Quality of life (QoL) in older age: Psychometric testing of the multidimensional Older People's Quality of Life (OPQOL) questionnaire and the causal model of QoL underpinning it.

Background

There are more people aged in their 70s and 80s, and with increased life expectancy, than ever before (http://www.statistics.gov.uk/focuson/olderpeople). Increasing social expectations and concerns about associated policy implications have led to interest in improving older people’s active contribution to society (1-3). International policy aims to promote ‘active ageing’ and, in effect, to add quality to extended years of life (3). Assessment of the effectiveness of public policy in this area requires the use of relevant and valid measures. As QoL is a subjective concept (4, 5), it is essential to reflect lay views in its measurement. Most QoL measures are based on theoretical concepts, such as human need, life satisfaction, broader health, or are individualised and expensive to administer (5). Two existing measures of QoL in older age are the CASP-19 and WHOQOL-OLD. The CASP-19 (19 items) was based on models of needs satisfaction and self-actualisation, and aimed to measure Control, Autonomy, Self-realisation and Pleasure (6). The WHOQOL-OLD (24 items) is a module of the World Health Organization’s QoL measure for adults of all ages (WHOQOL). It includes additional items, judged by focus groups to be missing from the WHOQOL if applied to older people (7); some domains were expert led (8).

Our approach to conceptualising QoL in our baseline ‘QoL Survey’ of 999 people aged 65+ in Britain, shifted the paradigm of conceptual and questionnaire development towards an approach embedded firmly in the perspective of older people, integrated with theory, embracing the epistemological challenge that lay views pose for academic theories. Social investigations benefit from grounding in lay views, as they enhance understandings (9). By also testing lay views against theoretical models, we satisfied the condition for the development of measures that they are embedded in theory (8). Respondents were asked open-ended questions about what gave their lives quality, what took quality away, and priorities, followed by a self-rated QoL uniscale and structured measures. This approach was consistent with our earlier research (10, 11). The rich dataset led to a lay based, multidimensional model of social, economic, psychological, health and neighbourhood influences on QoL (12-18). Theoretical influences on QoL were assessed using measures of social, psychological, health and physical functioning and resources, perceived neighbourhood, socio-demographic/economic circumstances, and a global QoL uniscale (19 –27). Respondents’ multifaceted definitions and explanations about QoL formed the basis of the Older People’s Quality of Life (OPQOL) questionnaire.
Objectives

The aims here were to: test i) the psychometric properties of the OPQOL; ii) the robustness of its causal paradigm; iii) examine the QoL of older people and factors which led them to remain active. The objectives were to test: i) the reliability and validity of the OPQOL in samples of older people; ii) the causal model underpinning it in a follow-up of ‘QoL survey’ respondents iii) to elicit older people's understandings of 'active ageing', and association with QoL; iv and v) examine influences on active ageing and QoL.

How the aims and objectives were met:

Aims and objectives were met by analyses of results from two national surveys of people aged 65+, and a follow-up of ‘QoL Survey’ respondents. Additional insights on active ageing and quality of life were provided by the qualitative follow-up of 42 ‘QoL survey’ respondents (see qualitative report output).

Psychometric statistics were used to test the OPQOL, as reported here (Aim 1, objective i). These also included constructing cross-sectional multivariable models based on each of the three datasets to examine independent predictors of variance in QoL scores. A longitudinal model of the results of the QoL follow-up survey examined the independent predictive strength of baseline measures of QoL on follow-up OPQOL scores (Aim 2, objective ii, iii). Respondents to all three surveys were asked open-ended questions about their understanding of active ageing, followed by self-ratings of active ageing. The analyses, together with the results of the qualitative arm, led to information on lay perceptions of active ageing, and how people remained active; cross-sectional and longitudinal multivariable models of predictors of self-rated active ageing were constructed (Aim 3 objectives iii-v) (see active ageing paper output).

Methods

Three surveys were undertaken in 2007-8:

i) A face-to-face interview survey with people aged 65+ responding to two waves of the Ethnibus Surveys (http://www.ethnibus.com) - a rolling face-to-face quota sample interview survey with adults aged 16+, living at home, based on a statistically robust sample of ethnic minority populations in Britain. Ethnibus targeted the following, most common, ethnic groups: Indian, Pakistani, Black Caribbean, Chinese people. The response rate among people aged 65+ was 70%.

ii) A face-to-face interview survey with people aged 65+ responding to two waves of the Office for National Statistics (ONS) Omnibus Survey (http://www.statistics.gov.uk) - a rolling face-to-face interview survey with adults aged 16+, living at home, based on a stratified random sample of postcodes across Britain. The overall response rate to the Omnibus surveys was 62%

iii) A postal follow-up survey of people aged 65+, living at home in Britain, who were participants in our ‘QoL Survey’ (1999-2000). The response rate to follow-up was 58%. (See Supplementary file Appendix I Methods). In-depth interviews on
active ageing and QoL were carried out with 42 of the QoL follow-up survey respondents (see report output).

Measures

QoL follow-up survey members were administered the 32-item version of the OPQOL by post. The ONS Omnibus and Ethnibus interview survey samples were administered the 35-item OPQOL, which included three items derived from later focus groups, organised by Ethnifocus (http://www.ethnifocus.com), to ensure greater relevance of the measure to ethnically diverse respondents. The CASP-19 (28; 29) and WHOQOL-OLD (30) were included in the two interview surveys only, as this mode was less cognitively taxing (31). Before the three QoL scales were administered, respondents were asked to rate, on 5-point scales from ‘Very good’ to ‘Very bad’, their QoL overall, and domains of health, social relationships, independence/control/freedom, home/neighbourhood, psychological/emotional well-being, financial circumstances and leisure/social activities. Standard socio-demographic items, and questions on circumstances, and attitudes (13), were included. Respondents were asked an open-ended question about perceptions of ‘active ageing’, then to self-rate active ageing on a 5-point Likert scale from ‘Very well’ to ‘Not very well’ (see active ageing output). Please see Supplementary file Appendix 2 for instruments and description).

Statistical analysis

Univariate and multivariable analyses were used. A hierarchical approach was used for multiple regression, with independent variables entered in conceptually-related blocks of theoretical importance. The level for statistical significance was P<0.05. Entered variables did not correlate by more than 0.732; tests for multicollinearity were satisfied. Tests of internal consistency, including Cronbach’s alpha (criteria of acceptability 0.70<0.90), were applied to the data to assess the strength of the association between each scale item and the full scale (reliability). Item-total correlations, item-item correlations, test-retest reliability and item response were examined. Construct (convergent and discriminant) validity was tested by assessing the strength of Spearman’s rho correlations between the scales and similar or relevant/dissimilar measures. Factor analysis was used to examine the dimensions underlying the OPQOL.

Results:

Characteristics of survey samples

Over half of each sample (52-54%) were female. While 91% of the Ethnibus sample were aged 65<75, 55% of ONS Omnibus respondents, and 17% of the QoL follow-up respondents, were aged 65<75. The remainder were aged 75+. In reflection of their younger age, more Ethnibus respondents were married/cohabiting than widowed (58%) compared with 49% of ONS Omnibus and QoL follow-up respondents. Fewer Ethnibus respondents were home owner-occupiers (52%) than other sample members (73% and 85% respectively), and they were more likely to live with friends or family; 30% lived in households with more than four people aged 18+, compared with 1% of ONS Omnibus and none of the QoL follow-up respondents. Also, 5% of Ethnibus

3
respondents lived alone; about half of the ONS and QoL follow-up respondents (48%–49%) lived alone. Few ONS Omnibus, and none of the QoL follow-up respondents were members of ethnic minorities - See Supplementary file Appendix 3 Table 1.

QoL Scale acceptability and distributions

Questionnaire comments indicated that respondents found the OPQOL easy to complete. Item-completion was at acceptable levels – item non-response for all three QoL scales was between 1<3% in both interview surveys, although slightly higher in the self-administered postal survey with the older sample (5-10% - plus 11% for the item about having paid or unpaid work/activities).

Table 2a in Supplementary file Appendix 3 of Tables shows QoL scores, means and Cronbach’s alphas, for each sample; Tables 2b-c show sub-scale distributions. Ethnibus respondents had significantly poorer QoL on each measure, followed by older QoL follow-up sample members; ONS Omnibus respondents had the best QoL. Most (73%) Ethnibus members were in the lowest two OPQOL categories (<119), indicating worse QoL, as were 45% of the older QoL follow-up sample, but just 12% of the ONS Omnibus sample. Consistent with this, 23% of Ethnibus members were in the worst two CASP-10 categories (<29), compared with 8% of ONS respondents; 25% of the Ethnibus sample fell in the worst two WHOQOL-OLD categories, compared with 15% of the ONS respondents. Additional analyses of Ethnibus showed that 58% (26) of Chinese people scored a good QoL with the OPQOL, compared with 28% (33) of Pakistani, 20% (31) of Indian, and 23% (31) of Caribbean people (Chi-square test 28.064, 2 degrees of freedom, p<0.001). CASP-19 and WHOQOL-OLD scores did not differ by ethnicity.

The responses of each sample to the QoL measures are shown in Supplementary file Tables 3-5. Responses to most items spanned the full range, although more Ethnibus respondents opted for middle categories, ‘sitting on the fence’, compared with other respondents. For scale acceptability, floor and ceiling effects (responses at top and bottom ends of measures) should ideally be <20%, although this is difficult to achieve in research on well-being where positivity bias occurs. Despite the use of 5-point response scales in the OPQOL and WHOQOL-OLD, and 4-point response scales in CASP-19, some responses exceeded this level. The OPQOL items were more likely to discriminate between samples than the CASP-19 or WHOQOL-OLD items.

QoL Reliability

Table 2a (earlier) showed that the Cronbach’s alpha statistics (for internal consistency without item redundancy) met the 0.70<0.90 threshold for the OPQOL in each sample, but the CASP-19 and WHOQOL-OLD failed to meet this criteria for the Ethnibus sample. Cronbach’s alpha statistic is sensitive to the magnitude of correlations among items and the number of items included in the scale (32) - alpha is usually higher the greater the number of scale items, usually affecting small scales of <10 items. It is unlikely that this would account for the stronger OPQOL alphas.

The criterion for item-total correlations (correlation of item with scale total with that item omitted) is that the item should correlate with the total scale by at least 2.0 (33).
With three exceptions, the 35 full OPQOL items met this criterion for all three samples (exceptions were Ethnibus: items 10, 12, and 32; as the Cronbach’s alpha was not improved by removal, and they correlated well in validity tests, they were retained). All but six of the 19 CASP items failed to meet this criterion (Ethnibus: items 1, 2, 5, 17, 18; ONS Omnibus: item 6). Fourteen of the 24 WHOQOL-OLD items failed this criterion in the Ethnibus sample, but all were satisfactory in the ONS sample. Sub-scale item analyses showed that, as expected, items correlated more highly with similar, than dissimilar, items in the scales. Cronbach’s alphas for the OPQOL in the three samples satisfied the /g302: 0.70<0.90 threshold for internal consistency: /g302: 0.748 (Ethnibus survey), /g302: 0.876 (ONS Omnibus survey), /g302: 0.901 (QoL follow-up survey). The CASP-19 and the WHOQOL-OLD both satisfied the threshold for Cronbach’s alpha in the ONS sample (α: 0.866 and α: 0.849 respectively), but not in Ethnibus (α: 0.553 and α: 0.415 respectively).

In addition to item-total correlations, OPQOL and CASP-19 subscales met criteria for correlations with the total scale (r>0.20), except the religion/culture subscale in ONS Omnibus. Few of the WHOQOL-OLD subscales met the criteria - see Supplementary file Tables 6-8.

Four week test-retest reliability correlations for the OPQOL ranged between rho: 0.403 to 0.782, the lower correlations being explained by reported life changes in the intervening month.

QoL Validity

Construct validity (convergent and discriminant) validity was tested. We hypothesised associations between optimum levels of QoL, active ageing, health, and social support (4). The literature on QoL and socio-demographic variables is inconsistent. In support of the construct (convergent) validity of the three QoL instruments, they correlated moderately-strongly with self-rated active ageing, with respondents having optimum levels of active ageing achieving better (higher) QoL scores. The exception was WHOQOL-OLD in the Ethnibus sample. Spearman’s rho correlations for the OPQOL were: Ethnibus -0.358; ONS -0.504; QoL follow-up -0.575; for the CASP-19: Ethnibus -0.241; ONS -0.469; for the WHOQOL-OLD: Ethnibus -0.069; ONS -0.439 (all p<0.01, except the WHOQOL-OLD in the Ethnibus sample which was not statistically significant). QoL scores correlated with self-rated health status in each sample, with better health being associated with more optimum QoL: OPQOL: Ethnibus -0.364; ONS -0.543; QoL follow-up -0.628; CASP-19: Ethnibus -0.238; ONS -0.530; WHOQOL-OLD: Ethnibus -0.138; ONS -0.465 (all p<0.01) (minus signs reflect different directions of coding). Several individual CASP-19 items failed to correlate with health and functioning in the Ethnibus sample.

The availability of more informal help and support were significantly associated with better OPQOL scores in each sample. Associations were frequently not significant with the CASP-19 and WHOQOL. Older age was inversely associated with QoL on each measure across samples, with younger people having a better QoL. There were no associations with sex. Socio-economic variables were significantly correlated with the OPQOL, although less often with the CASP19 and WHOQOL-OLD. Marital status significantly correlated with the OPQOL in the Omnibus sample only, with
married people having a better QoL than unmarried people - see Supplementary file Table 9.

The validity of all three QoL scales was supported by moderate to strong correlations with the global self-rated QoL item. The Spearman’s rho correlations for the OPQOL by global QoL were: Ethnibus -0.389; ONS -0.602; QoL follow-up: -0.659; for the CASP these were: Ethnibus -0.273; ONS -0.577; for the WHOQOL-OLD these were: Ethnibus -0.128; ONS -0.466; all correlations were significant at least at p<0.01, with the exception of WHOQOL-OLD in the Ethnibus sample which was p<0.05 (the minus sign reflects opposite coding directions). The CASP-19 Control and Autonomy sub-scales, and the WHOQOL-OLD Autonomy sub-scale correlated significantly with the self-rated domain independence/control over life/freedom in the ONS Omnibus sample but not in Ethnibus. The WHOQOL_OLD Sensory abilities sub-scale correlated significantly with the self-rated health domain, but not in Ethnibus. The WHOQOL_OLD Intimacy sub-scale correlated significantly with the social relationships domain in the ONS Omnibus sample, but not in Ethnibus (see Supplementary file Table 10). These results support the construct validity of the OPQOL in each sample; they only partly support the WHOQOL-OLD and CASP-19 which performed best in the ONS Omnibus survey, rather than the ethnically diverse Ethnibus sample.

Supplementary file Table 11 shows that the OPQOL, CASP-19 and WHOQOL-OLD total scores correlated together moderately-highly (rho: 0.380 – 0.732; all p<0.01). Scale-scale, and subscale-subscale correlations were examined to assess construct validity further. It was expected that comparable scales and sub-scales would correlate. High correlations would not necessarily be expected as the content of each measure differed. Tables 12-14 in the Supplementary file show the results for the subscale-subscale correlations (Spearman’s rho).

The OPQOL subscales correlated significantly with all the CASP-19 subscales, except with OPQOL religion/culture, in the ONS Omnibus sample; there were fewer significant correlations in the Ethnibus sample (Table 12). The OPQOL and WHOQOL-OLD sub-scales correlated significantly in ONS Omnibus, with the exception of WHOQOL-OLD DAD, but were less likely to correlate significantly in Ethnibus (Table 13). Significant scale to scale and sub-scale to sub correlations, in expected directions, between the WHOQOL-OLD and the CASP-19 were achieved for all sub-scales in ONS Omnibus, but not all correlated significantly in Ethnibus (Table 14).

The OPQOL Psychological well-being and outlook subscale correlated significantly with the OPQOL Life overall subscale in Ethnibus, ONS Omnibus and QoL follow-up samples (Spearman’s rho: 0.232, 0.554, 0.380 respectively; all p<0.01). Poor health and frailty can limit independence, and the OPQOL health and functioning subscale correlated significantly with the OPQOL Control, independence and freedom subscale (Spearman’s rho: 0.138, 0.489, 0.460 respectively; all p<0.01). With just one exception (Control - Self-realisation, rho: 0.079) the CASP-19 sub-scales all inter-correlated (between rho 0.160 to 0.835; all p<0.01). In the WHOQOL-OLD, Past, present and future abilities subscale correlated in each sample with Social participation subscale (rho 0.209 (Ethnibus) and 0.584 (ONS Omnibus); both p<0.01). The WHOQOL-OLD Self realisation subscale correlated with the Pleasure
subscale (rho 0.189 and 0.523 in the samples respectively; both p<0.01). All subscale-
total score correlations, for each measure within each sample, were significant at
p<0.01 (OPQOL rho 0.235 to 0.786; CASP-19 rho 0.549 to 0.834; WHOQOL-OLD
rho 0.291-0.761).

**OPQOL Factor analysis**

The 35 item OPQOL in the ONS Omnibus Survey, which contained the largest
number of cases, were subjected to principle components analysis (PCA), using
SPSS, to examine factor structure. The suitability of the data were assessed for their
suitability for analysis (34, 35). The correlation matrix revealed many correlations of
0.3+. The Kaiser-Meyer-Olkin value of sampling adequacy was 0.893, exceeding the
recommended value of 0.6 (36, 37). Bartlett’s Test of Sphericity (38) was significant
(Chi-square 7169.875, 595 degrees of freedom, p<0.001), supporting the factorability
of the correlation matrix.

PCA revealed the presence of 9 components where the eigenvalues exceeded 1, and
which explained cumulatively 60.583% of the total variance in QoL between
respondents; component 1 explained the most variance, 24.052%; component 2
explained a further 7.614%, component 3 explained a further 5.995, and component 4
a further 5.644%; the remaining components each explained 4%. Inspection of the
screeplot (39) showed a clear break after component 1, with small breaks after
components 3 and 4. This supported the conclusion that component 1, followed by
components 2-4, explained most of the variance.

Using the Kaiser criterion of retaining all components with eigenvalues above 1, most
items (n=27/35) loaded strongly (above 0.4) on the first component; eight items
loaded strongly (0.4), or moderately (above 3.0) on the second component; 11 items
loaded strongly-moderately on the third, and two items loaded strongly on the fourth.
Two items loaded strongly on components 5-9. Thus the factor analysis revealed a
simple structure for the OPQOL items, with most loading substantially on a single
component. **Supplementary file Table 15** shows that the results for the first four
components.

Using the results of Cattell’s scree test, it was decided to retain two components for
further investigation, using varimix rotation in order to aid interpretation. The rotated
solution confirmed a simple structure with most items again loading substantially on
one component. Most items loaded strongly (over 4.0). Two components explained
31.415% of the variance between respondents (component 1: 20.901%; component 2:
10.514%). **Supplementary file Table 16** shows these results. Two items failed to load,
but were retained given their good correlations in validity tests; their removal made
no difference to Cronbach’s alpha. The two components can be labelled as:
enjoyment, well-being, support and health; and Component 2 as life restrictions,
limitations and beliefs.

**QOL Multiple regression models**

In addition to assessment of longitudinal predictors of the OPQOL in the QoL follow-
up sample, cross-sectional multivariable analyses were conducted with the three
survey samples, in order to examine independent predictors of the OPQOL, CASP-19
and WHOQOL-OLD, for validity. The same independent variables were entered into each model, and were hypothesised to be associated with QoL: self-rated active aging; QoL domain self-ratings; social activities and help from social network members; self-rated health status and physical functioning (ADL); adjusted for age, sex, marital status and housing tenure.

Cross-sectional models of QoL: predictors of the OPQOL

The cross-sectional multivariable model for the QoL follow-up survey sample was significant. Self-rated active ageing and domain self-ratings of QoL-related health; independence, control, freedom; home and neighbourhood; psychological and emotional well-being; financial circumstances were all significant predictors of variance in OPQOL scores in the expected optimal directions, as was sex (female scored as having slightly better QoL than males). The amount of explained variance of OPQOL scores was high at 77% (Adjusted R² 0.774). The model is shown in Supplementary file Table 17.

The comparable model for the OPQOL in ONS Omnibus was highly significant. Self-rated active ageing, all but the one of the self-rated domains, social activities, help from network members, and self-rated health were highly significant predictors. The model explained 65% of the variance in OPQOL (Adjusted R²: 0.653) - see Supplementary file Table 18.

The model for the OPQOL in Ethnibus was also significant. The total of explained variance in OPQOL ratings was 43% (Adjusted R²: 0.430). The variables which were significance were self-rated active ageing, self-rated domains of health, home and neighbourhood, psychological and emotional well-being, finances, leisure/social activities and health status – see Supplementary file Table 19.

A causal model of QoL: longitudinal predictors OPQOL

The longitudinal model of the OPQOL aimed to assess the causal model underlying the OPQOL in the QoL follow-up sample. This used baseline indicators of QOL, which were supported by lay perceptions of QoL, as independent predictors of OPQOL: health and functional status, practical help, social support and activities, ratings of neighbourhood, and psychological outlook (social comparisons, self-efficacy, control), adjusted for socio-demographic indicators. This model explained 56% of the variance in OPQOL scores (Adjusted R²: 0.563). As number of different social activities lost significance in the model, a reduced model was conducted excluding it. Health status, number of diagnosed medical conditions, help/social support, perceived neighbourhood, downward social comparisons, and feelings of self-efficacy and control, in this reduced, highly significant, model, explained 48% of the variance in OPQOL scores (Adjusted R²: 0.481) - see Supplementary file Table 20.

Cross-sectional models of QoL: CASP-19

The amount of explained variance in CASP-19 scores in ONS Omnibus explained by the model was 57% (Adjusted R²: 0.568); the model was highly significant. The predictor variables which retained significance were five of the domain ratings (social
relationships; independence, control freedom; psychological and emotional well-being; leisure and financial circumstances) - see Supplementary file Table 21.

The model for Ethnibus was weak. The amount of explained variance in CASP-19 scores was just 14% (Adjusted R²: 0.141), although the model was still significant. The significant variables were self-rated active ageing, three of the seven domain self-ratings (health, psychological and emotional well-being, and financial circumstances) and self-rated health status - see Supplementary file Table 22.

Cross-sectional models of QoL: WHOQOL-OLD

The amount of explained variance in WHOQOL-OLD scores in ONS Omnibus was 45% (Adjusted R²: 0.448); the model was highly significant. The significant variables in the model were self-rated active ageing, three of the seven domain ratings (independence, control, freedom; psychological and emotional well-being; leisure and social activities); number of social activities and helpers; self-rated health, and housing tenure; see Supplementary file Table 23.

As with the CASP-19, the WHOQOL-OLD model for Ethnibus was weak. The amount of explained variance in WHOQOL-OLD scores was just 5% (Adjusted R²: 0.048), although the model was significant. The variables which were significant were three of the seven domain ratings (independence, control, freedom; home and neighbourhood; leisure and social activities); and number of social activities - see Supplementary file Table 24.

In conclusion, the OPQOL had good acceptability, internal consistency and construct validity in British population and ethnically diverse samples of older people. The CASP-19 and WHOQOL-OLD had good levels of reliability and validity in the British population sample, but not in the ethnically diverse sample. Factor analysis of the OPQOL suggested a two-factor solution, which explained 31% of the variance between respondents. The OPQOL has potential for use as an outcome measure of multi-sector policy.

Active ageing: summary

The analyses of active ageing in the surveys and in-depth interviews, are enclosed as the two permitted outputs for consideration. Summaries are presented below.

a). The three surveys

All survey respondents were asked open-ended questions about their understanding of active ageing, followed by self-assessed active ageing. Respondents defined active ageing mainly in terms of physical and mental health, fitness and exercise; psychological factors; social relationships, roles and activities; independence, mobility and enablers. Just under a third of the ONS Omnibus and QoL follow-up survey respondents reported engaging in physical activity; just under two-thirds of the Ethnibus reported this (they included more sedentary physical activities and games). Less than half of Ethnibus survey members rated themselves as ageing ‘very’ or ‘fairly’ actively; over three quarters of respondents to the ONS Omnibus and QoL follow-up surveys did so.
Multiple regression modelling showed that most consistent, independent predictors of optimum self-rated active ageing were having good QoL (OPQOL), levels of health and functioning, and social participation. The model in the ONS Omnibus sample explained 41% of the variance in self-rated active ageing; the comparable cross-sectional model in QoL follow-up survey explained 55% of the variance, and the longitudinal model in this sample explained 64%. The longitudinal model in the QoL follow-up survey also showed that, while baseline (1999-2000) indicators of respondents’ circumstances were important in predicting future active ageing, they lost significance compared with their current circumstances (albeit they are associated). These proportions of explained variance are sizeable for subjective indicators. The Ethnibus model was weaker and explained just 17% of the variance. The CASP-19 and WHOQOL-OLD were not significant, independent predictors of active ageing in any model.

b). In-depth interviews.

Qualitative interviews about active ageing were conducted with a diverse sample of 42 people aged 72 years and over, drawn from QoL follow-up survey respondents. A thematic analysis was conducted using a constant comparison technique to elicit themes around perceptions of active ageing. Active ageing was defined in physical, cognitive, psychological and social terms, again in support of multidimensional models (40). People were keen to portray themselves as active agers rather than the stereotype of an inactive older person. Barriers to active ageing included poor physical and cognitive functioning, poor health of self and others, inadequate transport, finances and social exclusion, while enablers included provision of clubs and services, help in the home, accessible health care and appropriate transport.

Perceptions of active ageing overlapped with quality of life (41); respondents indicated that their quality of life was enhanced by ageing actively. Some people maintained their quality of life through the use of strategies aimed at limiting potential threats. Far from merely coping with decline, respondents reported actively balancing gains and losses as they aged. Proactive coping facilitated strategies of using skills of ‘selective optimization and compensation’ (42).

Suggestions of how to overcome barriers to active ageing included better access to clubs, exercise and other activities. Lack of convenient and accessible transport was a major barrier to activity: people wanted more use of low floor boards and ‘kneeling’ buses, buzzers with in easy reach, plentiful handrails, enhanced suspension, patient and courteous service on buses. Rather than passively accepting barriers to an active lifestyle in older age, it was clear that people aimed to overcome obstacles to remain engaged and active.

Acknowledgements

The study was funded by the UK Cross Council New Dynamics of Ageing Programme; we are grateful for their support: RES-352-25-0001. Thanks are due to ONS Omnibus Survey and Ethnibus staff for mounting the Quality of Life and Active Ageing modules, and processing the data. Material from the ONS Omnibus Survey,
made available through ONS, has been used with the permission of the Controller of The Stationery Office. We also thank Professor Steve Iliffe, Ms Kalpa Kharicha, and members of the study advisory group for advice, and Ms Corinne Ward for QoL Survey administration, transcribing and data processing. Members of ONS Omnibus and Ethnibus hold no responsibility for the further analysis and interpretation of their datasets.

**Ethical committee consent:** The 2007-8 study was granted ethical committee consent by University College London Research Ethics Committee.

**Activities**

Apart from plans for dissemination with the Director of the NDA Programme, the findings have been reported internationally, to date, as follows:

Ann Bowling (invited open plenary lecture) Cadenza Conference on Successful Ageing, University of Hong Kong, Hong Kong (2008)
Tara McFarquhar 17th European Congress of Psychiatry, Lisbon, Portugal (2009)


Our Advisory Group included three older people and a policy representative.

**Outputs**

The datasets have been lodged with UK Data Archive (Acq. 3822/JM).

NDA Findings (NDA Programme, University of Sheffield)

Qualitative study report: Older people’s understandings about active ageing and its influence on quality of life: a qualitative study.

Papers submitted to journals:

1. Predictors of active ageing in two population samples and an ethnically diverse sample of older people in Britain
2. The psychometric properties of the Older People’s Quality of Life Questionnaire (OPQOL)
4. Fears about dying among people aged 65+. Findings from a national population sample and ethnically diverse sample in Britain.
Impacts

The project was 18 months in duration. We have had several expressions of interest from policy organisations about the final version of the Older People’s Quality of Life Questionnaire. It is currently being used in a multi-centre clinical trial of falls prevention in older people, funded by the Health Technology Assessment Board (S. Iliffe et al).

Future Research Priorities

1. Test the predictive strength of the OPQOL in the assessment of QoL outcomes of specific service users.

2. Examine reasons for ethnic differences in QoL.

3. Construction of a composite, multidimensional measure of active ageing, underpinned by lay views.
Annex of References