

Online Resource 4 for “Quality of life is substantially worse for community-dwelling older people living with frailty: systematic review and meta-analysis”. *Quality of Life Research*. Crocker TF*, Brown L, Clegg A, Farley K, Franklin M, Simpkins S, Young J. * Bradford Teaching Hospitals NHS Foundation Trust; tom.crocker@bthft.nhs.uk

DETAILS OF INCLUDED QUALITY OF LIFE INSTRUMENTS

Measure name	Construct according to developer(s)	Number of items, direction [†] and item-scaling	Summary scores (operation [‡] ; range [§])	Sub-scales (operation [‡] ; range [§])	Notes
CASP-19	QOL / needs satisfaction / well-being	19 ↑ Likert 0 to 3	Total (Σ : 0 to 57)	Control (Σ : 0 to 12) ability to intervene in one’s environment Autonomy (Σ : 0 to 15) freedom from unwanted interference Self-realization (Σ : 0 to 15) actively being and growing Pleasure (Σ : 0 to 15) happiness	Following Steptoe et al., included study Gale 2014 combined the control, autonomy and self-realization scales of the CASP-19 as a “eudaimonic” scale, and renamed the pleasure scale “hedonic”.
EQ-VAS	Self-rated health	1 ↑ VAS 0 to 100	Score (0 to 100)	<i>None: one item only.</i>	The EQ-VAS is part of the EuroQol 5-Dimension (EQ-5D) health questionnaire (not described in this document)
EUROHIS-QOL 8	QOL	8 ↑ Likert 1 to 5	Score (x : 1 to 5)	<i>None</i>	The eight items of the EUROHIS-QOL 8 are drawn from the 26 items of the WHOQOL-BREF, including the overall assessment of QOL, overall assessment of health, two physical, one psychological, one social and two environment domain items.
Life satisfaction (Pinto 2016)	Life satisfaction	6 ↑ Likert 1 to 4	Score (Σ : 6 to 24)	<i>None</i>	This unreferenced instrument has questions about satisfaction with life overall, friendship, environment, ability to do daily tasks, health services and means of transportation
Life satisfaction in 13 unspecified domains (Yang 2016)	Life satisfaction	13 ↑ Likert 1 to 5	Score (Σ : 13 to 65)	<i>None</i>	This unreferenced instrument has questions on 13 unspecified domains. Sample items included “How satisfied are you with your health status?” and “How satisfied are you with your family relationships?”

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Life-Satisfaction Terrible-Delightful scale (St John 2013)	Individual well-being / Life satisfaction	10 ↑ Likert 1 to 7	Health (1 to 7) Finances (1 to 7) Family relations (1 to 7) Friendships (1 to 7) Housing (1 to 7) Recreation activity (1 to 7) Spiritual fulfillment (1 to 7) Self-esteem (1 to 7) Transportation (1 to 7) Life overall (1 to 7)	<i>None: each item is scored separately</i>	The format is based on the Delighted-Terrible scale but the items have been changed.
OPQOL	QOL in older age	35 ↑ Likert 1 to 5	Total (Σ : 35 to 175)	Life overall (Σ : 4 to 20) Health (Σ : 4 to 20) Social relationships and participation (Σ : 5 to 25) Independence, control over life, freedom (Σ : 4 to 20) Area: home and neighbourhood (Σ : 4 to 20) Psychological and emotional well-being (Σ : 4 to 20) Financial circumstances (Σ : 4 to 20) Religion/culture (Σ : 6 to 30)	
Quality of life overall (Ament 2014)	QOL	1 ↓ Five options coded: excellent, very good or good = 0; moderate or bad = 1	Category (0 / 1)	<i>None: one item only</i>	This unreferenced instrument has a single question about quality of life overall.

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Ryff's Psychological Well-Being scale (18 item version)	Psychological well-being / general well-being	18 ↑ Likert 1 to 6	Total (Σ : 18 to 108)	Autonomy (Σ : 3 to 18) independence and self-determination Environmental mastery (Σ : 3 to 18) ability to manage one's life Personal growth (Σ : 3 to 18) being open to new experiences Positive relations with others (Σ : 3 to 18) having satisfying high quality relationships Purpose in life (Σ : 3 to 18) believing that one's life is meaningful Self-acceptance (Σ : 3 to 18) positive attitude towards oneself and one's past life	In included report Andrew 2012 the scores are reversed so that greater scores equal worse well-being, but raw scores are not reported in this review as data was not presented in a suitable format.
SF-12	Health status / Health-related QOL	12 ↑ Between two and six response options. Each response has a particular weight for each summary score.	Physical Component Summary (PCS-12) (<i>f</i> : 10 to 70) Mental Component Summary (MCS-12) (<i>f</i> : 6 to 72)	None	The PCS-12 and MCS-12 are both functions of all 12 items and a constant. They are designed to replicate scores from the SF-36 PCS and MCS based on regression analysis.

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SF-36	Health status / Health-related QOL	36 ↑ Between two and six response options. 2 items are scored with unequal intervals	Physical Component Summary (PCS) (<i>f</i> : 2 to 76) Mental Component Summary (MCS) (<i>f</i> : -1 to 81)	Physical functioning (<i>L</i> : 0 to 100) limitations in physical activities because of health problems Role—Physical (<i>L</i> : 0 to 100) limitations in usual role activities because of physical health problems Bodily pain (<i>L</i> : 0 to 100) Severity and interference of bodily pain General health(<i>L</i> : 0 to 100) general health perceptions Vitality (<i>L</i> : 0 to 100) energy and fatigue / subjective well-being Social functioning (<i>L</i> : 0 to 100) limitations in social activities because of physical or emotional problems Role—Emotional (<i>L</i> : 0 to 100) limitations in usual role activities because of emotional problems Mental health (<i>L</i> : 0 to 100) psychological distress and well-being	The PCS and MCS are both functions of all eight sub-scales based on principal component analysis, and are transformed to yield means of 50 and standard deviations of 10 for a general national population. The SF-36 includes an additional Health Transition item that does not contribute to the scales or summary scores and is not presented in the cited studies.
SWLS	Global life satisfaction	5 ↑ Likert 1 to 7	Score (Σ : 5 to 35)	None	Five global life satisfaction items (life ideal, excellent conditions, satisfied with life, have what I want, would change nothing)

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WHOQOL-BREF	QOL	26 ↑ Likert 1 to 5	Physical (<i>L</i> : 0 to 100) personal evaluation of physical health Psychological (<i>L</i> : 0 to 100) personal evaluation of psychological state Social (<i>L</i> : 0 to 100) satisfaction with social relationships Environment (<i>L</i> : 0 to 100) satisfaction with salient features of the environment (healthiness and safety of environment, living place, finances, information, leisure, transport and access to healthcare)	None	The four summary scores (domains) are calculated from 24 items, each of which represents one of the 24 facets of WHOQOL-100 (not described in this document). Two additional items, an overall assessment of QOL and an overall assessment of health are part of the WHOQOL-BREF but do not form part of the domains and are not reported in the included studies.
WHOQOL-OLD	QOL of older adults	24 ↑ Likert 1 to 5	Total (<i>x</i> : 1 to 5)	Sensory abilities (<i>x</i> : 1 to 5) sensory functioning and the impact of loss of sensory abilities on QOL Autonomy (<i>x</i> : 1 to 5) ability to live autonomously and to take own decisions Past, present and future activities (<i>x</i> : 1 to 5) satisfaction about achievements in life and things to look forward to Social Participation (<i>x</i> : 1 to 5) participation in activities of daily living, especially in the community Death and Dying (<i>x</i> : 1 to 5) concerns, worries, and fears about death and dying Intimacy (<i>x</i> : 1 to 5) ability to have personal and intimate relationships	The six sub-scales (facets) are additional to the 24 facets of the WHOQOL-100 (not described in this document).

- † Direction after any reversing of item scores: † Greater scores indicate better QOL; ‡ Lesser scores indicate better QOL.
- ‡ Operation performed on item scores to produce scale score. Σ : Sum of items; x : Mean of items; L : Mean of a linear transformation of the items; f : Other function (see notes); absent in the case of single item scales
- § Theoretical score range
- VAS Visual-analogue scale

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