Which measure of quality of life performs best in older age? A comparison of the OPQOL, CASP-19 and WHOQOL-OLD

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ABSTRACT

Background Most measures of quality of life (QoL) are based on 'expert' opinions. This study describes a new measure of QoL in older age, the Older People's QoL Questionnaire (OPQOL), which is unique in being derived from the views of lay people, cross-checked against theoretical models for assessment of comprehensiveness. Its performance was assessed cross-sectionally and longitudinally. It was compared with two existing QoL measures in the cross-sectional studies in order to identify the optimal measure for use with older populations.

Methods Data were taken from three surveys of older people living at home in Britain in 2007—2008: one population survey of people aged 65+, one focused enumeration survey of ethnically diverse older people aged 65+, one follow-up of a population survey of people aged 65+ at baseline in 1999/2000. Measures were QoL (using OPQOL, Control, Autonomy, Satisfaction, Pleasure - 19 items (CASP-19), World Health Organization Quality of Life questionnaire - version for older people (WHOQOL-OLD)), health, social and socioeconomic circumstances. The CASP-19 and WHOQOL-OLD were not administered to the longitudinal sample in order to reduce respondent burden.

Results Psychometric tests were applied to each QoL measure. The OPQOL, CASP-19 and WHOQOL-OLD performed well with the cross-sectional samples; however, only the OPQOL met criteria for internal consistency in the Ethnibus samples.

Conclusion The OPQOL is of potential value in the outcome assessment of health and social interventions, which can have a multidimensional impact on people's lives. Further research is needed to examine whether differences by ethnicity reflect real differences in QoL, methodological issues, variations in expectations or cultural differences in reporting.

BACKGROUND

Governments across the developed world are concerned with enabling older people to maintain their active contribution to society, and thereby their quality of life (QoL).[1] QoL has become a commonly used end point in the evaluation of multisector public policy, including health, social, community and environmental policy actions.

For policy outcomes to be measured with any validity, measures of QoL need to have social, as well as policy, relevance, to be meaningful to people's lives, and to be carefully conceptualised and constructed.

Lawton[2–6] developed a popularly cited quadripartite concept of QoL, proposing that the 'good life' (QoL) may be represented by behavioural and social competence (health, cognition, time use, social behaviour), perceptions of QoL (subjective evaluation of each domain of life), psychological well-being (mental health, cognitive judgements of life satisfaction, positive-negative emotions) and the external, objective, physical environment (housing, economic indicators). However, there is no consensus about its conceptual definition or measurement,[7] and most investigators have based their concepts on expert opinions rather than the perspectives of lay people. This has the consequence that there are few empirical data on the extent to which the items included in measurement scales have any relevance to people. Thus, it is increasingly important to develop a multidimensional model and measure of quality of life, for use in descriptive and evaluative multisector policy research, which reflects the views of the population concerned, with cross-sectional and longitudinal applicability. Elicitation of people's own views of QoL in this process is particularly important because QoL is a subjective concept.

What are older people's views of QoL? Survey and qualitative research with people aged 65+, living at home in Britain, reported that the central planks of QoL emphasised by respondents were psychological well-being and positive outlook, having health and functioning, social relationships, leisure activities, neighbourhood resources, adequate financial circumstances and independence.[7–10] This research led to the development of the Older People's Quality of Life Questionnaire (OPQOL), which is unique in being derived from the views of a representative sample of older people, cross-checked against theoretical models for assessment comprehensiveness.

METHODS

The aim here is to compare the psychometric properties of the OPQOL, with the CASP-19 and WHOQOL-OLD among people 65+ participating in three national surveys of older people living at home in Britain. Two of these three surveys were cross-sectional, and the third was longitudinal (see supplementary Appendix 1):

1. Ethnibus survey of people aged 65+ responding to two waves of the national Ethni Surveys (http://www.ethnicfocus.com) in 2008. This is a rolling face-to-face interview survey with adults aged 16+, living at home, based on focused enumeration, stratified random sampling of postcodes in Britain, and statistically robust sampling of people in common ethnic minority groups in Britain; the response rate was 70% (n=400).
2. ONS survey of people aged 65+ responding to two waves of the Office for National Statistics

(ONS) national Omnibus Survey (http://www.statistics.gov.uk) in 2008. This is 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 response rate was 61% (n=589).

3. QoL follow-up survey in 2007–2008, of people living at home in Britain, aged 65+ at baseline, who had responded to four ONS national Omnibus interview surveys. These were based on stratified random samples of postcodes across Britain during 1999/2000; response was 77% (n=999) at baseline and 58% among survivors (n=287) at 2007–2008 follow-up. The QoL follow-up survey is included here as the longitudinal design provided the opportunity to test the causal model of the OPQOL, as well as a willing sample for test-retest reliability assessment.

Measures

The OPQOL was administered in all three surveys. Prior to administration in the surveys reported here, the items in the OPQOL were pretested with 179 older people and three focus groups, reduced to 32-item and 35-item versions, and statistical tests of reliability and validity were applied. The CASP-19[11] and the WHOQOL-OLD[12 13] were administered in the two face-to-face interview surveys only; it would have been too cognitively burdensome to have included all three scales in the postal, self-administration mode. Supplementary Appendix 2 displays the OPQOL, summarises its development and briefly summarises the CASP-19 and WHOQOL-OLD.

Independent self-ratings of global QoL, and of its domains, were included in the questionnaire in order to distinguish between the constituents of, and influences on, QoL.[14] Also included were standard sociodemographic items, self-rated active ageing, items measuring health and psychosocial circumstances.[7] Ethnic status was measured using a standard item about ethnic identity in the UK. This would not necessarily be applicable to populations in other countries, because it reflects close connections between New Commonwealth countries and ethnic minority groups in the UK.[15]

Statistical analysis

Descriptive analyses included frequencies, χ^2 tests, and Spearman's r correlations. Tests of scale reliability were applied in order to assess the extent to which scale items measure the same construct, with freedom from random error (internal consistency). Reliability tests applied to the QoL scales included Cronbach's α test of homogeneity. This is the strength of the association between each scale item and the full scale, item-item and item-total correlations. Test-retest reliability of the stability of the newly developed OPQOL was assessed by mailing a second copy of the questionnaire to a random subsample of 50 follow-up QoL survey respondents, 4 weeks after return of the first questionnaire (response rate: 76%/38).

Criterion (concurrent) validity is the independent corroboration that the scale is measuring what it intends to measure. This can only be measured by proxy with subjective measures, as there is no gold standard. Proxy variables used here included independent self-ratings of QoL overall and of QoL domains (health, social relationships, independence/control over life/freedom, home and neighbourhood, psychological/emotional well-being, financial circumstances, social and leisure activities). Construct (convergent and discriminant) validity requires corroboration that scales measure the underlying construct they purport to measure. This was tested by assessing Spearman's r correlations between the QoL scales and similar variables (for convergent validity that the scale should correlate with similar or hypothesised variables) and dissimilar variables (for discriminant validity that there should be low correlations between scales and variables not expected to be associated).

Multiple regression was used to assess validity further by examining the ability of theoretically relevant variables to predict total QoL scores. A hierarchical approach was used, with independent variables entered in their theoretical order of importance. Statistical significance was set at $p<0.05$. The variables entered did not correlate by more than 0.732; tests for multicollinearity were satisfied. Sociodemographic variables were entered to adjust for their effects.

RESULTS

Characteristics of samples

Just over half of each sample comprised women (52%/207 Ethnibus, 55%/324 ONS, 54%/154 QoL follow-up). Whereas most Ethnibus respondents were aged 65<75 (91%/363), just over half of ONS Omnibus (55%/326), and less than a fifth of QoL follow-up respondents (17%/47), were aged 65<75. Thirty-eight per cent (152) of the Ethnibus sample were Indian, 29% (117) were Pakistani, 22% (86) were Black Caribbean and 11% (45) were Chinese. Most, 94% (555) of the ONS Omnibus sample were white British; all QoL follow-up respondents were white British. In reflection of their younger age, more of the Ethnibus than other respondents were married or cohabiting (58%/230, 49%/285, 49%/138 respectively). Fewer Ethnibus than other respondents were home-owners (532%/208, 73%/429, 85%/239 respectively) and fewer lived alone (5%/19, 48%/286, 49%/137 respectively) (All differences were statistically significant at least at $p<0.01$.) For detailed characteristics of the samples, see supplementary table 1.

Distributions of samples on QoL scales

Few, 12%/70, of the ONS Omnibus sample, compared with more, 45%/113 of the older QoL follow-up sample, and 73%/290 of the Ethnibus sample were in the lowest two OPQOL categories (<119), indicating worse QoL (see supplementary table 2).

The Ethnibus and ONS cross-sectional samples only were administered the CASP-19 and WHOQOL-OLD. Consistent with the OPQOL findings, 23%/94 of Ethnibus respondents were in the worst two CASP-19 categories (<29), compared with 8%/43 of ONS respondents; 25%/100 of the Ethnibus sample fell in the worst two WHOQOL-OLD categories, compared with 15%/80 of the ONS respondents (see supplementary tables 3 and 4).

Further analyses by total QoL scores and ethnicity in the Ethnibus sample 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 Black Caribbean people (χ^2 test 28.064, 2 degrees of freedom, $p<0.001$) (caution: smaller numbers). The CASP-19 and WHOQOL-OLD total scores showed no differences by ethnicity. Differences by ethnicity were not analysed in the other samples due to their low numbers in ethnic minority groups.

Reliability

The reliability criterion for item-total correlations (the correlation of the item with the scale total with that item omitted) is that the item should correlate with the total scale by at least 0.20. With three exceptions, the 35 full OPQOL items met this criterion for all three samples (the exceptions were in the Ethnibus sample with items 10, 12 and 32; but as Cronbach's α was not improved by their removal, and they performed well in validity tests, they were retained). Six of the 19 CASP items

failed to meet this criterion (Ethnibus: items 1, 2, 5, 17, 18; ONS: item 6). Fourteen of the 24 WHOQOL-OLD items failed this criterion in the Ethnibus sample only. As expected, all items correlated more highly with similar, than dissimilar, items in the scales.

Cronbach's α for the OPQOL in all three samples satisfied the 0.70<0.90 threshold for internal consistency: α 0.748 (Ethnibus survey), α 0.876 (ONS Omnibus survey), α 0.901 (QoL follow-up survey). The CASP-19 and the WHOQOL-OLD satisfied the threshold for Cronbach's α in the ONS sample (α 0.866 and α 0.849 respectively), but neither met this in Ethnibus (α 0.553 and α 0.415 respectively) (see earlier, neither were administered in the QoL follow-up sample).

The 4 week test-retest correlations, assessed among QoL follow-up survey respondents, ranged from moderate to high (r 0.403–0.782). Lower correlations were explained by reported life changes in the intervening month, demonstrating the difficulties of test-retest exercises in older populations. Respondents' comments at follow-up about life changes in the last 4 weeks illustrate this:

> 'About 4 days ago the plaster was taken off my left hand so now I can go on buses again - my only means of regular transport apart from volunteer drivers, a few friends and taxis. Anyway it means I am free';

> 'My husband of nearly 60 years was told he has lung cancer so it has changed very much how I feel. We are trying to be as normal as possible but it's very hard';

> 'My daughter and her young son have now left our home and acquired her own house. We miss them a lot';

> 'My husband has just come home after spending another 2 weeks in hospital (suspected heart attack)'.

Validity

In order to test the criterion (also known as concurrent) validity of the QoL scales, all respondents were asked to rate the 'QoL of their lives overall' and by area of life ('QoL domain'), using five-point scales from 'Very good' to 'Very bad'. The criterion validity of all three QoL scales was indicated by their moderate to strong, significant correlations with global self-rated QoL: the Spearman's r correlations for the OPQOL by self-rated QoL overall in each sample were Ethnibus −0.347, ONS −0.602 and QoL follow-up −0.659. For the CASP, in the two cross-sectional samples, they were Ethnibus −0.273, ONS −0.577, and for the WHOQOL-OLD, in the two cross-sectional samples, they were Ethnibus −0.128 and 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. (Minus signs simply reflect opposite coding directions).

The validity of the OPQOL was further supported by significant correlations between its subscales and the independent QoL domain ratings, in theoretically expected, similar directions[7] (eg, OPQOL health and functioning subscale correlated with self-rated health: Spearman's r Ethnibus −0.122 (p<0.05), ONS Omnibus −0.679 (p<0.01) and QoL follow-up −0.713 (p<0.01). There were no significant correlations with dissimilar pairs (eg, health and religion), again as expected.

The CASP-19 Control and Autonomy subscales and the WHOQOL-OLD Autonomy subscale also correlated significantly, as expected in similar directions, with self-rated independence, control over life and freedom in the ONS sample (r −0.472, p<0.01; r −0.466, p<0.01 respectively), but not in the Ethnibus sample. The WHOQOL-OLD Sensory Abilities subscale correlated significantly, again as expected, with self-rated health in the ONS (r −0.322, p<0.01), but not the Ethnibus sample. The WHOQOL-OLD Intimacy subscale correlated significantly, also as expected, with the social relationships domain in the ONS sample (r −0.330, p<0.01), but not in the Ethnibus sample.

Table 1 Multiple regression of predictors of OPQOL: QoL follow-up sample (final model)

Independent predictor variables	Unstandardised B Standardised β	95% CI (Two-tailed t test) p Value
Block 1		
Self-rated active ageing	−2.637 −0.184	−4.071 to −1.203 (−3.626) 0.0001
Block 2		
QoL domain self-ratings		
QOL: health	−1.965 −0.122	−3.759 to −0.172 (−2.162) 0.032
QoL: social relationships	−1.341 −0.080	−2.988 to 0.306 (−1.606) 0.110 NS
QoL: independence, control over life, freedom	−1.669 −0.106	−3.194 to −0.144(−2.158) 0.032
QoL: home and neighbourhood	−2.108 −0.106	−3.660 to −0.556 (−2.679) 0.008
QoL: psychological and emotional well-being	−3.258 −0.193	−4.768 to −1.749(−4.257) 0.0001
QoL: financial circumstances	−5.223 −0.273	−6.669 to −3.777 (−7.124) 0.0001
QoL: leisure and social activities	−0.681 −0.043	−2.320 to 0.957 (−0.820) 0.413 NS
Block 3		
Total number of different social activities done in last month (out of listed eight)	1.108 0.150	0.375 to 1.842 (2.981) 0.003
Total number of relatives, friends, neighbours who would help with practical tasks	0.132 0.060	−0.032 to 0.297(1.586) 0.114 NS
Block 4		
Self-rated health status, compared to others of same age	−0.562 −0.041	−2.141 to 1.018 (−0.701) 0.484 NS
ADL total score (sum of ability to: walk 400 yards, do heavy housework, shop/carry heavy bags, steps/stairs)	0.238 0.062	−0.166 to 0.642 (1.163) 0.246 NS
Block 5		
Age	0.008 0.004	−0.157 to 0.173 (0.095) 0.925 NS
Sex	3.303 0.118	1.279 to 5.328 (3.219) 0.002
Marital status	0.759 0.055	−0.250 to 1.768 (1.484) 0.140 NS
Housing tenure	−0.797 −0.053	−1.831 to 0.237 (−1.520) 0.130 NS
Constant	153.985	
R^2	0.791	
Adjusted R^2	0.774	
Anova F statistic; p value	45.794; 0.0001	

ADL, activities of daily living; NS, not significant; OPQOL, Older People's Quality of Life; QOL, Quality of Life.

Table 2 Multiple regression of predictors of OPQOL: ONS Omnibus and Ethnibus samples (final models)

Independent predictor variables	ONS Omnibus: Unstandardised B / Standardised beta	ONS Omnibus: 95% CI (2-tailed t-test) / p Value	Ethnibus: Unstandardised B / Standardised beta	Ethnibus: 95% CI (2-tailed t-test) / p Value
Block 1				
Self-rated active ageing	−1.515 −0.103	−2.507 to −0.523 (−3.000) 0.003	−1.652 −0.167	−2.464 to 0.839 (−3.998) 0.0001
Block 2				
QoL domain self-ratings				
QOL: health	−1.531 −0.104	−2.756 to −0.307 (−2.457) 0.014	−1.044 −0.085	−1.980 to −0.109 (−2.194) 0.029
QoL social relationships	−1.503 −0.097	−2.577 to −0.430 (−2.751) 0.006	−0.213 −0.017	−1.165 to 0.739 (−0.439) 0.661 NS
QoL: independence, control over life, freedom	−2.081 −0.133	−3.231 to −0.931 (−3.556) 0.0001	−0.678 −0.055	−1.639 to 0.284 (−1.386) 0.167 NS
QoL: home and neighbourhood	−0.730 −0.040	−1.912 to 0.451 (−1.214) 0.225ns	−3.013 −0.245	−4.022 to −2.004 (−5.870) 0.0001
QoL: psychological and emotional well-being	−1.424 −0.084	−2.611 to −0.237 (−2.356) 0.019	−2.033 −0.161	−3.078 to −0.987 (−3.821) 0.0001
QoL: financial circumstances	−3.362 −0.207	−4.366 to −2.358 (−6.577) 0.0001	−1.952 −0.158	−2.887 to −0.016 (−4.103) 0.0001
QoL: leisure and social activities	−2.047 −0.146	−3.118 to −0.977 (−3.757) 0.0001	−2.184 −0.191	−3.093 to −1.275 (−4.723) 0.0001
Block 3				
Total number of different social activities done in last month (out of listed 8)	0.843 0.112	0.335 to 1.351 (3.259) 0.001	−0.401 −0.051	−1.012 to 0.211 (−1.288) 0.198 NS
Total number of relatives, friends, neighbours who would help with practical tasks	0.106 0.080	0.035 to 0.177 (2.949) 0.003	−0.008 −0.005	−0.136 to 0.120 (−0.125) 0.900 NS
Block 4				
Self-rated health status, compared to others of same age	−1.289 −0.100	−2.298 to −0.279 (−2.507) 0.012	−2.443 −2.228	−3.445 to −1.441 (−4.792) 0.0001
ADL total score (sum of ability to: walk 400 yards, do heavy housework, shop/carry heavy bags, steps/stairs)	−0.009 −0.003	−0.279 to 0.260 (−0.069) 0.945ns	0.001 0.001	−0.276 to 0.278 (0.007) 0.994 NS
Block 5				
Age	0.044 0.022	−0.073 to 0.162 (0.742) 0.458 NS	−0.209 −0.071	−0.428 to 0.011 (−1.867) 0.063 NS
Sex	0.612 0.021	−0.914 to 2.139 (0.788) 0.431 NS	0.055 0.003	−1.575 to 1.686 (0.067) 0.947 NS
Marital status	−0.341 −0.027	−1.046 to 0.364 (−0.950) 0.342 NS	0.182 0.014	−0.817 to 1.181 (0.358) 0.721 NS
Housing tenure	−0.286 −0.020	−1.060 to 0.488 (−0.726) 0.468 NS	−0.632 −0.069	−1.326 to 0.061 (−1.793) 0.074 NS
Constant	159.694		176.681	
R2	0.663		0.453	
Adjusted R2	0.653		0.430	
Anova F statistic; p	62.853; 0.0001		19.814; 0.001	

ADL, activities of daily living; NS, not significant; QOL, Quality of Life.

In support of construct (convergent) validity, the OPQOL correlated moderately strongly in the same direction, as hypothesised,[7] with self-rated health status ('compared with others of same age') in each sample: OPQOL Ethnibus −0.364, ONS −0.543 and QoL follow-up −0.628. The CASP-19 and WHOQOL-OLD correlations in the two cross-sectional samples were also in the same direction and significant, although slightly weaker (CASP-19 Ethnibus −0.238, ONS −0.530; WHOQOL-

OLD Ethnibus −0.138, ONS −0.465; all p<0.01). (Minus signs simply reflect different directions of coding).

Multivariable analyses

Multivariable analyses were conducted with each sample in order to examine independent predictors of the OPQOL, CASP-19 and WHOQOL-OLD. For comparability, the same independent variables were entered into each model. On the basis of the literature,[7] optimum scores on each measure were hypothesised to be associated with optimum QoL: self-rated active ageing, independent self-ratings of QoL domains, social activities and help from social network members, self-rated health status and physical functioning (ADL), age, sex, marital status and housing tenure. The QoL follow-up sample also provided an opportunity to test the causal model underpinning the OPQOL.

OPQOL

The cross-sectional model for the QoL follow-up sample was highly significant (see table 1). Perceptions of ageing more actively, having optimal self-ratings of health, independence, home and neighbourhood, psychological well-being and finances, more social activities and female sex significantly, and independently, predicted optimal OPQOL scores. The amount of explained variance of OPQOL scores in the model was high at 77% (adjusted R^2 0.774).

The OPQOL models in the ONS and Ethnibus samples were also highly significant. Again, optimal ratings of active ageing, most self-rated QoL domains and also self-rated health status were significant in both samples. The model explained 65% of the variance in OPQOL scores (adjusted R^2 0.653) in the ONS sample and 43% (adjusted R^2 0.430) in the Ethnibus sample (table 2).

The variables included in the test of the causal model underpinning the OPQOL, in the QoL follow-up sample, were the baseline indicators that reflected the components chosen for the OPQOL domains (health and functional status, practical help received, social support and activities, perceived quality of neighbourhood, psychological outlook, GAP score for social comparisons and expectations and self-efficacy), plus standard sociodemographic indications to control for their effects.

This model explained 56% of the variance in OPQOL scores (adjusted R^2: 0.563). As number of different social activities was not significant in the model, a reduced model was conducted excluding this variable. Health status and number of diagnosed medical conditions, help and social support, perceptions of neighbourhood and feeling safe, social comparisons (comparing one's financial and living circumstances with others who are worse off), feelings of self-efficacy and control, then explained 48% of the variance in OPQOL scores in expected directions (adjusted R^2 0.481). The overall model was highly significant in general support of the OPQOL (see table 3).

CASP-19

The CASP-19 was assessed in the two ONS and Ethnibus samples. The amount of explained variance in CASP-19 scores in the ONS sample explained by the model was 57% (adjusted R^2 0.568); the model was highly significant, and in expected directions. The variables that retained significance in the model were five of the domain ratings, health and functioning. In contrast, the CASP-19 model for the Ethnibus sample was weak: the amount of explained variance in CASP-19 scores was just 14% (adjusted R^2 0.141), although the model was still significant. The variables that were significant were self-rated active ageing, and three of the seven QoL domain self-ratings, health status, but not physical functioning (see table 4).

Table 3 Causal model underpinning OPQOL

Independent predictor variables	Unstandardised B Standardised β	95% CI (Two-tailed t test) p Value
Final model 5		
Block 1		
Self-rated health compared with others of same age	−4.220 −0.318	−5.643 to −2.798 (−5.846) 0.0001
No. of diagnosed medical conditions	−1.710 −0.136	−3.016 to −0.404 (−2.579) 0.011
Block 2		
No. of five listed areas can call for help and support with	6.368 0.132	1.837 to 10.900 (2.769) 0.006
Married/cohabiting versus single, widowed, divorced	−2.811 −0.097	−5.724 to 0.103 (−1.901) 0.059 NS
Block 3		
Self-rating of neighbourhood score (quality, problems)	−3.176 −0.199	−4.665 to −1.688 (−4.205) 0.0001
Feels safe walking alone day±night score	3.850 0.099	0.268 to 7.433 (2.118) 0.035
Block 4		
GAP score: social comparisons worse, same or better off than others	−7.440 −0.227	−10. 504 to −4.376 (−4.784) 0.0001
Self-efficacy score	−2.145 −0.155	−3.461 to −0.829 (−3.211) 0.002
Block 5		
Age	−0.486 −0.221	−0.698 to −0.274 (−4.510) 0.001
Sex	3.077 0.109	0.402 to 5.751 (2.267) 0.024
Housing tenure: home-owner/mortgage versus rent/other	1.149 0.035	−1.999 to 4.297 (0.719) 0.473 NS
Constant	175.666	
R^2	0.505	
Adjusted R^2	0.481	
Anova F statistic; p value	21.629; 0.0001	

ADL, activities of daily living; NS, not statistically significant at least the 0.05 level; OPQOL, Older People's Quality of Life.
Multiple regression of baseline (1999/2000) predictors of OPQOL at follow-up (2007/2008): QoL follow-up sample (final model).

WHOQOL-OLD

The WHOQOL-OLD was assessed in the ONS and Ethnibus samples The amount of explained variance in WHOQOL-OLD scores in the ONS Omnibus survey was 45% (adjusted R^2 0.448); the model was highly significant, again in expected directions. The significant variables were self-rated active ageing, three of the seven QoL domain ratings and the number of social activities and helpers, health status and housing tenure. However, the WHOQOL-OLD model for the Ethnibus sample was weak, although significant: the amount of explained variance in WHOQOL-OLD scores was just 5% (adjusted R^2 0.048). The significant variables were three of the seven domain ratings, and number of social activities (see table 5).

CONCLUSION

This study describes the psychometric performance of a QoL questionnaire, developed from the perspectives of older people

Table 4 Multiple regression of predictors of CASP-19:ONS OMNIBUS and Ethnibus (final models)

	ONS Omnibus		Ethnibus	
	Unstandardised B	95% CI (Two-tailed t test)	Unstandardised B	95% CI (Two-tailed t test)
Independent predictor variables	Standardised β	p Value	Standardised β	p Value
Block 1				
Self-rated active ageing	−0.532 −0.064	−1.157 to 0.093 (-1.672) 0.095 NS	−0.672 −0.143	−1.147 to −0.197 (−2.782) 0.006
Block 2				
QoL domain self-ratings				
QOL: health	−0.683 −0.081	−1.455 to 0.088 (−1.740) 0.082 NS	−0.690 −0.118	−1.237 to −0.143(−2.478) 0.014
QoL: social relationships	−0.693 −0.078	−1.369 to −0.017(−2.013) 0.045	0.182 0.031	−0.375 to 0.738 (0.642) 0.522 NS
QoL: independence, control over life, freedom	−1.236 −0.138	−1.960 to −0.512(−3.352) 0.001	−0.386 −0.065	−0.948 to 0.176 (−1.351) 0.178 NS
QoL: home and neighbourhood	0.039 0.004	−0.705 to 0.784(0.104) 0.917 NS	−0.106−0.018	−0.695 to 0.484 (−0.352) 0.725 NS
QoL: psychological and emotional well-being	−1.027 −0.106	−1.774 to −0.279(−2.697) 0.007	−0.659 −0.110	−1.270 to −0.047 (−2.117)0.035
QoL: financial circumstances	−0.920 −0.100	−1.553 to −0.288(−2.858) 0.004	−0.566 −0.096	−1.113 to 0.020 (−2.036) 0.0420
QoL: leisure and social activities	−1.303 −0.162	−1.978 to −0.629 (−3.796) 0.0001	−0.431 −0.079	−0.962 to 0.101 (−1.593) 0.112 NS
Block 3				
Total number of different social activities done in last month (out of listed eight)	0.146 0.034	−0.174 to 0.466(0.896) 0.371 NS	0.237 0.063	−0.121 to 0.594 (1.301) 0.194 NS
Total number of relatives, friends, neighbours who would help with practical tasks	0.028 0.037	−0.017 to 0.072(1.227) 0.220 NS	−0.010 −0.013	−0.085 to 0.064 (−0.274) 0.784 NS
Block 4				
Self-rated health status, compared to others of same age	−0.963 −0.131	−1.599 to −0.327(−2.975) 0.003	−0.692 −0.136	−1.278 to −0.106 (−2.321) 0.021
ADL total score (sum of ability to: walk 400 yards, do heavy housework, shop/carry heavy bags, steps/stairs)	−0.289 −0.142	−0.458 to −0.119(−3.334) 0.001	−0.038 −0.027	−0.200 to 0.124 (−0.460) 0.646 NS
Block 5				
Age	−0.053 −0.047	−0.127 to 0.021(−1.404) 0.161 NS	−0.086 −0.062	−0.214 to 0.043 (−1.313) 0.190 NS
Sex	0.333 0.020	−0.629 to 1.295 (0.680) 0.496 NS	0.363 0.036	−0.590 to 1.317 (0.749) 0.454 NS
Marital status	0.189 0.026	−0.255 to 0.633 (0.836) 0.403 NS	−0.052 −0.008	−0.637 to 0.532 (−0.176) 0.860 NS
Block 6				
Housing tenure	−0.030 −0.004	−0.518 to 0.458 (−0.121) 0.904 NS	0.440 −0.101	−0.846 to −0.035 (−2.135) −0.033
Constant	61.749		51.095	
R^2	0.581		0.175	
Adjusted R^2	0.568		0.141	
Anova F statistic, p value	45.151; 0.0001		5.089; 0.001	

ADL, activities of daily living; NS, not significant; QOL, Quality of Life.

themselves: the OPQOL. It was tested in two cross-sectional, and one longitudinal, surveys of older people across Britain. The longitudinal survey enabled the OPQOL to be tested in a dynamic, ageing population and an assessment of its underlying model, although its self-administration mode necessitated the assessment of the OPQOL only (and not the CASP-19 or WHOQOL) in this older sample.

The surveys used statistically robust sampling methods, and the response rates were fairly to very good. The characteristics of respondents to the ONS Omnibus and Ethnibus surveys (and

Table 5 Multiple regression of predictors of WHOQOL-OLD: ONS OMNIBUS and Ethnibus (final model)

	ONS Omnibus		Ethnibus	
	Unstandardised B	95% CI (Two-tailed t test)	Unstandardised B	95% CI (Two-tailed t test)
Independent predictor variables	Standardised β	p Value	Standardised β	p Value
Block 1				
Self-rated active ageing	−1.272 −0.105	−2.325 to −0.219 (−2.373) 0.018	−0.064 −0.011	−0.705 to 0.578 (−0.195) 0.845 NS
Block 2				
QoL domain self-ratings				
QOL: health	0.650 0.053	−0.650 to 1.949 (0.982) 0.326 NS	−0.496 −0.066	−1.235 to 0.243 (−1.320) 0.187 NS
QoL: social relationships	−1.143 −0.089	−2.283 to −0.004 (−1.971) 0.049 NS	0.559 0.075	−0.192 to 1.311 (1.463) 0.144 NS
QoL: independence, control over life, freedom	−1.591 −0.123	−2.811 to −0.370 (−2.561) 0.011	0.341 0.045	−0.418 to 1.100 (0.884) 0.377 NS
QoL: home and neighbourhood	−0.106 −0.007	−1.360 to 1.148(−0.166) 0.868 NS	−0.911 −0.121	−1.707 to −0.114 (−2.247)0.025
QoL: psychological and emotional well-being	−1.931 −0.138	−3.191 to −0.671 (−3.012) 0.003	0.548 0.071	−0.278 to 1.373 (1.304) 0.193 NS
QoL: financial circumstances	−0.629 −0.047	−1.695 to 0.437 (−1.159) 0.247	−0.244 −0.032	−0.982 to 0.495 (−0.649) 0.517 NS
QoL: leisure and social activities	−1.428 −0.123	−2.565 to −0.292 (−2.469) 0.014	−0.823 −0.118	−1.540 to −0.105 (−2.253) 0.025
Block 3				
Total number of different social activities done in last month (out of listed eight)	0.561 0.090	0.021 to 1.100 (2.042) 0.042	0.500 0.103	−0.017 to 0.983 (2.036) 0.042
Total number of relatives, friends, neighbours who would help with practical tasks	0.089 0.081	0.014 to 0.164 (2.319) 0.021	0.031 0.031	−0.071 to 0.132 (0.594) 0.553 NS
Block 4				
Self-rated health status, compared to others of same age	−2.332 −2.220	−3.403 to −1.260 (−4.275) 0.0001	−0.559 −0.085	−1.350 to 0.232 (−1.389) 0.166 NS
ADL total score (sum of ability to: walk 400 yards, do heavy housework, shop/carry heavy bags, steps/stairs)	0.115 0.039	−0.172 to 0.401 (0.788) 0.431 NS	−0.169 −0.092	−0.388 to 0.050 (−1.515) 0.131 NS
Block 5				
Age	−0.078 −0.048	−0.203 to 0.046 (−1.233) 0.218 NS	−0.173 −0.097	−0.346 to 0.001 (−1.957) 0.051 NS
Sex	1.261 0.053	−0.360 to 2.881 (1.529)0.127 NS	−0.402 −0.031	−1.689 to 0.886(−0.614)0.540 NS
Marital status	−0.703 −0.067	−1.451 to 0.046 (−1.1.845) 0.066 NS	0.099 0.012	−0.690 to 0.888 (0.248) 0.804 NS
Block 6				
Housing tenure	−0.884 −0.075	−1.706 to −0.062 (−2.114)0.035	−0.406 −0.073	−0.953 to 0.142 (−1.457) 0.146 NS
Constant	115.284		100.058	
R^2	0.466		0.087	
Adjusted R^2	0.448		0.048	
Anova F statistic, p value	26.728 0.0001		2.270 0.004	

ADL, activities of daily living; NS, not significant; QOL, Quality of Life.

the QoL survey at baseline) were comparable with population estimates from the last census. However, non-response is still a cause for concern. The QoL follow-up sample, by its longitudinal design, reflected the healthy survivors. Also, although the sampling approach of the Ethnibus survey was statistically robust, it used focused enumeration. There is no other practical methodology for attempting to obtain representative samples of people in ethnic minority groups in national samples.

This study reported that Ethnibus respondents obtained poorer (worse) QOL scores than the other sample respondents, with the OPQOL, CASP-19 and WHOQOL-OLD. This is not unexpected given that people in ethnic minority groups are often more

What is already known on this subject

- Increasing numbers of older people, higher expectations for 'a good life', and demands for health and social care, have led to international interest in the enhancement, and measurement, of quality of life (QoL) in older age.
- QoL is a subjective concept, yet most measures of QoL are based primarily or partly on 'expert' opinions.

What this study adds

- This study focuses on the testing of a new measure of QoL, the Older People's QoL Questionnaire (OPQOL), which was derived entirely from the views of older people in Britain, cross-checked against theoretical models for comprehensiveness.
- The OPQOL performed well in three samples of older people in Britain, one of which comprised people from ethnic minority groups. It is of potential value in the outcome assessment of health and social interventions, which can have a multidimensional impact on people's lives.

economically disadvantaged than the wider population.[15] Further research is needed to examine whether differences in QoL reflect real variations, methodology, and cultural variations in expectations or in reporting. Ethnic minority groups in Britain live in a wide range of different communities, and their diversity may also have affected responses in some way. Hence, variations in QoL by ethnic group requires caution in interpretation. It should also be noted that the standard question for ethnic status used, largely reflected Britain's New Commonwealth groups, and may not be appropriate for use in other countries.

The OPQOL performed well in psychometric tests of reliability and validity. Multiple regression models supported its validity and underlying constructs.

Despite the Ethnibus sample's consistently worse QoL scores, compared with the other samples, the CASP-19 and WHOQOL-OLD did not meet all criteria for internal consistency (reliability) in the ethnically diverse Ethnibus sample. The CASP-19 and WHOQOL-OLD also had relatively large numbers of items that failed to meet the reliability criterion for item-total scale correlations; they frequently failed correlation tests for validity in the Ethnibus sample. This may have been due to this sample's ethnic diversity, or because the CASP-19 and WHOQOL-OLD were not sufficiently sensitive.

Health and social care interventions can have a multifaceted impact on people's lives. The OPQOL is of potential value in descriptive and evaluative research. This research supports the use of the OPQOL in older populations in Britain. It awaits testing in other countries, and with different ethnic minority population groups. The OPQOL is currently being tested with older people living in Italy; initial results for cultural equivalence and understanding are positive (personal communication, Dr Claudio Bilotta, University of Milan).

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