Electronic Supplementary Material 1

Manuscript title: Measurement properties of the EQ-5D in populations with a mean age of \geq 75 years: a systematic review.

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Table S1 Search strategy in PubMed using an adapted version of the patient-reported outcome measurement filter available on the COSMIN website[1]

- (instrumentation[MeSH Subheading] OR "reproducibility of results" [MeSH Terms] OR reproducib*[Title/Abstract] OR 1# "psychometrics" [MeSH] OR psychometr* [Title/Abstract] OR "discriminant analysis" [MeSH] OR reliab* [Title/Abstract] OR valid*[Title/Abstract] OR "internal consistency"[Title/Abstract] OR (cronbach*[Title/Abstract] AND (alpha[Title/Abstract] OR alphas[Title/Abstract])) OR "item correlation"[Title/Abstract] OR "item correlations"[Title/Abstract] OR agreement[Text Word] OR test-retest [Title/Abstract] OR (test[Title/Abstract] AND retest[Title/Abstract]) OR (reliab*[Title/Abstract] AND (test[Title/Abstract] OR retest[Title/Abstract])) OR intrarater[Title/Abstract] OR intratester[Title/Abstract] OR intra-tester[Title/Abstract] OR OR intraobserver[Title/Abstract] OR intra-observer[Title/Abstract] OR intraindividual[Title/Abstract] OR intra-individual[Title/Abstract] OR intraparticipant[Title/Abstract] OR intra-participant[Title/Abstract] OR kappa[Title/Abstract] OR kappa's[Title/Abstract] OR kappa's[Title/Abstract] OR "coefficient of variation"[Title/Abstract] OR repeatable*[Text Word] OR ((replica*[Text Word] OR repeated[Text Word]) AND (measure[Text Word] OR measures[Text Word] OR findings[Text Word] OR result[Text Word] OR results[Text Word] OR test[Text Word] OR tests[Text Word])) OR concordance[Title/Abstract] OR (infraclass[Title/Abstract] AND correlation*[Title/Abstract]) OR discriminative[Title/Abstract] OR "known group" [Title/Abstract] OR "factor analysis"[Title/Abstract] OR "factor analyses"[Title/Abstract] OR "factor structure"[Title/Abstract] OR "factor structures"[Title/Abstract] OR dimensionality[Title/Abstract] OR subscale*[Title/Abstract] OR "item discriminant"[Title/Abstract]OR "interstate correlation"[Title/Abstract] OR "interstate correlations" [Title/Abstract] OR "individual variability" [Title/Abstract] OR "standard error of measurement"[Title/Abstract] OR sensitive*[Title/Abstract] OR responsive*[Title/Abstract] OR "minimal detectable concentration"[Title/Abstract] OR (small*[Title/Abstract] AND (real[Title/Abstract] OR detectable[Title/Abstract]) AND (change[Title/Abstract] OR difference[Title/Abstract])) OR "meaningful change"[Title/Abstract] OR "minimal important change"[Title/Abstract] OR "minimal important difference"[Title/Abstract] OR "minimally important change"[Title/Abstract] OR "minimally important difference"[Title/Abstract] OR "minimal detectable change"[Title/Abstract] OR "minimal detectable difference"[Title/Abstract] OR "minimally detectable change"[Title/Abstract] OR "minimally detectable difference"[Title/Abstract] OR "minimal real change"[Title/Abstract] OR "minimal real difference" [Title/Abstract] OR "minimally real change" [Title/Abstract] OR "minimally real difference"[Title/Abstract] OR "Item response model"[Title/Abstract] OR IRT[Title/Abstract] OR Rash[Title/Abstract] OR "Differential item functioning" [Title/Abstract] OR DIF[Title/Abstract])
- #2 (EQ-5D) OR (EQ5D) OR (EuroQoL)
- #3 (aged, 80 and over[MeSH Terms]) OR (aged[MeSH Terms]) OR (elderly[MeSH Terms]) OR (aged[Title/Abstract]) OR (elderly*[Title/Abstract]) OR (older*[Title/Abstract]) OR (geriatric*[Title/Abstract])
- #4 #1 AND #2 AND #3
- #5 ("addresses" [Publication Type] OR "biography" [Publication Type] OR "case reports" [Publication Type] OR "comment" [Publication Type] OR "directory" [Publication Type] OR "editorial" [Publication Type] OR "festschrift" [Publication Type] OR "interview" [Publication Type] OR "lectures" [Publication Type] OR "legal cases" [Publication Type] OR "legislation" [Publication Type] OR "letter" [Publication Type] OR "news" [Publication Type] OR "lectures" [Publication Type] OR "news" [Publication Type] OR "consensus development conference" [Publication Type] OR "consensus development conference, nigh" [Publication Type] OR "practice guideline" [Publication Type]) NOT ("animals" [MeSH Terms])
- #6 #4 NOT #5

Table S2 Specific hypotheses for each individual study

Reference	Hypotheses
Aguirre et al.[2]	$\mathbf{DEMQOL} \rightarrow \mathbf{moderate} \ \mathbf{to} \ \mathbf{strong}$
	$\mathbf{QOL}\text{-}\mathbf{AD} \rightarrow \mathbf{moderate}$ to strong
Ankri et al.[3]	Convergent validity:
	$\mathbf{VAS} \rightarrow \mathbf{moderate}$ to strong
	Katz-ADL &
	EQ-5D mobility \rightarrow moderate to strong
	EQ-5D self-care \rightarrow moderate to strong
	EQ-5D usual activities \rightarrow moderate to strong
	EQ-5D pain/discomfort \rightarrow weak to moderate
	EQ-5D anxiety/depression \rightarrow weak to no association
	CDR (dementia severity) \rightarrow H9 (weak)
	MMSE (dementia severity) \rightarrow H9 (weak)
	$Age \rightarrow H7$
	Known-groups validity:
	3) Sex & Anxiety/Depression \rightarrow women are more anxious than men
Barton et al.[4]	$SF-6D \rightarrow strong$
Bhadhuri et al.[5]	Convergent validity (EQ-5D-3L & EQ-5D-5L):
	Barthel index &
	EQ-5D mobility \rightarrow moderate to strong
	EQ-5D self-care & Barthel index \rightarrow strong
	EQ-5D usual activities & Barthel index \rightarrow moderate to strong
	EQ-5D pain/discomfort & Barthel index \rightarrow weak to moderate
	EQ-5D anxiety/depression & Barthel index \rightarrow weak to moderate
	Responsiveness – Comparison of subgroups:
	Moderate to large effect size for the EQ-5D-5L/-3L in the improved Barthel index group.
	Negative effect size, when there is worsening in the Barthel index.
	Moderate to large effect size for the EQ-5D-5L/-3L in the improved EQ-VAS group.
	Negative effect size, when there is worsening on the EQ-VAS.
Bjerk et al.[6]	Convergent validity:
	SF-6D \rightarrow strong
	SF physical functioning &
	EQ-5D mobility \rightarrow moderate to strong
	EQ-5D self-care \rightarrow moderate to strong

EQ-5D usual activities \rightarrow moderate to strong
EQ-5D pain/discomfort \rightarrow weak to moderate
EQ-5D anxiety/depression \rightarrow weak
SF role participation &
EQ-5D mobility \rightarrow weak to moderate
EQ-5D self-care \rightarrow weak to moderate
EQ-5D usual activities \rightarrow moderate to strong
EQ-5D pain/discomfort \rightarrow weak
EQ-5D anxiety/depression \rightarrow moderate to strong
SF social functioning &
EQ-5D mobility \rightarrow weak to moderate
EQ-5D self-care \rightarrow weak to moderate
EQ-5D usual activities \rightarrow moderate
EQ-5D pain/discomfort \rightarrow weak to moderate
EQ-5D anxiety/depression \rightarrow weak to moderate
SF bodily pain &
EQ-5D mobility \rightarrow moderate
EQ-5D self-care \rightarrow moderate
EQ-5D usual activities \rightarrow moderate
EQ-5D pain/discomfort \rightarrow strong
EQ-5D anxiety/depression \rightarrow weak to moderate
SF mental health &
EQ-5D mobility \rightarrow weak
EQ-5D self-care \rightarrow weak
EQ-5D usual activities \rightarrow weak to moderate
EQ-5D pain/discomfort \rightarrow weak to moderate
EQ-5D anxiety/depression \rightarrow strong
SF vitality &
EQ-5D mobility \rightarrow weak to moderate
EQ-5D self-care \rightarrow weak to moderate
EQ-5D usual activities \rightarrow weak to moderate
EQ-5D pain/discomfort \rightarrow weak to moderate
EQ-5D anxiety/depression \rightarrow weak to moderate
BBS &
EQ-5D mobility \rightarrow moderate to strong correlation

	EQ-5D self-care \rightarrow moderate
	EQ-5D usual activities \rightarrow low to moderate
	EQ-5D pain/discomfort \rightarrow low to moderate
	EQ-5D depression/anxiety \rightarrow low or no association
	30s STS &
	EQ-5D mobility \rightarrow moderate to strong
	EQ-5D self-care \rightarrow low to moderate
	EQ-5D usual activities \rightarrow low to moderate
	EQ-5D pain/discomfort \rightarrow low to moderate
	EQ-5D depression/anxiety \rightarrow low or no association
	4m-walk test &
	EQ-5D mobility \rightarrow moderate to strong
	EQ-5D self-care \rightarrow low to moderate
	EQ-5D usual activities \rightarrow low to moderate
	EQ-5D pain/discomfort \rightarrow low to moderate
	EQ-5D depression/anxiety \rightarrow low or no association
	FESI &
	EQ-5D mobility \rightarrow moderate to strong
	EQ-5D self-care \rightarrow moderate
	EQ-5D usual activities \rightarrow moderate to strong
	EQ-5D pain/discomfort \rightarrow low to moderate
	EQ-5D depression/anxiety \rightarrow moderate
	Responsiveness – Comparison with other instruments:
	BBS \rightarrow moderate association of change scores
	30s STS \rightarrow weak association of change scores
	4m-walk test \rightarrow weak association of change scores
	FESI \rightarrow weak to moderate association of change scores
Brazier et al.[7]	Known-groups validity \rightarrow (H5)
	$Age \rightarrow H7$
	GP visit in previous $14d = yes \rightarrow lower EQ-5D$ values
	Outpatient attendance in previous 3 months = yes \rightarrow lower EQ-5D values
	Accident and Emergency department attendance in prev. 3 months = yes \rightarrow lower EQ-5D values
	Hospital inpatient stay in prev. 12 months = yes \rightarrow lower EQ-5D values
	Longstanding illness = yes \rightarrow lower EQ-5D values
	Higher disability severity (OPCS) is associated with lower EQ-5D values

Cheng et al.[8]	Convergent validity:
	$\mathbf{EQ}\text{-}\mathbf{VAS} \rightarrow \text{moderate to strong}$
	SPVU-5D \rightarrow moderate to strong
	SPVU-5D pain &
	EQ-5D mobility \rightarrow weak to moderate
	EQ-5D self-care \rightarrow weak to moderate
	EQ-5D usual activities \rightarrow weak to moderate
	EQ-5D pain/disc. \rightarrow strong
	EQ-5D anxiety/depression \rightarrow weak to moderate
	SPVU-5D mobility &
	\dots EQ-5D mobility \rightarrow strong
	EQ-5D self-care \rightarrow moderate
	EQ-5D usual activities \rightarrow moderate to strong
	EQ-5D pain/discomfort \rightarrow weak to mod.
	EQ-5D anxiety/depression \rightarrow weak to moderate
	SPVU-5D mood &
	EQ-5D mobility \rightarrow weak to moderate
	EQ-5D self-care \rightarrow weak to moderate
	EQ-5D usual activities \rightarrow weak to moderate
	EQ-5D pain/discomfort \rightarrow weak to mod.
	\dots EQ-5D anxiety/depression \rightarrow mod. to strong
	SPVU-5D smell &
	EQ-5D mobility \rightarrow weak to moderate
	EQ-5D self-care \rightarrow weak or no assoc.
	EQ-5D usual activities \rightarrow weak to moderate
	EQ-5D pain/discomfort \rightarrow weak
	EQ-5D anxiety/depression \rightarrow weak
	SPVU-5D social activities &
	EQ-5D mobility \rightarrow moderate to strong
	EQ-5D self-care \rightarrow weak to moderate
	EQ-5D usual activities \rightarrow moderate to strong
	EQ-5D pain/disc. \rightarrow weak to mod.
	EQ-5D anxiety/depression \rightarrow weak to moderate
	Known-groups validity:
	Age (mean/median split) \rightarrow low to mod. effect size (ES)

	Duration of ulcer (mean/median split) \rightarrow mod. ES
	Healing status (mean/median split) \rightarrow mod. ES
	EQ-VAS (bad-fair-good-excellent) \rightarrow meaningful differences bw. groups with lower VAS values having lower EQ-5D values
	Responsiveness – Comparison bw. subgroups:
	Change scores for those with healed VLUs at different FU time points exceed the change scores for those who remained unhealed.
	People with longer active ulcer duration (=proxy for ulcer severity) have lowest changes in EQ-5D index from BL to FU
Coast et al.[9]	Convergent validity:
	EQ-5D mobility & Barthel index \rightarrow moderate to strong
	EQ-5D mobility & Barthel transfer \rightarrow moderate to strong
	EQ-5D mobility & Barthel mobility \rightarrow strong
	EQ-5D mobility & Barthel stairs \rightarrow moderate to strong
	EQ-5D self-care & Bartel index \rightarrow moderate to strong
	EQ-5D self-care & Bartel grooming \rightarrow strong
	EQ-5D self-care & Bartel toilet use \rightarrow moderate to strong
	EQ-5D self-care & Bartel feeding \rightarrow moderate to strong
	EQ-5D self-care & Bartel dressing/bathing \rightarrow strong
	COOP-WONCA physical fitness &
	EQ-5D index \rightarrow moderate to strong
	EQ-5D mobility \rightarrow moderate to strong
	EQ-5D self-care \rightarrow weak to moderate
	EQ-5D usual activities \rightarrow weak to moderate
	EQ-5D pain/discomfort \rightarrow weak to moderate
	EQ-5D anxiety/depression \rightarrow weak
	COOP-WONCA feelings &
	EQ-5D index \rightarrow weak to moderate
	EQ-5D mobility \rightarrow weak to moderate
	EQ-5D usual activities \rightarrow weak to moderate
	EQ-5D self-care \rightarrow weak to moderate
	EQ-5D pain/discomfort \rightarrow weak
	\dots EQ-5D anxiety/depression \rightarrow mod. to strong
	COOP-WONCA daily activities &
	EQ-5D index \rightarrow moderate to strong
	EQ-5D mobility \rightarrow moderate to strong

	Responsiveness – Comparison bw. subgroups:
	People admitted for elective total hip/knee replacement, who are relatively fit & healthy prior to surgery recover more quickly than those admitted with fractured neck of femur, who could be expected to be more frail prior to their treatment \rightarrow clinically significant difference in change score
	People with fractured femur neck recover more quickly than those admitted with stroke \rightarrow clinically sign. difference in change score
Davis et al.[10]	Convergent validity:
	EQ-5D & ICECAP-O \rightarrow moderate
	PPA &
	EQ-5D mobility \rightarrow weak or no assoc.
	EQ-5D Self-care \rightarrow weak or no assoc.
	EQ-5D Usual activities \rightarrow weak or no assoc.
	EQ-5D Pain/Discomfort \rightarrow weak or no assoc.
	EQ-5D Anxiety/Depression \rightarrow weak or no assoc.
	EQ-5D Index \rightarrow weak or no assoc.
	SPPB &
	EQ-5D Mobility \rightarrow weak to moderate
	EQ-5D Self-care \rightarrow weak or no
	EQ-5D Usual activities \rightarrow weak or no
	EQ-5D Pain/Discomfort \rightarrow weak or no
	EQ-5D Anxiety/Depression \rightarrow no
	EQ-5D Index \rightarrow weak or no
	MMSE &
	EQ-5D Mobility \rightarrow weak/no
	EQ-5D Self-care \rightarrow weak/no
	EQ-5D Usual activities \rightarrow weak/no
	EQ-5D Pain/Discomfort \rightarrow weak/no
	EQ-5D Anxiety/Depression \rightarrow weak/no
	EQ-5D Index \rightarrow weak/no
	IADL &
	EQ-5D Mobility \rightarrow weak to moderate
	EQ-5D Self-care \rightarrow weak to moderate
	EQ-5D Usual activities \rightarrow moderate to strong
	EQ-5D Pain/Discomfort \rightarrow weak to moderate
	EQ-5D Anxiety/Depression \rightarrow weak/no
	EQ-5D Index \rightarrow weak to moderate

Davis et al.[11]	Responsiveness – Comparison bw. subgroups:
	The change (decline) in HrQoL over time is larger in fallers versus non-fallers.
Easton et al.[12]	Convergent validity:
	DEMQOL-U index &
	EQ-5D Mobility \rightarrow no/weak
	EQ-5D Self-Care \rightarrow weak/moderate
	EQ-5D Usual activities \rightarrow weak/moderate
	EQ-5D Pain/discomfort \rightarrow weak/moderate
	EQ-5D Anxiety/Depression \rightarrow weak/moderate
	EQ-5D Index \rightarrow moderate
	DEMQOL-U positive emotion &
	EQ-5D Mobility \rightarrow weak to moderate
	EQ-5D Self-Care \rightarrow no/weak
	EQ-5D Usual activities \rightarrow weak/moderate
	EQ-5D Pain/discomfort \rightarrow weak
	EQ-5D Anxiety/Depression \rightarrow weak/moderate
	EQ-5D Index \rightarrow weak/moderate
	DEMQOL-U negative emotion &
	EQ-5D Index Mobility \rightarrow no/weak
	EQ-5D Index Self-Care \rightarrow no/weak
	EQ-5D Index Usual activities \rightarrow weak/moderate
	EQ-5D Index Pain/discomfort \rightarrow weak/moderate
	EQ-5D Index Anxiety/Depression \rightarrow moderate/strong
	EQ-5D Index index \rightarrow weak/moderate
	DEMQOL-U loneliness &
	EQ-5D Mobility \rightarrow no/weak
	EQ-5D Self-Care & DEMQOL-U loneliness \rightarrow no/weak
	EQ-5D Usual activities & DEMQOL-U loneliness \rightarrow weak/moderate
	EQ-5D Pain/discomfort & DEMQOL-U loneliness \rightarrow weak/no
	EQ-5D Anxiety/Depression & DEMQOL-U loneliness \rightarrow weak/moderate
	EQ-5D Index & DEMQOL-U loneliness \rightarrow weak
	DEMQOL-U cognition &
	EQ-5D Mobility→ weak/no
	EQ-5D Self-Care \rightarrow weak/moderate
	EQ-5D Usual activities \rightarrow weak/moderate

	EQ-5D Pain/discomfort \rightarrow weak/no
	EQ-5D Anxiety/Depression \rightarrow weak
	EQ-5D Index \rightarrow weak/no
	DEMQOL-U relationships &
	EQ-5D Mobility \rightarrow weak/mod.
	EQ-5D Self-Care \rightarrow weak/mod.
	EQ-5D Usual activities \rightarrow weak/moderate
	EQ-5D Pain/discomfort \rightarrow weak/no
	EQ-5D Anxiety/Depression \rightarrow weak/no
	EQ-5D Index \rightarrow weak/moderate
	Pas-Cog (cognitive impairment) &
	EQ-5D Mobility \rightarrow weak
	EQ-5D Self-Care \rightarrow weak/moderate
	EQ-5D Usual activities \rightarrow weak/moderate
	EQ-5D Pain/discomfort \rightarrow no/weak
	EQ-5D Anxiety/Depression \rightarrow weak/no
	EQ-5D Index \rightarrow weak/moderate
	Mobility & MBI (physical function) &
	EQ-5D mobility \rightarrow moderate
	EQ-5D Self-Care \rightarrow moderate to strong
	EQ-5D Usual activities \rightarrow moderate
	EQ-5D Pain/discomfort \rightarrow no/weak
	EQ-5D Anxiety/Depression \rightarrow no/weak
	EQ-5D Index \rightarrow moderate
	NPI-Q (neuropsychiatric symptoms) &
	EQ-5D mobility \rightarrow weak/no
	EQ-5D Self-Care \rightarrow weak/no
	EQ-5D Usual activities \rightarrow weak/no
	EQ-5D Pain/discomfort \rightarrow weak/no
	EQ-5D Anxiety/Depression \rightarrow weak/no
	EQ-5D Index \rightarrow weak/no
	Known-groups validity:
	People with no/mild cognitive impairment (CI) have higher HrQoL than those with moderate/severe CI
	People with better physical functioning have better HrQoL than those with worse physical functioning
Frihagen et al.[13]	Responsiveness – Comparison bw. subgroups:
	1

	The complications group has lower EQ-5D values at 4 and at 12 months than the non-complications group
	The mean change bw. 4 and 12 months is higher in the complications group than in the non-complications group.
Griffiths et al.[14]	Convergent validity:
	$\mathbf{QOL}\text{-}\mathbf{AD} \rightarrow \mathbf{moderate}$
Hazell et al. [15]	Known-groups validity:
	People with likely obstructive airways disease have lower EQ-5D scores than people with unlikely obstructive airways disease.
Heiskanen et al. [16]	Convergent validity:
	$15D \rightarrow strong$
	Responsiveness – Comparison with other instruments:
	The proportions of changes stratified according to the MID values are similar between EQ-5D and 15D.
Holland et al.[17]	Convergent validity:
	$\mathbf{AQOL} \rightarrow \mathbf{moderate}$ to strong
	Known-groups validity:
	sex: Women have lower scores than men
	$age \rightarrow H7$
	social class \rightarrow H8
	people taking more medications report lower scores
	people living alone report higher scores than those not living alone
	according to the population (neither severe dementia, nor institutionalized no (or only weak) correlation
	with abbreviated mental test score assumed (H9)
	Responsiveness – Comparison with other instruments:
	$AQOL \rightarrow$ moderate to strong correlation of change scores
Jönsson et al. [18]	Convergent validity:
	$\mathbf{MMSE} \rightarrow \mathbf{weak/no}$
	$QoL-AD \rightarrow moderate to strong$
	$VAS \rightarrow$ moderate to strong
	MMSE &
	EQ-5D Mobility \rightarrow weak or no association
	EQ-5D Self-care \rightarrow weak or no association
	 EQ-5D Usual activities → weak or no association EQ-5D Pain/Discomfort → weak or no association
	EQ-5D Fam/Disconnect \rightarrow weak of no association EQ-5D Anxiety/Depression \rightarrow weak or no association
Kaambwa et al.[19]	Convergent validity:
Trainfown of al.[17]	convergent randing.

	Correlation bw. subdimensions of the EQ-5D and subdimensions of the OPQOL-Brief/ASCOT
	according to the generic hypotheses
	OPQoL-Brief Summary Score \rightarrow moderate to strong
	ASCOT Summary Score \rightarrow moderate to strong
	Known-groups validity:
	$Age \rightarrow H7$
	Sex: Male = higher scores
	Living alone = higher scores
	Education \rightarrow H8
	Having higher self-reported general health = higher scores
	having informal care support = higher scores
Karlawish et al. [20]	Known-groups validity:
	People with higher EQ-5D scores have higher scores in:
	function (ADL/IADL [Lawton-Brody scales])
	• mood (GDS-15)
	 generic health-related QoL (SF-12 general health, MCS, & PCS) QOL-AD dimensions Memory, Life & Whole
	MMSE (Cognition) \rightarrow H9
	GDS Memory \rightarrow H9
Kim et al. [21]	Known-groups validity:
	Men with higher LUTS severity have lower EQ-5D scores.
Kunz [22]	Convergent validity:
	Barthel Index \rightarrow moderate
	NOSGER subscale IADL \rightarrow weak to moderate
	$\mathbf{MMSE} \rightarrow \mathbf{weak} \text{ or no association}$
	Known-groups validity:
	People with dementia as only co-morbidity have a higher HrQoL than those with additional comorbidities.
	Responsiveness – Comparison with other instruments:
	Barthel Index \rightarrow moderate corr. of change scores
	NOSGER subscale IADL \rightarrow weak to moderate corr. of change scores
	MMSE \rightarrow weak or no corr. of change scores
	Responsiveness – Comparison bw. subgroups:
	People with deterioration in health status (CGI-I) have a higher effect size in EQ-5D change bw. BL & FU.
Lutomski et al.[23]	Convergent validity:
	EQ-5D mobility & Katz assistance with walking \rightarrow strong

	EQ-5D self-care & Katz bathing \rightarrow strong
	EQ-5D self-care & Katz dressing \rightarrow strong
	EQ-5D usual activities & Katz summary IADL score \rightarrow strong
	EQ-5D anxiety/depression & Rand-36 mental health sub scale \rightarrow moderate to strong
	EQ-5D index & Cantril's Self Anchoring Ladder \rightarrow moderate
	Known-groups validity:
	EQ-5D value is lower in people who are:
	• older (or H7!)
	widowed/single
	• lower educated (or H8!)
	living alone
	• women (especially in dimension anxiety/depression)
	• multi-morbid
Malkin et al.[24]	Convergent validity:
	Items of the filtered Activity Inventory for LVR patients & EQ-5D index:
	Reading \rightarrow weak to moderate
	Mobility \rightarrow weak to moderate
	Vis Motor \rightarrow weak to moderate
	Vis info \rightarrow weak to moderate
	Goals \rightarrow weak to moderate
	Responsiveness – Comparison with other instruments:
	Visual ability \rightarrow weak to moderate association of change scores
	Responsiveness – Before and after intervention:
	Low vision care has a clinically important effect on HrQoL (EQ-5D).
Martin et al.[25]	Convergent validity:
	QOL-AD-NH \rightarrow moderate
	$CDR \rightarrow$ weak or no association
	FAST \rightarrow weak to moderate
	$\mathbf{CMAI} \rightarrow \mathbf{weak} \text{ or no association}$
	Responsiveness – Comparison with other instruments:
	QOL-AD-NH \rightarrow moderate association of change scores
	$CDR \rightarrow$ no or weak association of change scores
	$FAST \rightarrow$ weak to moderate association of change scores
	$\mathbf{CMAI} \rightarrow \mathbf{no} \text{ or weak association of change scores}$
Michalowsky et al.[26]	Convergent validity:
	$QoL-AD \rightarrow$ moderate to strong
	General health status (Proxy) \rightarrow moderate to strong
L	

	Lawton IADL \rightarrow weak to moderate
	$GDS \rightarrow$ weak to moderate
	Known-groups validity:
	Lower EQ-5D scores for people with:
	• poorer/better general health status
	more severe IADL problems
	 higher functional impairment due to dementia have lower EQ-5D scores. more severe demonstration have lower EQ 5D scores.
Naglie et al.[27]	more severe depression have lower EQ-5D scores. <i>Convergent validity:</i>
	Global health \rightarrow moderate to strong
	MMSE \rightarrow weak or no association
	Katz ADL \rightarrow moderate to strong
	Lawton IADL \rightarrow weak to moderate
	$GDS \rightarrow$ weak to moderate
	Comorbidities \rightarrow weak to moderate
	$\mathbf{QWB} \rightarrow \mathbf{moderate} \ \mathbf{to} \ \mathbf{strong}$
	HUI3 \rightarrow strong
	$\mathbf{EQ}\text{-}\mathbf{VAS} \rightarrow \text{moderate/strong}$
Nikolova et al.[28]	Convergent validity:
	SF-6D \rightarrow strong
	SF physical functioning &
	EQ-5D mobility \rightarrow moderate to strong
	EQ-5D self-care \rightarrow moderate to strong
	EQ-5D usual activities \rightarrow moderate to strong
	EQ-5D pain/discomfort \rightarrow weak to moderate
	EQ-5D anxiety/depression \rightarrow weak
	SF role participation/limitation &
	EQ-5D mobility \rightarrow weak to moderate
	EQ-5D self-care \rightarrow weak to moderate
	EQ-5D usual activities \rightarrow moderate to strong
	EQ-5D pain/discomfort \rightarrow weak
	EQ-5D anxiety/depression \rightarrow moderate to strong
	SF social functioning &
	EQ-5D mobility \rightarrow weak to moderate
	EQ-5D self-care \rightarrow weak to moderate
	EQ-5D usual activities \rightarrow moderate

	EQ-5D pain/discomfort \rightarrow weak to moderate
	EQ-5D anxiety/depression \rightarrow weak to moderate
	SF bodily pain &
	EQ-5D mobility \rightarrow moderate
	EQ-5D self-care \rightarrow moderate
	EQ-5D usual activities \rightarrow moderate
	EQ-5D pain/discomfort \rightarrow strong
	EQ-5D anxiety/depression \rightarrow weak to moderate
	SF mental health &
	EQ-5D mobility \rightarrow weak
	EQ-5D self-care \rightarrow weak
	EQ-5D usual activities \rightarrow weak to moderate
	EQ-5D pain/discomfort \rightarrow weak to moderate
	EQ-5D anxiety/depression \rightarrow strong
	SF vitality &
	EQ-5D mobility \rightarrow weak to moderate
	EQ-5D self-care \rightarrow weak to moderate
	EQ-5D usual activities \rightarrow weak to moderate
	EQ-5D pain/discomfort \rightarrow weak to moderate
	EQ-5D anxiety/depression \rightarrow weak to moderate
Olerud et al.[29]	Responsiveness – Comparison with other instruments:
	DASH $\rightarrow \geq$ moderate correlation of change scores
	Responsiveness – Comparison btw. subgroups:
	The EQ-5D score is able to significantly discriminate bw. the dichotomized outcomes (AUC \ge 0.7).
	Improvement in EQ-5D scores bw. 4 and 12 months in patients whose disease status (according to the EC) improved, but further deterioration in people whose disease status deteriorated.
	Responsiveness – Before & after intervention:
	Deterioration of HrQoL at 4 months compared with before fracture.
Orgeta et al.[30]	Convergent validity:
	CSDD \rightarrow weak to moderate
	RAID \rightarrow weak to moderate
	BADLS \rightarrow moderate
Parsons et al.[31]	Convergent validity:
	$OHS \rightarrow moderate to strong$
	ICECAP-O \rightarrow moderate
	Responsiveness – Comparison btw. subgroups:
	15

	The EQ-5D is able to predict death or revision (AUC ≥ 0.7)
	Responsiveness – Before & after intervention:
	Clinically important deterioration in EQ-5D bw. baseline (pre-fracture) & FU, but improvement in EQ-5D from 4 weeks to 4 months FU.
Pérez-Ros et al.[32]	Convergent validity:
(EQ-5D-3L for	Tinetti Index \rightarrow weak to moderate
assessing)	Barthel index \rightarrow moderate to strong
	Lawton index \rightarrow moderate to strong
	VAS pain \rightarrow weak to moderate
	$GDS \rightarrow weak$
	Tinetti Index & EQ-5D mobility \rightarrow moderate to strong
	Barthel index & EQ-5D self-care \rightarrow moderate to strong
	Lawton index & EQ-5D usual activities \rightarrow moderate to strong
	VAS pain & EQ-5D pain \rightarrow strong
	GDS & EQ-5D anxiety \rightarrow moderate to strong
Pérez-Ros et al.[33]	Convergent validity:
	$\mathbf{EQ}\text{-VAS} \rightarrow \text{moderate to strong}$
	Tinetti Index & EQ-5D mobility \rightarrow moderate to strong
	Barthel index & EQ-5D self-care \rightarrow moderate to strong
	Lawton index & EQ-5D usual activities \rightarrow moderate to strong
	VAS pain & EQ-5D pain \rightarrow strong
	GDS & EQ-5D anxiety \rightarrow moderate to strong
Ratcliffe et al.[34]	Convergent validity:
	$\mathbf{MMSE} \rightarrow \mathbf{weak}$
	CSDD \rightarrow weak to moderate
	$MBI \rightarrow$ moderate to strong
	PainAd \rightarrow weak to moderate
	Known-group validity:
	Lower EQ-5D scores in people with:
	higher pain levels
	higher depression levels
Sanchez-Arenas et al.[35]	lower functioning levels Convergent validity:
Sanchez-Archas et al.[33]	ADL \rightarrow moderate to strong
	$ADL \rightarrow$ moderate to strong IADL \rightarrow weak to moderate
	$MMSE \rightarrow weak/no$

	SF-36 physical function \rightarrow moderate to strong
	SF-36 physical role \rightarrow moderate to strong
	SF-36 bodily pain \rightarrow moderate to strong
	SF-36 general health \rightarrow moderate to strong
	SF-36 vitality \rightarrow moderate to strong
	SF-36 social functioning \rightarrow moderate to strong
	SF-36 emotional role \rightarrow at least weak to moderate
	SF-36 mental health→ moderate to strong
	Charlson comorbidity index \rightarrow moderate to strong
Tidermark et al.[36]	Convergent validity:
	$SF-36 \rightarrow strong$
	Responsiveness – Comparison with other instruments:
	SF-36 global score \rightarrow strong
	SF-36 physical function→ moderate to strong
	SF-36 physical role \rightarrow moderate to strong
	SF-36 bodily pain \rightarrow moderate to strong
	SF-36 general health \rightarrow moderate to strong
	SF-36 vitality \rightarrow moderate to strong
	SF-36 social functioning \rightarrow moderate to strong
	SF-36 emotional role \rightarrow weak to moderate
	SF-36 mental health \rightarrow moderate to strong
	Responsiveness – Comparison bw. subgroups:
	People with a "less good outcome" (pain >1 on the modified pain score and/or need for walking aids more
	than just one stick) score sign. lower in the EQ-5D sub-dimensions than people with a "good outcome"
Tidermark et al.[37]	Responsiveness – Comparison with other instruments:
	NHP total score \rightarrow strong
	EQ-5D mobility & NHP phys. mobility \rightarrow strong
	EQ-5D pain/discomfort & NHP pain \rightarrow strong
	EQ-5D anxiety/depression & NHP emotional reaction \rightarrow strong
	Responsiveness – Comparison bw. subgroups:
	The mean change in EQ-5D scores bw. BL & 6-month FU is higher (negative direction, moderate to high
	SRM) for participants with displaced fracture than for participants with undisplaced fractures who remain relatively unchanged
	The EQ-5D is able to discriminate bw. displaced and undisplaced fractures
van Leeuwen et al.[38]	Convergent validity:
	ICECAP-O \rightarrow moderate

	$ASCOT \rightarrow moderate$
	Health GRS \rightarrow moderate to strong
	Katz ADL Index \rightarrow moderate to strong
	SF-12 PCS \rightarrow moderate to strong
	SF-12 MCS \rightarrow weak to moderate
	QoL GRS \rightarrow moderate
	Pearlin Mastery Scale → weak to moderate
	$\mathbf{CCCQ} \rightarrow \mathbf{weak}$ or no association
	Responsiveness – Comparison with other instruments:
	ICECAP-O \rightarrow moderate
	$ASCOT \rightarrow moderate$
	Health GRS \rightarrow moderate to strong
	Katz ADL Index \rightarrow moderate to strong
	SF-12 PCS \rightarrow moderate to strong
	SF-12 MCS \rightarrow weak to moderate
	QoL GRS \rightarrow moderate
	Pearlin Mastery Scale \rightarrow weak to moderate
	$\mathbf{CCCQ} \rightarrow \mathbf{weak} \text{ or no association}$
Walters et al.[39]	Convergent validity:
	SF-36 physical function \rightarrow moderate to strong
	SF-36 physical role \rightarrow moderate to strong
	SF-36 bodily pain \rightarrow moderate to strong
	SF-36 general health \rightarrow moderate to strong
	SF-36 vitality \rightarrow moderate to strong
	SF-36 social functioning \rightarrow moderate to strong
	SF-36 emotional role \rightarrow weak to moderate
	SF-36 mental health→ moderate to strong
	Known-group validity:
	$Age \rightarrow H7$
	Lower EQ-5D scores in people:
	• with larger leg ulcers
	• who have to walk with an aid or are chair or bed bound compared to those who are able to
	walk freelywith longer ulcer duration
	Responsiveness – Comparison bw. subgroups:
	Higher deterioration of HrQoL (EQ-5D) in people whose ulcer had not healed at 3-month FU.

EQ-5D scores improve more (or deteriorate less) in people whose perceived health change at 3M-FU is
"better" or "same" than those who perceive it as "worse"
The change scores for people having a non-healed/recurred ulcer and those whose initial ulcer healed and stayed healed differ at 1 year FU.

Table S3 Summary of findings – EQ-5D-3L – subdimensions.

Measurement property	Summary	Overall rating
Construct validity		
Convergent validity		+ (91%)
EQ-5D index and comparis	on instruments' subdimensions	
HrQoL instruments	SF-36 [35, 39] (16/16), COOP-WONCA [9] (7/7)	+(100%)
QoL instruments	ASCOT [40] (8/8), OPQoL-Brief [40] (13/13)	+(100%)
Other instruments	Activity Inventory [24] (5/5)	+ (100%)
EQ-5D subdimensions and	comparison instruments' summary scores	
QoL instruments	OPQoL-Brief [40] (5/5), ASCOT [40] (5/5)	+ (100%)
(I)ADL	Barthel [32, 33, 41] (7/7), Lawton & Brody [10, 32, 33] (4/7), Katz [23] (1/1)	+(80%)
Cognitive status	MMSE [‡] [10, 18] (10/10)	+(100%)
Depression/anxiety	Rand-36 Mental Health [23] (1/1), EQ-5D anxiety/depression & GDS [32, 33] (1/2)	$\pm (67\%)$
Other	PPA [10] (5/5), SPPB [10] (5/5), Tinetti [32, 33] (1/2), EQ-5D pain & VAS Pain [32, 33] (1/2), Age [3] (5/5)	+ (89%)
EQ-5D subdimensions and	comparison instruments' sub dimensions	
HrQoL instruments	COOP-WONCA [9] (34/45)	+ (76%)
QoL instruments	OPQoL-Brief [40] (63/65), ASCOT [40] (38/40)	+ (96%)
ADL	Katz [23] (2/3)	± (67%)
Responsiveness		
Comparison with other instruments		± (36%)
EQ-5D index and comparis	on instruments' subdimensions	
HrQoL instruments	NHP [37] (0/3), SF-36 (4/8) [36]	± (36%)

[‡]no relevant difference between groups hypothesized

<u>Abbreviations</u>: (x/y), x of y hypotheses supported; ADL, Activities of Daily Living; ASCOT, Adult Social Care Outcomes Toolkit; COOP/WONCA, Darmouth COOP Functional Health Assessment Charts/WONCA; EQ-5D, EuroQol five-dimensional questionnaire; GDS, Geriatric Depression Scale; HrQoL, health-related quality of life; MMSE, Mini-Mental State Examination; NHP, Nottingham Health Profile; OPQoL-Brief, Older People's Quality of Life questionnaire brief version; PPA, Physiological Profit Assessment; QoL, quality of life; SF-36, 36-Item Short-Form Health Survey; SPPB, Short Physical Performance Battery, VAS Pain, Visual Analog Scale for Pain.

Table S4 Summary of findings – EQ-5D-5L – subdimensions.

Measurement property	Summary	Overall rating
Construct validity		
Convergent validity		+ (90%)
EQ-5D index and comparis	son instruments' subdimensions	
QoL instruments	DEMQOL-U [12] (5/5)	+ (100%)
EQ-5D subdimensions and	comparison instruments' summary scores	
QoL instruments	DEMQOL-U [12] (5/5)	+ (100%)
ADL	Barthel [41] (5/5), MBI [12] (5/5)	+ (100%)
Cognitive status	PAS-Cog* [12] (1/5)	- (20%)
Other instruments	NPI-Q [12] (5/5), 30s STS [6] (5/5), 4m walk test [6] (5/5), FES-I [6] (5/5), BBS [6] (5/5)	+ (100%)
EQ-5D sub dimensions and	d comparison instruments' subdimensions	
HrQoL instruments	SF-6D [6] (27/30), SF-6D [28] (28/30)	+ (92%)
QoL instruments	SPVU-5D [8] (23/25), DEMQOL-U [12] (22/25)	+ (90%)

[‡]no relevant difference between groups hypothesized

* results in the opposite of the hypothesized direction (H9)

<u>Abbreviations</u>; ADL, Activities of Daily Living; BBS, Berg Balance Scale; DEMQOL, Dementia Quality of Life; EQ-5D, EuroQol five-dimensional questionnaire; FES-1, Falls Efficacy Scale International; HrQoL, health-related quality of life; MBI, Modified Barthel Index; NPI-Q, Neuropsychiatric Inventory-Questionnaire; PAS-Cog, Psychogeriatric Assessment Scales-Cognitive Impairment Scale; QoL, quality of life; SF-6D, six-dimensional Short-Form Health Survey; 30s STS, 30s sit-to-stand test; SPVU-5D, five-dimensional Sheffield-Preference-based Venous Ulcer questionnaire.

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	✓ (Title page)
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	✓
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	\checkmark
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	\checkmark
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	\checkmark
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	✓
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	✓
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	✓ (Table S1, Supplement 1)
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	✓
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	✓
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	N/A
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	\checkmark
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	\checkmark
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I^2) for each meta-analysis.	\checkmark

Section/topic	#	Checklist item	Reported on page #
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	N/A
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	N/A
RESULTS			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	✓ (Figure 1)
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	✓ (Table 2)
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	✓ (Supplement)
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	N/A
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	N/A
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	\checkmark
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	N/A
DISCUSSION	•		
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	\checkmark
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	\checkmark
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	\checkmark
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	✓ (Title page)

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