why do you feel like this?”). Responses were recorded verbatim, and a thematic coding frame was again designed by AB, as before, after reading all the transcripts; the coding was again

carried out by staff at ONS). Finally, respondents were asked, “How do you think getting older/ageing will affect you”? Responses were recorded verbatim and coded using the same processes as above.

Other items included self-ratings of overall quality of life, using an item and response scale tested in a previous study: “Thinking about the good and bad things that make up your quality of life, how would you rate the quality of your life as a whole?” The seven-point response category was: “So good, it could not be better”, “Very good”, “Good”, “Alright”, “Bad”, “Very bad”, “So bad, it could not be worse” (Bowling and Gabriel 2004; Bowling 2005a), along with two popular single global health items: reported long-term illness which limits activities (“Do you have any long-term illness, health problems or disability which limits your daily activities or the work you can do?” (“Yes”, “No”) and self-rated health status (“In general, compared with other people your age, would you say that your current health is: “Excellent”, “Very good”, “Good”, “Fair”, “Poor”). A similar question, without the age referent, using the same response scales is included in the Short-Form 36 Health Status Questionnaire and has been well tested (Ware et al. 1993). The scale is deliberately loaded towards the positive end in order to increase sensitivity (as most people rate their health favourably) (Bowling 2005b). Respondents in the survey reported here were asked to compare their health with others of the same age in order to prevent them comparing themselves with younger people and thus rating their health as worse (Bowling 2005b). These items have a long history of use in health and social surveys across the world, and have been shown to be associated with other indicators of health, service use and mortality (e.g., Kaplan and Camacho 1983; Goldstein et al. 1984; Schoenfeld et al. 1994; Idler and Kasl 1995; Greiner et al. 1999; Manor et al. 2001). Standard Omnibus Survey socio-demographic and socio-economic characteristics and classifications were also included (age, gender, marital status, household size and type, socio-economic group and class, level of education, car access, income, and housing tenure).

Statistical methods

The main dependent variable of interest was self-rated successful ageing. This was expressed as a ranked categorical variable. Univariate analyses were conducted to test associations between self-rated successful ageing and age, gender, health status, quality of life, and variables measuring socio-demographic characteristics and social circumstances. Chi-square tests, means and Spearman’s rho rank order correlations were used. The

item response rate was high and ranged between 84 and 100%.

The independent associations between respondents’ characteristics (dependent variables on the *y* axis) and their definitions (themes) of successful ageing (Q1) (independent variable on the *x* axis) were explored using binary logistic regression analysis. The method for entry of variables was theory driven, and block-entry techniques were used; socio-economic and demographic variables were also forced to remain in the predictive models throughout in order that the results were adjusted for age, sex and socio-economic status (as these are common confounding variables). The threshold for statistical significance was 0.05.

Multiple regression was used to examine the independent effects of theoretically relevant and statistically significant (at univariate level) predictor variables on self-rated successful ageing (dependent variable). Hierarchical multiple regression analysis was used as this technique enables theory relevant, rather than data driven, variables to be entered. Selected socio-economic and demographic variables were forced to remain in the predictive models throughout in order that the results were adjusted for age, sex and socio-economic status.

Multicollinearity was assessed firstly by examining the zero order correlations between the independent variables (Spearman’s rank order correlation was used). As these bivariate correlations assess only the relationship between two variables, without adjustment for the other variables, the correlation matrix produced by the multivariate analyses, in which correlations are adjusted for one another, was also examined. None of these correlations between the entered independent variables exceeded $r = 0.468$, and thus satisfied the lower 0.70 univariate threshold for entry into a multivariable model (Tabachnick and Fidell 2001).

Assessment of the collinearity diagnostics within SPSS multiple regression analysis procedures also showed that the tolerance values for the variables entered were acceptable. They were all high (between 0.7 and 0.9) indicating that multicollinearity was at a respectable level (low values near 0 indicate multiple correlation with other entered variables), and the entry of the variables was justified (Katz 1999).

Results

Characteristics of respondents

Fifty seven percent (486) of respondents were aged 50 < 65, 24% (210) were aged 65 < 75, and 19% (158)

were aged 75 and over. Their mean age was 64, with a range of 50–94 (confidence intervals: 63.53–64.89), and median was 62. The characteristics of respondents by age group are displayed in Table 1. Just under half of respondents were males, around three-quarters were married/cohabiting, and about three-quarters lived with others, mainly their spouses (the latter two states decreased with age, reflecting increased likelihood of widow(er)hood).

Around half had no educational qualifications, increasing with age; almost a quarter 23% had an annual gross income of less than £6,240 (\$10,989), reflecting their reliance on basic state retirement pensions, although at the other end of the spectrum, almost a third had £20,800 or more (\$36,964+), especially in the younger age group, reflecting their continued employment and thus earnings. Most owned their accommodation, increasing with older age, and most had access to a car or van in their household, but with the proportion declining with age. About a third had held managerial or professional occupational positions, particularly in the youngest and oldest age groups.

While just over a third of respondents reported a limiting longstanding illness, more than four-fifths reported their health to be at the positive ends of the scale as “Excellent”, “Very good”, or “Good”. Over four-fifths also rated their quality of life as “So good could not be better”, “Very good”, or “Good”. The table shows that about three-quarters of respondents rated themselves as ageing successfully (“very well” or “well”). More respondents rated themselves at the extreme, optimum end of the successful ageing scale (“...very well”: 39%) than at the extreme, optimum ends of the quality of life (“So good could not be better”: 7%) or health status scales (“Excellent”: 15%). The youngest (50 < 65) and oldest (75+) age groups were more likely to rate themselves as successfully aging “Not well” or “Not very well” than those aged 65 < 75, although this was not statistically significant.

Definitions of successful ageing

Table 2 shows respondents’ categorised definitions of successful ageing. Two-thirds of respondents defined it in terms of health and functioning (e.g., “having health”, “being free from disability”, “being able to get out”) and almost half defined it psychologically (e.g., “having an active mind”, “satisfaction with life”, “enjoyment of life”, “having a happy outlook”). Others defined it in relation to social roles and activities (e.g., “going on holidays”, “having enjoyable

interests”, “having interests outside one’s life”), finances (e.g., “being comfortable”, “having enough to live a life on”, “having enough money to get by on and pay bills”), social relationships (“having a family for company”, “having a family to keep (one) motivated”, “having friends to prevent loneliness”), neighbourhood (“having community facilities to join in and be involved”), and various other factors. The only difference by age group was with finances (people aged between 50 and 65 were more likely than those aged 65 < 75 or 75+ to mention this), and with social roles and activities (65 < 75 year old age groups were more likely to mention this).

Respondents’ characteristics were analysed in relation to their definitions of successful ageing, and the independence of associations was next examined using logistic regression analysis (Table 3). Respondents who were in good, rather than not good, health had a significantly increased odds of defining successful ageing in terms of social relationships (over twice the odds), social activity, and psychological factors, although not health. However, those who reported a longstanding illness had a slightly reduced odds, compared with those who reported none, of mentioning psychological factors. Respondents, who rated their quality of life as good, rather than not good, had a reduced odds of mentioning neighbourhood.

People who were married, as opposed to unmarried, had an increased odds of mentioning financial circumstances. Those who had access to a car had an increased odds, compared with those who did not, of mentioning social activities and had twice the odds of mentioning neighbourhood; they had a reduced odds of mentioning independence. Home owners, compared with those who rented their homes, and those in the highest, rather than lower, occupational groups, had an increased odds of mentioning finances (those in highest occupational groups also had an increased odds of mentioning social activities).

Males had reduced odds, compared with females, of mentioning social activities, social relationships, and neighbourhood. And those aged under 65, compared with those aged 65+, and had an increased odds of mentioning social activities and a reduced odds of mentioning finances.

Self-rated successful ageing

It was shown earlier in Table 1 that most respondents rated themselves as ageing successfully. Respondents’ self-ratings of successful ageing were compared with items measuring physical and mental health and psycho-social well-being, reflecting

Table 1 Characteristics of respondents by age group

Respondents' characteristics	Age group			Total (<i>n</i> = 840–54 ^a) (%)
	< 65 (<i>n</i> = 476–6) (%)	65 < 75 (<i>n</i> = 208–10) (%)	75+ (<i>n</i> = 156–8) (%)	
Gender				
Male	45	50	49	47
Female	55	50	51	53
Marital status				
Married or cohabiting as married	81	71	48	72 ***
Single	5	10	6	5
Widowed	4	16	43	14
Divorced or separated	11	9	4	9
Household size				
Lives alone	13	27	50	23 ***
Lives with one or more others	67	73	50	77
Highest education qualification				
Degree or equivalent	16	10	10	13 ***
Higher education below degree	45	32	23	38
No qualifications	39	58	67	49
Housing tenure				
Home owner	41	67	72	53 ***
Home owner on mortgage	42	10	4	27
Rented home local/housing authority	12	21	18	15
Rents home privately	5	2	6	5
Car access				
Had access to car/van in household	87	81	57	80 ***
No access	13	19	43	20
Socio-economic group				
Managerial and professional occupations	35	28	40	34 *
Intermediate occupations	22	20	17	20
Routine and manual occupations	41	50	38	43
Other	2	2	5	3
Gross annual income				
Less than £6,240 (<\$10,989)	19	31	25	23 ***
£6,240 < 11,440	16	32	36	23
£11,440 < 20,800	24	19	22	22
£20,800+ (\$36,964+)	41	18	17	31
Reported restricting longstanding illness				
Yes	27	41	51	35 ***
No	73	59	49	65
Health status				
Excellent	15	15	10	15
Very good	34	32	34	34
Good	31	38	37	34
Fair	16	13	12	13
Poor	4	2	8	4
Quality of life				
So good, could not be better	7	9	8	7
Very good	49	45	42	47
Good	30	36	29	31
Alright	14	10	18	14
Bad	1	1	3	1
Very bad	–	–	1	–
So bad, could not be worse	–	–	–	–
Successfully ageing				
Yes, very well	35	43	43	39
Yes, well	37	38	34	37
Yes, alright	21	14	15	18
No, not well	5	3	5	4
No, not very well	2	2	3	2

^a Sub-total numbers vary due to item non-response**P* < 0.05; ** *P* < 0.01; *** *P* < 0.001

Table 2 Summary of Q1 by age group: “What do you think are the things associated with successful ageing?”

Definitions of successful ageing (main themes)	Age group			Total (%) (<i>n</i> = 854)
	Age < 65 (%) (<i>n</i> = 486)	Age 65 < 75 (%) (<i>n</i> = 210)	Age 75+ (%) (<i>n</i> = 158)	
Health and functioning	68	62	65	66
Psychological factors	46	48	46	47
Social roles and activities	32	42	36	35*
Financial and living circumstances	37	23	21	30***
Social relationships	24	31	27	26
Neighbourhood/community	11	9	7	10
Work	7	7	3	6
Independence	4	2	5	4
Other	2	2	6	3

Table totals do not equal 100% as some respondents gave more than one response; each person counted once only within each category

Statistical significance levels for age group differences: * $P < 0.05$; *** $P < 0.001$

common theoretical definitions of successful ageing. People who rated themselves as successfully ageing were more likely than others to rate their health positively (Spearman's rho: 0.498, $P < 0.01$), to have no reported limiting, longstanding illness (Spearman's rho: 0.237, $P < 0.01$), and to rate their quality of life at the good end of the scale (Spearman's rho: 0.536, $P < 0.01$), although these correlations were weak to modest. Table 4 shows that these associations held when analysed in detail by age group (under 65, 65 < 75, 75+). However, substantial minorities of those who rated themselves as successfully ageing (“...very well” or “...well”) also reported less than good health, a limiting longstanding illness, and less than good quality of life.

When analysed by age group, the table shows no significant associations with self-rated successful ageing and education qualifications, income, and socio-economic group. However, among respondents aged under 65 only, those with better self-ratings of successful ageing were more likely to be home owners rather than renters, and to have access to a car or van. There were no associations with marital status, or with gender except for the youngest age subgroup.

The independent strength of the associations between self-rated successful ageing (dependent variable) and health status, longstanding illness, quality of life and the most sensitive indicators of socio-economic status (housing tenure and car access which retained statistical significance with self-rated successful aging at the 0.05 level of significance with univariate analyses), were explored using multiple regression analysis; gender was entered, and age was also entered into the model for all ages, in order to adjust for their effects.

The final models for the total sample, and for each age group are presented in Table 5.

Table 5 shows that the models for each age group were all highly statistically significant at $P < 0.001$ (F values). The individual variables which retained significance in the final models for each age were health status (but not longstanding illness) and quality of life, plus age group in the model for all ages. Neither the socio-economic variables nor gender were significant in the models. The addition of quality of life to the models for each age group led to the greatest changes in the adjusted R^2 : 0.108*** (all ages); 0.117*** (ages 50 < 65); 0.118*** (ages 65 < 75); 0.076*** (ages 75+) (figures not shown in table). The percentage of total variation in ratings of successful ageing between groups which was explained decreased slightly with older age: it was 36% (all ages), 38% (ages 50 < 65), 32% (ages 65 < 75), 32% (age 75+). These are large percentages for subjective variables.

Reasons for self-rated successful ageing

Further insight into the constituents of self-rated successful ageing was obtained when respondents were asked an open-ended question about why they rated themselves as successfully aged or not. The most commonly mentioned reasons were having/not having good health and functioning (physical and mental) (50%, 427), followed by psychological factors (e.g., having/not having life satisfaction, and a happy outlook) (45%, 383), social roles and activities (e.g., having/not having an enjoyable social life, activities) (20%, 169), social relationships (e.g., having/not having family or friends) (17%, 148), finances (e.g., having/not having enough money to meet basic needs) (12%, 104),

Table 3 Logistic regression to show the associations (odds ratios, 95% CIs) between respondents' definitions of successful ageing (themes) and their characteristics (*n*: 845)

Themes mentioned (y) ^a									
Odds ratio (95% CI)									
Independent variables (x)	Health and functioning	Psychological factors	Social roles and activities	Financial and living circumstances	Social relationships	Neighbour hood/community	Work	Independence	
Health excellent to good	0.957	1.827**	1.950**	0.684	2.212**	1.124	1.238	0.473	(0.164–1.369)
1 vs less than good	(0.611–1.498)	(1.181–2.826)	(1.188–3.201)	(0.422–1.107)	(1.276–3.833)	(0.552–2.289)	(0.480–3.195)		
0 referent									
Longstanding illness	0.998	0.696 *	0.827	1.073	0.929	1.352	1.067	0.933	(0.377–2.310)
1 vs none 0 referent	(0.704–1.414)	(0.499–0.971)	(0.581–1.177)	(0.734–1.568)	(0.638–1.355)	(0.757–2.414)	(0.531–2.143)		
Quality of life so	1.001	1.000	1.002	1.000	1.000	0.996 **	1.001	1.003	(0.998–1.007)
good could not be better to good 1	(0.999–1.003)	(0.998–1.001)	(1.000–1.004)	(0.998–1.002)	(0.998–1.002)	(0.994–0.999)	(0.997–1.004)		
vs less than good 0 referent									
Married 1 vs unmarried 0 referent	0.965	1.113	0.994	1.977 **	0.973	0.713	0.874	0.186	(0.455–3.088)
Has car 1 vs none 0 referent	(0.664–1.401)	(0.779–1.589)	(0.676–1.461)	(1.291–3.028)	(0.647–1.463)	(0.401–1.266)	(0.419–1.827)		
Home owner 1 vs rents 0 referent	1.305	1.334	1.581 *	0.663	1.166	2.264*	1.673	0.322*	(0.122–0.851)
Higher professionals/managers ^b	(0.854–1.996)	(0.881–2.021)	(0.996–2.510)	(0.410–1.070)	(0.721–1.886)	(1.043–4.917)	(0.656–4.262)		
1 vs lower groups 0 referent	1.371	0.907	1.190	1.781**	0.986	0.797	0.879	1.609	(0.571–4.532)
Males 1 vs females 0 referent	(0.919–2.047)	(0.613–1.343)	(0.771–1.835)	(1.103–2.878)	(0.626–1.555)	(0.414–1.534)	(0.394–1.958)	0.428	(0.158–1.157)
Age < 65 1 vs 65+ 0 referent	0.974	1.202	1.458*	1.628**	1.189	1.413	0.763		
	(0.704–1.348)	(0.887–1.628)	(1.059–2.007)	(1.174–2.259)	(0.841–1.682)	(0.856–2.334)	(0.400–1.457)		
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CI Confidence intervals

^a Theme mentioned = 1, not mentioned = 0 (referent)^b National statistics socio-economic group classification* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$

Table 4 Comparison of responses to Q3. “Are you ageing successfully so far?” by age, health, quality of life and socio-economic and demographic characteristics ($n = 838$)

Independent variables	Aged under 65					Aged 65 < 75					Aged 75+				
	Aged under 65					Aged 65 < 75					Aged 75+				
	Very well ($n = 167-9$)	Well ($n = 175-8$)	Alright ($n = 101-2$)	Not well/ not very well ($n = 31-3$)		Very well ($n = 88-90$)	Well ($n = 78-9$)	Alright ($n = 23-8$)	Not well/ not very well ($n = 12-14$)		Very well ($n = 67-8$)	Well ($n = 52-3$)	Alright ($n = 23-4$)	Not well/ not very well ($n = 7-13$)	
Self-rated health															
Excellent	25	11	4	16 ***		29	5	4 ***	–		18	4	4 ***	–	
Very good	52	33	18	4		35	39	18	–		49	28	22	–	
Good	17	39	45	20		34	39	46	–		24	57	39	–	
Fair	5	17	26	36		2	15	32	–		7	9	26	–	
Poor	1	1	8	24		–	–	3	–		3	2	9	–	
Longstanding illness (LSI)															
Has LSI limiting activity or work	19	23	34	63 ***		33	37	64 ***	–		39	49	62 **	–	
None	81	74	66	37 ***		67	63	36	–		61	51	38	–	
Quality of life															
So good could not be better	10	5	2	4		–***	18	3	4 ***		13	4	4 ***	–	
Very good	76	49	19	8		12	60	47	11		56	44	17	–	
Good	12	34	53	24		23	38	61	–		22	39	35	–	
Alright	2	13	25	48		–	11	21	–		9	12	39	–	
Bad/Very bad/So bad could not be worse	–	–	2	21		–	1	4	–		–	2	4	–	
Highest education qualification															
Degree or equivalent	20	15	12	16		9	13	7	–		16	8	4	–	
Below degree level/other	45	49	38	39		31	30	29	–		21	19	33	–	
None	35	36	47	45		60	57	64	–		63	74	63	–	
Housing tenure															
Owns home/ on mortgage	92	78	80	70 **		81	75	76	75		82	74	65	44	
Rents home	8	22	20	30		19	25	24	25		18	26	35	56	
Gross annual income															
Less than £6,240 (\$10,989)	20	19	20	26		31	28	38	38		23	23	38	–	
£6,240 or more	80	81	80	74		69	72	62	62		77	77	63	–	
Socio-economic group (NS_SEC)															

Table 4 continued

Ageing successfully by age group	Aged under 65				Aged 65 < 75				Aged 75+			
	Very well (n = 167–9)	Well (n = 175–8)	Alright (n = 101–2)	Not well/ not very well (n = 31–3)	Very well (n = 88–90)	Well (n = 78–9)	Alright (n = 23–8)	Not well/ not very well (n = 12–14)	Very well (n = 67–8)	Well (n = 52–3)	Alright (n = 23–4)	Not well/ not very well (n = 7–13)
Mangerial and professional occupations	39	39	25	33	29	28	29	–	43	41	25	–
Intermedicate occupations	27	18	22	14	19	25	4	–	19	13	21	–
Routine and manual occupations	32	39	52	53	51	43	68	–	34	40	46	–
Not classified	2	3	2	–	1	4	–	–	4	6	6	–
Access to car/van in household	89	92	77	75 ***	83	80	75	77	61	57	50	–
Has access to car/van	11	9	23	25	17	20	25	23	39	43	50	–
No access	39	49	47	55 *	46	52	54	62	51	53	44	–
Gender	61	51	53	45	54	48	46	38	49	47	56	–
Female	16	17	23	23	31	27	32	31	47	58	65	–
Marital status	84	83	77	77	69	73	68	69	53	42	35	–
Unmarried												
Married												

Caution less than four expected observations in cell can increase chance significance; Chi-square tests

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$

Table 5 Multiple regression of self-rated successful aging (final models)

Dependent variable: self-rated successful aging (y)				
Odds ratio (95% CI) (2-tailed <i>t</i> test)				
Independent variables (x)	All ages	Age 50 < 65	Age 65 < 75	Age 75+
Health status (excellent to poor)	0.278 (0.214–0.343) (8.478)***	0.289 (0.205–0.374) (6.760)***	0.227 (0.092–0.362) (3.311)***	0.313 (0.155–0.470) (3.932)***
Longstanding illness (yes/no)	–0.36 (0.165–0.092) (0.556)	0.066 (–0.115–0.246) (0.714)	–0.155 (–0.400–0.091) (–1.244)	–0.135 (–0.433–0.163) (–0.897)
Quality of life (so good to so bad)	0.405 (0.337–0.474) (11.608)***	0.425 (0.334–0.516) (9.169)***	0.454 (0.302–0.605) (5.915)***	0.324 (0.170–0.478) (4.157)***
Car/van access (yes/no)	–0.026 (–0.172–0.121) (–0.343)	–0.070 (–0.281–0.141) (0.651)	0.078 (–0.231–0.388) (0.499)	0.055 (–0.254–0.365) (0.354)
Housing tenure (home owner/tenant)	–0.023 (–0.168–0.123) (–0.306)	0.056 (–0.144–0.257) (0.552)	–0.122 (–0.412–0.167) (–0.834)	–0.142 (0.481–0.197) (–0.825)
Gender (male/female)	0.103 (0.003–0.209) (1.910)	0.121 (–0.015–0.257) (1.753)	0.084 (–0.138–0.306) (0.748)	0.029 (–0.253–0.310) (0.202)
Age group (< 65, 65 < 75, 75+)	–0.110 (–0.181–0.039) (–3.059)**	–	–	–
Constant	0.401	0.001	0.379	0.424
R^2	0.366	0.387	0.339	0.349
Adjusted R^2	0.360***	0.379***	0.319***	0.323***

CI Confidence interval, *F* statistic* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$

followed by having/not having work they enjoyed (8%, 72), being independent or not (4%, 32), living in a good or bad home or neighbourhood (3%, 29), and various other factors (3%, 25). These were consistent overall with their definitions of successful ageing which focused on health, psychological factors, social activities and roles, finances, social relationships, neighbourhood, work, and independence.

Discussion

This paper reports results from the first British survey of lay views of successful ageing. The strength of the data presented here is that they were derived from a national random sample of people aged 50 and over in Britain, of sufficient size to permit analyses by age group. The response rate (62%) was fairly good for a general population survey at national level, although this still leaves over a third of people who were non-responders, and the true amount of non-response bias is unknown.

Most respondents to the survey presented here rated themselves as ageing successfully (“very well” or

“well”). This is in contrast to biomedical models in which few people are classified by researchers as successfully aged (Strawbridge et al. 2002). Although the response rate to the study reported here was 62%, with the possible consequence of response bias, the results are consistent with the lay self-ratings reported by Strawbridge et al. (2002).

Age was an independently significant predictor of ratings of successful ageing in the multivariate model. The youngest (50 < 65) and oldest (75+) age groups were slightly more likely to rate themselves as successfully aging “not well” or “not very well” than those aged 65 < 75. It was of interest that more respondents perceived themselves to be at the optimum end of the spectrum for successful ageing than for quality of life. It is not clear why this pattern should emerge, but it is worthy of further research. Perhaps it reflects their greater desire to dissociate themselves from negative stereotypes of ageing.

The results from the open-ended method of questioning show that self-rated successful ageing is made up of far more than indicators of health, quality of life, socio-economic and financial status. Respondents’ definitions of successful ageing, and the reasons given

by people for their own self-ratings, illustrate clearly the multidimensionality of the concept and caution against unidimensional perspectives. These findings are consistent with the few published studies investigating older people's views, discussed earlier (see [Introduction](#)). However, other surveys were based on small in-depth interview studies, highly select populations, or presented respondents with researchers' definitions to rate, rather than eliciting respondents' own views.

Definitions also varied with respondents' characteristics in further evidence of its subjectivity. Although the study was based on a community sample, thus omitting the views of frailer older people who lived in institutions, a main strength of the study was the inclusion of middle aged groups—the next generation of older adults. Their insights into what constitutes successful ageing could be used to anticipate social demands and pre-empt problems. People aged between 50 and 65 were more likely to mention finances those aged $65 < 75$ or $75+$, and the older age groups were more likely to mention the importance of having social roles and activities. This suggests either an age or cohort effect. These results also indicate the need for society to enhance the opportunities for social inclusion in older age. It was also found that the definition of successful ageing as having “health” was unrelated to respondents' own health status. Possibly those in good health were conscious of its importance in maintaining their active lives, and those whose health was deteriorating equally valued it because they were losing it.

Self-rated health status and quality of life consistently retained significance in the models of predictors of self-rated successful ageing; self-rated quality of life made the greatest contribution to the models. Reporting a longstanding, limiting illness was not significant. The overall models explained about a third of the overall variation in self-rated successful ageing. These results also indicate clearly that the biomedical model requires broadening away from reliance on health and functioning. But social models which define successful ageing simply in terms of quality of life also need to be broadened.

The self-ratings support the argument that the presence of illness should not be equated with “unsuccessful” ageing. These results demonstrate that people are not homogenous in their perceptions, and continued investigation into the lives of people by age group, including those in their middle ages, will provide insight for future planning (Tate et al. 2003). And as people's belief systems influence their use of services (Sarkisian et al. 2002), professionals who are involved

with older people need to balance a health and disease with a psycho-social perspective of older age and to develop mutual understandings with them in relation to service goals (Phelan and Larson 2002), and to consider interventions which will optimise people's chances of “ageing successfully” in a broader sense. This is likely to result in a different choice of outcome measures (Glass 2003).

Respondents themselves raised the additional variables which need to be incorporated in a model of successful ageing, along with health, well-being and finances, if it is to be relevant to their lives and values. These included other psychological factors (including optimistic outlook), social roles and activities, relationships, work, independence, and features of home and neighbourhood. The theoretical importance of these variables has been discussed in the literature (see [Introduction](#)). These findings mirror research on lay definitions of quality of life, which is another multidimensional and subjective concept (Bowling and Gabriel 2004).

In conclusion, the message to investigators of successful ageing is that it is important to broaden theoretical perspectives, to incorporate multidimensional measures, and to include a self-rating of successful ageing for enhanced social relevance, given that lay views are broader than existing theoretical models. The subjectivity of the concept, rather than being viewed as a weakness, should be seen as a strength, and the challenge to research is to capture this. In sum, this research, with the use of open-ended questioning, makes a novel methodological contribution to the literature, is unique in questioning middle aged as well as older people, and provides a British perspective on a topic which has been investigated mainly in the US and Germany.

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References

- Baltes PB, Baltes MM (eds) (1990) *Successful aging. Perspectives from the behavioral sciences*. Cambridge University Press, New York
- Bergstrom MJ, Holmes E (2000) Lay theories of successful aging after the death of a spouse: a network text analysis of bereavement advice. *Health Commun* 12:377–406
- Berkman LF, Seeman TE, Albert M et al (1993) High, usual and impaired functioning in community-dwelling older men and women: findings from the MacArthur Foundation Network on Successful Ageing. *J Clin Epidemiol* 40:1129–1140
- Bowling A (2005a). Ageing well. Quality of life in old age. Open University Press, Maidenhead
- Bowling A (2005b) Just one question: if one question works why ask several? *J Epidemiol Commun Health* 59:342–345
- Bowling A (2006). Systematic review of the constituents of successful ageing. *Int J Aging Hum Dev* (in press)
- Bowling A, Dieppe P (2005) What is successful ageing and who should define it? *Br Med J* 331:1548–1551
- Bowling A, Gabriel Z (2004) An integrational model of quality of life in older age. A comparison of analytic and lay models of quality of life. *Soc Indic Res* 69:1–36
- Bowling A, Gabriel Z, Dykes J, Marriott-Dowling L, Fleissig A, Evans O, Banister D, Sutton S (2003) Let's ask them: a national survey of definitions of quality of life and its enhancement among people aged 65 and over. *Int J Aging Hum Dev* 56:269–306
- Bretsky P, Guralnik JM, Launer L et al (2003) The role of APOE-epsilon4 in longitudinal cognitive decline: MacArthur studies of successful ageing. *Neurology* 60:1077–1081
- Butler RN (1974) Successful ageing and the role of the life review. *J Am Geriatr Soc* 22:529–535
- Charbonneau-Lyons DL, Mosher-Ashley PM, Stanford-Pollock M (2002) Opinions of college students and independent-living adults regarding successful aging. *Educ Gerontol* 28:823–833
- Clark F, Carlson M, Zemke R et al (1996) Life domains and adaptive strategies of a group of low-income, well older workers. *Am J Occup Ther* 50:99–108
- Day AT (1991) *Remarkable survivors. Insights into successful aging among women*. Urban Institute Press, Washington
- Fisher BJ (1992) Successful aging and life satisfaction: a pilot study for conceptual clarification. *J Aging Stud* 6:191–202
- Fisher BJ (1995). Successful aging: life satisfaction and generativity in later life. *Int J Aging Hum Dev* 41:239–250
- Fisher BJ, Specht DK (1999) Successful aging and creativity in later life. *J Aging Stud* 13:457–472
- Fozard JL, Popkin SJ (1978) Optimising adult development: and means of an applied psychology of ageing. *Am Psychol* 33:975–989
- Glass TA (2003) Assessing the success of successful aging. *Ann Intern Med* 139(Suppl. 1):382
- Glass TA, Seeman TE, Herzog AR, Kahn R, Berkman LF (1995) Change in productive activity in late adulthood. MacArthur studies of successful aging. *J Gerontol* 50B:S65–S76
- Goldstein MS, Siegel JM, Boyer R (1984) Predicting changes in perceived health status. *Am J Public Health* 74:611–615
- Goldthorpe JH ('with C Llewellyn') (1980) *Social mobility and class structure in modern Britain*. Oxford, Clarendon
- Goldthorpe JH (1997) The 'Goldthorpe' class schema: some observations on conceptual and operational issues in relation to the ESRC review of government social classifications. In: Rose D, O'Reilly K (eds) *Constructing classes: towards a new social classification for the UK*. Economic and Social Research Council/Office for National Statistics, Swindon
- Greiner PA, Snowdon DA, Greiner LH (1999) Self-rated function, self-rated health, and postmortem evidence of brain infarcts: findings from the Nun study. *J Gerontol B Psychol Sci Soc Sci* 54:S219–S222
- Guse LW, Masesar MA (1999) Quality of life and successful aging in long-term care: perceptions of residents. *Issues Ment Health Nurs* 20:527–539
- Havighurst RJ (1957) The social competence of middle-aged people. *Genet Psychol Monogr* 56:297–375
- Havighurst RJ (1961) Successful ageing. *Gerontologist* 1:8–13
- Herzog AR, House JG (1991) Productive activities and aging well. *Generations* 15:49–54
- Idler EI, Kasl SV (1995) Self-ratings of health: do they also predict change in functional ability? *J Gerontol B Psychol Sci Soc Sci* 50:S344–S353
- Kaplan GA, Camacho T (1983) Perceived health and mortality: a nine-year follow-up of the human population laboratory cohort. *Am J Epidemiol* 117:292–298
- Katz MH (1999) *Multivariable analysis. A practical guide for clinicians*. Cambridge University Press, Cambridge
- Knight T, Ricciardelli LA (2003) Successful aging: perceptions of adults aged between 70 and 101 years. *Int J Ageing Hum Dev* 56:223–245
- Kubzansky LD, Berkman LF, Glass TA, Seeman TE (1998) Is educational attainment associated with shared determinants of health in the elderly? Findings from the MacArthur studies of successful aging. *Psychosom Med* 60:578–585
- Lawton G (1946) *Aging successfully*. Columbia University Press, New York
- Manor O, Matthews S, Power C (2001) Self-rated health and limiting longstanding illness: inter-relationships with morbidity in early adulthood. *Int J Epidemiol* 30:600–607
- Marmot M, Banks J, Blundell R, Lessof C, Nazroo J (eds) (2003) *Health, wealth and lifestyles of the older population in England. The 2002 English longitudinal study of ageing*. Institute of Fiscal Studies, London
- Menec VH (2003) The relation between everyday activities and successful aging: a 6-year longitudinal study. *J Gerontol* 58B:S74–S82
- Moen P, Dempster-McClain D, Williams RM (1992) Successful aging: a life course perspective on women's multiple roles and health. *Am J Sociol* 97:1612–1638
- Palmore E (1979) Predictors of successful aging. *Gerontologist* 19:427–431
- Phelan EA, Larson EB (2002) "Successful aging"—where next? *J Am Geriatr Soc* 50:1306–1308
- Phelan EA, Anderson LA, Lacroix AZ, Larson EB (2004). Older adults' views of "successful aging"—how do they compare with researchers' definitions? *J Am Geriatr Soc* 52:211–216
- Reuben DB, Judd-Hamilton L, Harris TB, Seeman TE (2003) The associations between physical activity and inflammatory markers in high-functioning older persons: MacArthur studies of successful aging. *J Am Geriatr Soc* 51:1125
- Rowe JW, Kahn RL (1987) Human aging: usual and successful. *Science* 23:143–149
- Rowe JW, Kahn RL (1998) *Successful aging*. Pantheon Books, New York
- Rupp C, Duffy EL, Danish MM (1967) Successful adaptation to aging. I. Psychologic, social and psychiatric aspects. *J Am Geriatr Soc* 15:1137–1143
- Ryff CD (1982) Successful aging: a developmental approach. *Gerontologist* 22:209–214

- Sarkisian CA, Hays RD, Mangione CM (2002) Do older adults expect to age successfully? The associations between expectations regarding aging and beliefs regarding health-care seeking among older adults. *J Am Geriatr Assoc* 50:1837–1843
- Schoenfeld DE, Malmrose LC, Blazer DG et al (1994) Self-rated health and mortality in the high-functioning elderly. A closer look at healthy individuals: MacArthur field study of successful aging. *J Gerontol* 49:M109–M115
- Seeman TE, Berkman LF, Charpentier PA et al (1995) Behavioral and psychosocial predictors of physical performance: MacArthur studies of successful aging. *J Gerontol* 50A:M177–M183
- Seeman TE, Bruce ML, McAvay GJ (1996a) Social network characteristics and onset of ADL disability: MacArthur studies of successful aging. *J Gerontol* 51B:S191–S200
- Seeman TE, Charpentier PA, Berkman LF et al (1994) Predicting changes in physical performance in a high-functioning elderly cohort. *MacArthur studies of successful aging. J Gerontol* 49:M97–M108
- Seeman TE, Lusignolo TM, Albert M, Berkman L (2001) Social relationships, social support, and patterns of cognitive aging in healthy, high functioning older adults: MacArthur studies of successful ageing. *Health Psychol* 20:243–255
- Seeman T, McAvay G, Merrill S et al (1996b) Self-efficacy beliefs and change in cognitive performance: MacArthur studies of successful aging. *Psychol Aging* 11:538–551
- Seeman TE, Unger JB, McAvay G, Mendes de Leon CF (1999) Self-efficacy beliefs and perceived declines in functional ability. *MacArthur studies of successful aging. J Gerontol* 54B:214–222
- Starr JM, Deary IJ, Macintyre S (2003) Associations with successful aging in the 'healthy Old People in Edinburgh' cohort: being well, fit and healthy. *Aging Clin Exp Res* 15:336–342
- Strawbridge WJ, Wallhagen MI, Cohen RD (2002) Successful aging and well-being. Self-rated compared with Rowe and Kahn. *Gerontologist* 42:727–733
- Tabachnick BG, Fidell LS (2001) *Using multivariate statistics*, 4th edn. Allyn and Bacon, Boston
- Tabbarah M, Crimmins EM, Seeman TE (2002) The relationship between cognitive and physical performance. *MacArthur studies of successful aging. J Gerontol* 57A:M228–M235
- Tate RB, Lah L, Cuddy TE (2003) Definition of successful aging by elderly Canadian males: the Manitoba follow-up study. *Gerontologist* 43:735–744
- Unger JB, McAvay G, Bruce ML et al (1999) Variation in the importance of social network characteristics on physical functioning in elderly persons: MacArthur studies on successful aging. *J Gerontol* 54B:S245–S251
- Vaillant GE, Mukamal K (2001) Successful aging. *Am J Psychiatr* 158:839–847
- Von Faber M, Bootsma-van der Weil A, van Exel E et al (2001) Successful aging in the oldest old: who can be characterised as successfully aged? *Arch Intern Med* 161:2694–2700
- Ware JE, Snow KK, Kosinski M, Gandek B (1993) *SF-36 health survey*. New England Medical Centre, Boston
- Williams RH, Wirths CG (1965) *Lives through the years: styles of life and successful aging*. Atherton, New York
- Wong PT (1989) Personal meaning and successful aging? *Can Psychol* 30:3516–3253
- Wong PT, Watt LM (1991) What types of reminiscence are associated with successful aging? *Psychol Aging* 6:272–279