

Questionnaire	Concept of interest	Reference	Number of items	Dimensions	Score range	Recall period
<i>global health and quality of life measures</i>						
<b>15D family of questionnaires</b>	Health related quality of life	Sintonen H, Pekurinen M. A generic 15 dimensional measure of health-related quality of life (15D). Soc Med 1993; 209-20. 1989; 26: 85-96.	15	Mobility, Vision, Hearing, Breathing, Eating, Sleeping, Speech, Elimination, Usual activities, Mental function, Discomfort and symptoms, Depression, Distress, Vitality, Sexual activity (1 item each)	0-75, higher values representing reduced quality of life	present
<b>AQoL-4D (Assessment of Quality of Life)</b>	Quality of life	Richardson J, Hawthorne G, Osborne R, McNeil H. The Australian quality of life (AQoL) instrument: Psychometric properties of the descriptive system and initial validation. Australian Studies of Health Service Administration, 1997, 85, pp 315-342.	12	Independent living, Relationships, Mental health, Senses (3 items each)	12-48, higher score indicating higher impact on QoL	past 7 days
<b>AIMS2 (Arthritis Impact Measurement Scales 2)</b>	Health state in arthritis patients	Meenan, R.F., Gertman, P.M. and Mason, J.H. (1980), Measuring health status in arthritis. Arthritis & Rheumatism, 23: 146-152. <a href="https://doi.org/10.1002/art.1780230203">https://doi.org/10.1002/art.1780230203</a> and Meenan RF, Mason JH, Anderson JJ, Guccione AA, Kazis LE. AIMS2: the content and properties of a revised and expanded Arthritis Impact Measurement Scales health status questionnaire. Arthritis Rheum 1992; 35:1-10.	78	Mobility Level (5 items), Walking and Bending (5 items), Hand and Finger Function (5 items), Arm Function (5 items), Self Care Tasks (4 items), Household Tasks (4 items), Social Activity (5 items), Support from Family and Friends (4 items), Arthritis Pain (5 items), Work (5 items), Level of Tension (5 items), Mood (5 items), Satisfaction with each domain (1 item), Impact from each domain (1 item), Need for improvement for each domain (1 item), Current and future health (5 items), Impact from arthritis (4 items), Comorbidities and impact (3 items),	0-10 per dimension, higher values representing reduced health state	past 4 weeks

				Demographics (6 items)		
<b>CASP (Control, Autonomy, Selfrealization and Pleasure)</b>	Quality of life	M. Hyde , R. D. Wiggins , P. Higgs & D. B. Blane (2003) A measure of quality of life in early old age: The theory, development and properties of a needs satisfaction model (CASP-19), <i>Aging &amp; Mental Health</i> , 7:3, 186-194, DOI:10.1080/1360786031000101157	19	Control (4 items), Autonomy (5 items), Self-realization (5 items), Pleasure (5 items)	0-57, higher values representing better quality of life	not specified
<b>EQ5D-5L/3L</b>	Health related quality of life	The EuroQol Group, 1990. EuroQol – a new facility for the measurement of health-related quality of life. <i>Health Policy</i> , 16, pp.199-208.	6	Mobility, Self-care, Usual activities, Pain/discomfort, Anxiety/depression (each 1 item) plus overall health quality VAS	5-digit code	today
<b>HAQ (Health Assessment Questionnaire)</b>	Pain, physical functioning, ADL	Fries JF, Spitz PW, Young DY. The dimensions of health outcomes: the health assessment questionnaire, disability and pain scales. <i>J Rheumatol.</i> 1982 Sep-Oct;9(5):789-93. PMID: 7175852.	24	Dressing and grooming (2 items); rising (2 items); eating (3 items); walking (2 items); hygiene (3 items); reach (2 items); grip (3 items); activities (3 items); devices/help (4 items)	0-3 as disability index (average score), higher values indicating greater disability	past week/past six months
<b>HRQOL–14 "Healthy Days Measure" (and short forms)</b>	Health status and impact of symptoms on ADL	Moriarty DG, Zack MM, Kobau R. The Centers for Disease Control and Prevention's Healthy Days Measures - population tracking of perceived physical and mental health over time. <i>Health Qual Life Outcomes.</i> 2003;1:37.	14	Healthy Days Core Module (4 questions), Activity Limitations Module (5 questions), Healthy Days Symptoms Module (5 questions)	dichotomization and summation of unhealthy days per dimension with max 30/30 days of recall, i.e. higher values indicating poorer health	past 30 days
<b>HUI (Health Utility Index)</b>	Quality of life	Horsman J, Furlong W, Feeny D <i>et al.</i> The Health Utilities Index (HUI®): concepts, measurement properties and applications. <i>Health Qual Life Outcomes</i> 1, 54 (2003). <a href="https://doi.org/10.1186/1477-7525-1-54">https://doi.org/10.1186/1477-7525-1-54</a>	8	Vision, Hearing, Speech, Ambulation, Dexterity, Emotion, Cognition, Pain (1 item each)	weighted utilities $u^* = 1.371 (b1 * b2 * b3 * b4 * b5 * b6 * b7 * b8) - 0.371$ with 0.0 equivalent to death, 1.0 equivalent to perfect health	not specified

<b>NHP (Nottingham Health Profile)</b>	Perceived health status	Hunt, S M; McKenna, S P; McEwen, J; Backett, E M; Williams, J; Papp, E (1980). A quantitative approach to perceived health status: A validation study. <i>Journal of Epidemiology &amp; Community Health</i> . 34 (4): 281–6. doi:10.1136/jech.34.4.281	45	Energy level (3 items), Pain (8 items), Emotional reaction (9 items), Sleep (5 items), Social isolation (5 items), Physical abilities (8 items), Life areas affected (7 items)	sum of all weighted values adding up to 100 (as percent) with 0 poor, 1 good health	not specified
<b>PROMIS (Patient-Reported Outcomes Measurement Information System)</b>	Health status	Khanna, D., Krishnan, E., Dewitt, E.M., Khanna, P.P., Spiegel, B., & Hays, R.D. (2011). The Future of Measuring Patient-Reported Outcomes in Rheumatology: Patient-Reported Outcomes Measurement Information System (PROMIS). <i>Arthritis Care and Research</i> , 63 Suppl 11, S486-490. <a href="http://dx.doi.org/10.1002/acr.20581">http://dx.doi.org/10.1002/acr.20581</a> Tulsky, D.S., Carlozzi, N.E., & Cella, D. (2011). Advances in Outcomes Measurement in Rehabilitation Medicine: Current Initiatives from the National Institutes of Health and the National Institute on Disability and Rehabilitation Research. <i>Archives of Physical Medicine and Rehabilitation</i> , 92(10, Supplement), S1-S6. <a href="http://dx.doi.org/10.1016/j.apmr.2011.07.202">http://dx.doi.org/10.1016/j.apmr.2011.07.202</a>	>300 stand-alone measures	Global Health, Mental Health, Physical Health, Social Health, different profiles some focussing on pain	depending on module	depending on module
<b>SF-36 (and short forms)</b>	Health related quality of life	Stewart AL, Hays RD, Ware JE Jr. The MOS short-form general health survey. Reliability and validity in a patient population. <i>Med Care</i> . 1988 Jul;26(7):724-35. doi: 10.1097/00005650-198807000-00007. PMID: 3393032.	36	General Health Perception (5 items), Vitality/energy (4 items), Bodily Pain (2 items), Physical Functioning (10 items), Role Limitations due to Physical Health (4 items), Role Limitations due to Emotional Health (3 items), Social Role Functioning (2 items), Mental Health (5 items)	0-100, higher scores indicating better HrQoL	past 4 weeks
<i>OA pain and knee scores</i>						
<b>AASK (American Knee Society Score)</b>	Knee and patient functioning	Insall J N, Dorr L D, Scott R D, Scott W N. Rationale of the Knee Society Clinical Rating System. <i>Clin Orthop</i> 1989; 248: 13-4.	7	Pain (1 item), Stability (2 items), Range of Motion (1 item),	0-100, higher values indicating better knee function and less symptoms	past 4 weeks

				Function (2 items), Alignment (1 item)		
<b>ICOAP (Intermittent and Constant Osteoarthritis Pain scale)</b>	Pain	Hawker GA, Davis AM, French MR et al. Development and preliminary psychometric testing of a new OA pain measure--an OARS/OMERACT initiative. <i>Osteoarthritis Cartilage</i> . 2008 Apr;16(4):409-14. doi: 10.1016/j.joca.2007.12.015. PMID: 18381179; PMCID: PMC3268063.	11	Constant pain (5 items); intermittent pain (6 items)	0-100, higher values indicating higher pain impact	past 7 days
<b>IKDC (International Knee Documentation Committee) Subjective Knee Evaluation Form</b>	Pain, physical functioning	Irrgang JJ, Anderson AF, Boland AL, et al. Development and validation of the International Knee Documentation Committee Subjective Knee Form. <i>Am J Sports Med</i> . 2001;29:600-613.	11	Pain (3 items); stiffness/swelling (3 items); activity (5 items)	0-100, higher values indicating less impact from knee problems	past 4 weeks
<b>KSKSS (Knee Society Knee Scoring System)</b>	Expectations, satisfaction, and physical activities in end stage disease patients (pre/post. joint replacement)	Noble PC, Scuderi GR, Brekke AC et al. Development of a new Knee Society scoring system. <i>Clin Orthop Relat Res</i> . 2012 Jan;470(1):20-32. doi: 10.1007/s11999-011-2152-z.	24	Patient Demographics, Objective Knee Score (alignment, instability (2 items), joint motion), Symptoms (2 items), Patient Expectations (3 items), Patient Satisfaction Score (5 items), Activities (10 items)	0-depend on dimension, generally higher values indicate better function, higher expectations etc.	past 4 weeks
<b>KOOS (Knee Injury and Osteoarthritis Outcome Score)</b>	pain, symptoms, activities of daily living, sport and recreation function, and knee-related quality of life	Roos EM, Roos HP, Lohmander LS et al. Knee Injury and Osteoarthritis Outcome Score (KOOS)--development of a self-administered outcome measure. <i>J Orthop Sports Phys Ther</i> . 1998 Aug;28(2):88-96. doi: 10.2519/jospt.1998.28.2.88. PMID: 9699158.	42	Pain (9 items); stiffness (2 items); other symptoms (5 items); ADL function (17 items); sport and recreation function (5 items); knee-related QoL (4 items)	0-100, higher values indicating better outcome	past 7 days
<b>LKSS (Lysholm Knee Scoring Scale)</b>	Pain, physical functioning, ADL	Lysholm J, Gillquist J. Evaluation of knee ligament surgery results with special emphasis on use of a scoring scale. <i>Am J Sports Med</i> . 1982;10:150-4	8	Pain (1 item + NRS), disability (5 items); activity (2 items)	0-100, higher values indicating better knee function and less symptoms	past 24 hours
<b>LISOK (Lequesne index of severity for osteoarthritis of the knee)</b>	Pain and function	Lequesne MG. The algofunctional indices for hip and knee osteoarthritis. <i>J Rheumatol</i> . 1997 Apr;24(4):779-81. PMID: 9101517.	11	Pain or discomfort (5 items), Maximum distance walked (2 items), Activities of daily living (4 items)	0-24, higher values indicating higher disability	not specified

<b>mCKRS (Modified Cincinnati Knee Rating)</b>	Pain and function	Shelbourne KD, Nitz P. Accelerated rehabilitation after anterior cruciate ligament reconstruction. Am J Sports Med. 1990 May-Jun;18(3):292-9. doi: 10.1177/036354659001800313. PMID: 2372081.	8	Pain Intensity, Swelling, Giving Way, Overall activity level, Walking, Stairs, Running activity, Jumping or Twisting (1 item each)	0-100, higher values indicating better knee function and less symptoms	not specified
<b>OKS (Oxford Knee Score)</b>	Pain, physical functioning, ADL	Dawson J, Fitzpatrick R, Murray D, Carr A. Questionnaire on the perceptions of patients about total knee replacement. J Bone Joint Surg Br. 1998 Jan;80(1):63-9. doi: 10.1302/0301-620x.80b1.7859. PMID: 9460955.	12	Pain (6 items), disability (1 item); activity (5 items)	0-48, higher values indicating better joint health	past 4 weeks
<b>PAKS (Pain and Activity Knee Symptom Score)</b>	Pain and function adjusted for ambulation	Lo GH, Song J, McAlindon TE, Hawker GA et al. Validation of a new symptom outcome for knee osteoarthritis: the Ambulation Adjusted Score for Knee pain. Clin Rheumatol. 2019 Mar;38(3):851-858. doi: 10.1007/s10067-018-4352-3.	6	WOMAC pain (5 items), daily walking hours	1-21, higher values indicating higher symptom impact and less activity, score algorithm (WOMAC pain + 1)/((average daily hours of walking) + 1)	past 7 days for mobility, WOMAC depending on version, typically 48h
<b>WOMAC (Western Ontario and McMaster Universities Osteoarthritis Index)</b>	Pain, function and stiffness	Bellamy N, Buchanan WW, Goldsmith CH et al. Validation study of WOMAC: a health status instrument for measuring clinically important patient relevant outcomes to antirheumatic drug therapy in patients with osteoarthritis of the hip or knee. J Rheumatol. 1988 Dec;15(12):1833-40.	24	Pain (5 items); stiffness (2 items); physical function (17 items)	0-100 (normalized), higher values indicating higher disease impact	past 48 hours (other versions available)
<b>also see Lundgren-Nilsson A, Dencker A, Palstam A, et al. Patient-reported outcome measures in osteoarthritis: a systematic search and review of their use and psychometric properties. RMD Open 2018;4:e000715. doi:10.1136/rmdopen-2018-000715</b>						
<i>pain scores single domain scales</i>						
<b>FPS-R (Faces Pain Scale-Revised)</b>	Pain	Hicks CL, von Baeyer CL, Spafford P, van Korlaar I, Goodenough B. The Faces Pain Scale - Revised: Toward a common metric in pediatric pain measurement. Pain, 2001;93:173-183.	1	Pain (1 item)	0-10, higher values indicating more pain	present

<b>NRS (Numerical Rating Scale)</b>	Pain	Hjermstad MJ, Fayers PM, Haugen DF et al. European Palliative Care Research Collaborative (EPCRC). Studies comparing Numerical Rating Scales, Verbal Rating Scales, and Visual Analogue Scales for assessment of pain intensity in adults: a systematic literature review. <i>J Pain Symptom Manage.</i> 2011 Jun;41(6):1073-93. doi: 10.1016/j.jpainsymman.2010.08.016.	1	Pain (1 item)	0-10, higher values indicating more pain	present
<b>VAS (Visual Analogue Scale)</b>	Pain	Hjermstad MJ, Fayers PM, Haugen DF et al. European Palliative Care Research Collaborative (EPCRC). Studies comparing Numerical Rating Scales, Verbal Rating Scales, and Visual Analogue Scales for assessment of pain intensity in adults: a systematic literature review. <i>J Pain Symptom Manage.</i> 2011 Jun;41(6):1073-93. doi: 10.1016/j.jpainsymman.2010.08.016.	1	Pain (1 item)	0-10, higher values indicating more pain	present
<b>VRS (Verbal Rating Scale)</b>	Pain	Hjermstad MJ, Fayers PM, Haugen DF et al. European Palliative Care Research Collaborative (EPCRC). Studies comparing Numerical Rating Scales, Verbal Rating Scales, and Visual Analogue Scales for assessment of pain intensity in adults: a systematic literature review. <i>J Pain Symptom Manage.</i> 2011 Jun;41(6):1073-93. doi: 10.1016/j.jpainsymman.2010.08.016.	1	Pain (1 item)	depending on the version different number of hierarchically ordered verbal descriptors (typically 5-7) that translate into a numeric value, higher values indicating more pain	present
<i>pain scores multiple domaine scales</i>						
<i>quality</i>						
<b>DN4 (Douleur neuropathique 4 questions)</b>	Pain (differentiation of neuropathic pain)	Bouhassira D, Attal N, Alchaar H et al. Comparison of pain syndromes associated with nervous or somatic lesions and development of a new neuropathic pain diagnostic questionnaire (DN4). <i>Pain.</i> 2005 Mar;114(1-2):29-36. doi: 10.1016/j.pain.2004.12.010.	4	Pain quality (3 items), Paraesthesia/dysaesthesia (4 items), Sensory deficits (2 items), Evoked pain (2 items)	0-10, values $\geq 4$ associated with higher probability of neuropathic pain component	not specified

<b>ID Pain</b>	Pain (differentiation of neuropathic pain)	Portenoy R. Development and testing of a neuropathic pain screening questionnaire: ID Pain. <i>Curr Med Res Opin</i> 2006; 22:1555–1565	6	Pain quality (6 items, limitation to joints equals minus 1 point) plus human map	minus 1-5, higher values associated with higher probability for neuropathic pain	past week
<b>LANSS (Leeds assessment of neuropathic symptoms and signs)</b>	Pain (differentiation of neuropathic pain)	Bennett M. The LANSS Pain Scale: the Leeds assessment of neuropathic symptoms and signs. <i>Pain</i> . 2001 May;92(1-2):147-57. doi: 10.1016/s0304-3959(00)00482-6.	3	Pain quality (5 items), Test for allodynia and pin-prick threshold	0-24, values equal or higher than 12 associated with higher probability of neuropathic pain component	past week
<b>MPQ (McGill Pain Questionnaire)</b>	Pain	Melzack R, Torgerson WS. On the language of pain. <i>Anesthesiology</i> . 1971 Jan;34(1):50-9. doi: 10.1097/0000542-197101000-00017. PMID: 4924784. Melzack R. The McGill Pain Questionnaire: Major properties and scoring methods. <i>Pain</i> . 1975; 1: 277-299.	3	Pain quality (20 items), Time course (2 items), Pain intensity (6 items)	0-78, higher values indicating greater pain	present
<b>NPQ (Neuropathic Pain Questionnaire)</b>	Pain (differentiation of neuropathic pain)	Krause SJ, Backonja M-M. Development of a neuropathic pain questionnaire. <i>Clin J Pain</i> 2003; 19:306–314.	12	Pain quality (10 items), Affect (2 items)	below or above 0, weighted algorithm plus neg constant, values below 0 rather indicate nociceptive pain, values above 0 rather indicate neuropathic pain	not specified
<b>NPSI (Neuropathic Pain Symptom Inventory)</b>	Pain (differentiation of neuropathic pain)	Bouhassira D, Attal N, Fermanian Jet al. Development and validation of the Neuropathic Pain Symptom Inventory. <i>Pain</i> . 2004 Apr;108(3):248-257. doi: 10.1016/j.pain.2003.12.024.	12	Pain quality (3 items), Time course (4 items), Trigger factors (3), Paraesthesia/dysaesthesia (2)	0-50, higher values associated with higher probability for neuropathic pain plus information on temporal pattern	past 24 hours
<b>NPS (Neuropathic Pain Scale)</b>	Pain (differentiation of neuropathic pain)	Galer BS, Jensen MP. Development and preliminary validation of a pain measure specific to neuropathic pain: the Neuropathic Pain Scale. <i>Neurology</i> . 1997 Feb;48(2):332-8. doi: 10.1212/wnl.48.2.332. PMID: 9040716.	11	Pain quality/intensity (10 items), time pattern (1 item)	0-100, higher values associated with higher probability for neuropathic pain plus information on temporal pattern	not specified
<b>P4 (Pain 4)</b>	Pain intensity (time course)	Spadoni GF, Stratford PW, Solomon PE, Wishart LR. The development and cross-validation of the P4: a self-report pain intensity measure. <i>Physiother Can</i> 2003;55:32e40.	4	Pain intensity (4 items)	0-40, higher values indicating more pain	past 48 hours

<b>painDETECT</b>	Pain (differentiation of neuropathic pain)	Freyenhagen R, Baron R, Gockel U, Tölle TR. painDETECT: a new screening questionnaire to identify neuropathic components in patients with back pain. <i>Curr Med Res Opin.</i> 2006 Oct;22(10):1911-20. doi: 10.1185/030079906X132488.	13	Pain course (1 item), Pain irradiation (1 item), Sensory symptom items (7 items)	minus 1 -38, values equal or higher than 19 associated with higher probability of neuropathic pain component	present/past 4 weeks
<b>painPREDICT</b>	Pain (differentiation of neuropathic pain)	Tölle TR, Baron R, de Bock E et al. painPREDICT: first interim data from the development of a new patient-reported pain questionnaire to predict treatment response using sensory symptom profiles. <i>Curr Med Res Opin.</i> 2019 Jul;35(7):1177-1185. doi: 10.1080/03007995.2018.1562687	20	Pain intensity (2 items), Course of pain (1 item), Location of pain (1 item), Pain quality/sensory symptoms (16 items)	clusters with predominantly evoked pain, paraesthetic/dysaesthetic pain, nociceptive pain attacks)	not specified
<b>PQAS (Pain Quality Assessment Scale)</b>	Pain (differentiation of neuropathic pain)	Jensen MP, Gammaitoni AR, Olaleye DO, et al. The pain quality assessment scale: assessment of pain quality in carpal tunnel syndrome. <i>J Pain</i> 2006; 7:823–832	20	Pain quality and intensity (17 items), surface vs deep pain (2 items), temporal course (1 item)	0-10 per item or normalized, higher values associated with higher probability of neuropathic pain component	past week
<b>StEP (Standardized Evaluation of Pain)</b>	Pain (differentiation of neuropathic pain)	Scholz J, Mannion RJ, Hord DE et al. A novel tool for the assessment of pain: validation in low back pain. <i>PLoS Med.</i> 2009 Apr 7;6(4):e1000047. doi: 10.1371/journal.pmed.1000047.	16	Interview (6 items on pain intensity, quality/sensory symptoms, temporal course, triggers, paraesthesia/dysaesthesia) and standardized bedside examination (10 tests)	weighted score	past 24 hours
<i>functioning</i>						
<b>BPI (Brief Pain Inventory)/BPQ (Brief Pain Questionnaire)</b>	Pain severity and interference	Daut RL, Cleeland CS, Flanery RC. Development of the Wisconsin Brief Pain Questionnaire to assess pain in cancer and other diseases. <i>Pain</i> : October 1983 - Volume 17 - Issue 2 - p 197-210 doi: 10.1016/0304-3959(83)90143-4	14	Pain severity (4 items), Interference from pain (7 items)	0-40 for severity, 0-70 for interference, higher values indicating greater impact	past 24 hours
<b>MPI (Multidimensional Pain Inventory)</b>	Chronic pain experience	Kerns RD, Turk DC, Rudy TE. The West Haven-Yale Multidimensional Pain Inventory (WHYMPI). <i>Pain.</i> 1985 Dec;23(4):345-356. doi: 10.1016/0304-3959(85)90004-1.	52	Pain: Interference (9 items), Support (3 items), Pain severity (3 items), Life-control (2 items), Affective distress (3 items). Interaction: Negative responses (4 items), Solicitous responses (6	Dimensions are scored separately at 0-7, higher values indicating higher impact	past 24 hours/past week



				items), Distracting responses (4 items). Activity: Household Chores (5 items), Outdoor Work (5 items), Activities Away from Home (4 items), Social Activities (4 items)		
<b>NIH Toolbox</b>	Neurological and Behavioral Function	NIH Toolbox for assessment of neurological and behavioral function, various validation articles on behalf of the NIH Blueprint for Neuroscience Research Neurology Mar 2013, 80 (11 Supplement 3) S1	> 100 stand-alone measures	Cognition Batteries, Emotion Batteries, Motor Batteries, Sensation Measures	depending on module	depending on module
<b>ODI (Oswestry Disability Index) V2.0</b>	Pain impact on activities of daily living	Fairbank JC, Pynsent PB. The Oswestry Disability Index. Spine (Phila Pa 1976). 2000 Nov 15;25(22):2940-52; discussion 2952. doi: 10.1097/00007632-200011150-00017.	10	Pain intensity, Personal care, Lifting, Walkin, Sitting, Standing, Sleeping, Sex life, Social life, Travelling (1 item each)	0-100, higher values indicating a greater degree of disability	present
<b>PDI (Pain Disability Index)</b>	Pain impact on activities of daily living	Pollard CA. Preliminary validity study of the pain disability index. Perceptual and Motor Skills. 1984; 59: 974.	7	Family/Home Responsibilities, Recreation, Social Activity, Occupation, Sexual Behavior, Self Care, Life-Support Activities (1 item each)	0-70, higher values indicating a higher impact on life	not specified
<b>RDQ (Roland-Morris Disability Questionnaire)</b>	Pain impact on activities of daily living	Roland MO, Morris RW. A study of the natural history of back pain. Part 1: Development of a reliable and sensitive measure of disability in low back pain. Spine 1983; 8: 141-144.	24	Activities of daily living (yes/no)	0-24, higher values indicating higher disability	not specified
<b>Activity and performance scales</b>						
<b>ARS (Activity Rating Scale) for disorders of the knee</b>	Activity in patients with knee disorders	Marx RG, Stump TJ, Jones EC et al. Development and evaluation of an activity rating scale for disorders of the knee. Am J Sports Med. 2001 Mar-Apr;29(2):213-8. doi: 10.1177/03635465010290021601.	4	Running, Cutting, Deceleration, Pivoting (1 item each)	0-16, higher scores indicating higher activity	past year
<b>IPAQ (International Physical Activity Scale)</b>	Physical functioning	Craig CL, Marshall AL, Sjöström M et al. International physical activity questionnaire: 12-country reliability and validity. Med Sci Sports Exerc. 2003 Aug;35(8):1381-95. doi: 10.1249/01.MSS.0000078924.61453.F B.	27	Job related physical activity (6 items), Physical activity transportation (6 items), Activity for housework, house maintenance, caring for	MET level x minutes of activity x events per week	past week

				family (6 items), Activity for sports, leisure time, recreation (6 items), Time spent sitting (2 items)		
<b>ÖMPQ (Örebro Musculoskeletal Pain Screening Questionnaire)</b>	Risk of pain related disability	Linton, Steven J., and Karin Halldén. "Can we screen for problematic back pain? A screening questionnaire for predicting outcome in acute and subacute back pain." <i>The Clinical Journal of Pain</i> 14.3 (1998): 209-215. Linton, Steven J., Michael Nicholas, and Shane MacDonald. "Development of a short form of the Örebro Musculoskeletal Pain Screening Questionnaire." <i>Spine</i> 36.22 (2011): 1891-1895.	25, 10	Short Form: Pain duration and intensity (2 items), Interference with daily life and work (2 items), affective component of pain (2 items), believes about course of pain (4 items)	Short form 0-100, long form 0-210, higher values indicating higher risk of disability/work absence in the following year	past week/past three months/past year
<b>PASE (Physical Activity Score for the Elderly)</b>	Physical functioning	Washburn RA, Smith KW, Jette AM, Janney CA. The Physical Activity Scale for the Elderly (PASE): development and evaluation. <i>J Clin Epidemiol.</i> 1993 Feb;46(2):153-62. doi: 10.1016/0895-4356(93)90053-4.	12	Activity (12 items)	weights and frequency values for each of 12 types of activity typical range 0-400 (may be higher), higher values indicating higher activity levels	past week
<b>TAS (Tegner Activity Scale)</b>	Physical functioning	Tegner Y, Lysholm J. Rating systems in the evaluation of knee ligament injuries. <i>Clinical Orthopaedics.</i> 1985; 198: 43-49.	1	Activity, 10 categories from sick leave to competitive sports at national level	0-10, higher values indicating higher activities	Before and after injury
<b>also see Williams K, Frei A, Vetsch A, Dobbels F et al. Patient-reported physical activity questionnaires: a systematic review of content and format. <i>Health Qual Life Outcomes.</i> 2012 Mar 13;10:28. doi: 10.1186/1477-7525-10-28. PMID: 22414164; PMCID: PMC3349541.</b>						
<i>psychology, coping, sleep</i>						
<b>BDI (Beck Depression Inventory)</b>	Depressive mood	Beck AT, Ward C, Mendelson M. Beck Depression Inventory (BDI). <i>Archives of General Psychiatry,</i> 1961; 4, 561-571.	21	Indicators of depressive mood (21 items)	0-63, higher values indicating signs of depression, values ≥10 indicative of mild mood disturbances	past week
<b>BFI (Brief Fatigue Inventory)</b>	Severity of and impact from fatigue	Mendoza TR, Wang XS, Cleeland CS, et al. The rapid assessment of fatigue severity in cancer patients: use of the Brief Fatigue Inventory. <i>Cancer</i> 1999;85:1186-1196.	9	Fatigue intensity and frequency (3 items), Interference (6 items)	0-10 (average score), higher values indicating higher severity of and impact from fatigue	past 24 hours

<b>CES-D (Center for Epidemiologic Studies Depression Scale)</b>	Depressive mood	Radloff LS. The CES-D Scale: a Self-Report Depression Scale for Research in the general population. <i>Appl Psychol Meas</i> (1977) 1(3):385-401. doi: 10.1177/014662167700100306	20	Indicators of depressive mood (20 items)	0-60, higher scores (esp. $\geq 16$ ) associated with a higher risk of depression	past week
<b>CPAQ (Chronic Pain Acceptance Questionnaire)</b>	Acceptance of pain	McCracken LM, Vowles KE, Eccleston C. Acceptance of chronic pain: component analysis and a revised assessment method. <i>Pain</i> : January 2004 - Volume 107 - Issue 1 - p 159-166 doi: 10.1016/j.pain.2003.10.012 Geisser ME, Haig AJ, Theisen ME. Activity avoidance and function in persons with chronic back pain. <i>J Occup Rehabil</i> 2000;10:215-27.	20	Activity engagement (11 items), Pain willingness (9 items)	0-120, higher scores indicating higher acceptance	not specified
<b>CPCI (Chronic Pain Coping Inventory)</b>	Coping strategies	Jensen MP, Turner JA, Romano JM, Strom SE. The Chronic Pain Coping Inventory: development and preliminary validation. <i>Pain</i> . 1995 Feb;60(2):203-216. doi: 10.1016/0304-3959(94)00118-X.	104	Guarding (9 items), Resting (7 items) and Asking for Assistance (4 items); Wellness-Focused Coping scales consist of Exercise/Stretch (12 items), Relaxation (7 items) and Task Persistence (6 items), Coping Self-Statements (11 items) and Seeking Social Support (8 items) plus medication summary. Version for patient and significant other.	0-7 (averaged) with higher values indicating the more intense use of coping strategies per day, documentation of opioid medication per day	past week
<b>DAPOS (Depression, Anxiety and Positive Outlook Scale)</b>	Emotional state in patients with chronic pain	Pincus T, Williams AC, Vogel S, Field A. The development and testing of the depression, anxiety, and positive outlook scale (DAPOS). <i>Pain</i> . 2004 May;109(1-2):181-8. doi: 10.1016/j.pain.2004.02.004.	11	Depression (5 items), Positive affect (3 items), Anxiety (3 items)	5-25 for depression, 3-15 for anxiety and pos. affect, higher values indicating higher relevance	last few weeks
<b>FABQ (Fear Avoidance Beliefs Questionnaire)</b>	Beliefs around the impact of activity on (low back) pain	Waddell GA, Newton M, Henderson I et al. A Fear-Avoidance Beliefs Questionnaire (FABQ) and the role of fear-avoidance beliefs in chronic low back pain and disability. <i>Pain</i> : February 1993 - Volume 52 - Issue 2 - p 157-168 doi:10.1016/0304-3959(93)90127-B	16	Fear avoidance believes about physical activity (5 items), Fear avoidance believes about work (11 items)	0-66, higher values indicating a more intense fear avoidance behaviour (evaluation of only select questions)	not specified

<b>GADS-7 (Generalized Anxiety Disorder 7-item Scale)</b>	Identification of generalized anxiety disorders	Spitzer RL, Kroenke K, Williams JBW, Löwe B. A Brief Measure for Assessing Generalized Anxiety Disorder: The GAD-7. Arch Intern Med. 2006;166(10):1092–1097. doi:10.1001/archinte.166.10.1092	7	feeling nervous, anxious, or on edge, being able to stop or control worrying, worrying too much about different things, trouble relaxing, being restless, becoming easily annoyed or irritable, feeling afraid as if something awful might happen, plus question on impact on daily function	0-21, higher values associated with higher risk of a generalized anxiety disorder, cut of defining at least mild anxiety $\geq 5$	past two weeks
<b>GDS (Geriatric Depression Scale) short form</b>	Depression	Yesavage JA, Brink TL, Rose TL, Lum O, Huang V, Adey M, Leirer VO. Development and validation of a geriatric depression screening scale: a preliminary report. J Psychiatr Res. 1982-1983;17(1):37-49. doi: 10.1016/0022-3956(82)90033-4.	15	Indicators of depressive mood (15 items)	0-15, values $\geq 5$ indicating a risk of depression	past week
<b>HADS (Hospital Anxiety and Depression Scale)</b>	Anxiety and Depression	Zigmond AS, Snaith RP. The Hospital Anxiety and Depression Scale. Acta Psychiatr Scand 1983;67:361–370.	14	Depression (7 items), Anxiety (7 items)	0-21 for each dimension, higher values associated with higher risk of pathology, values $\geq 11$ considered abnormal	past week
<b>ISI (Insomnia Severity Index)</b>	Insomnia pattern and impact	Morin CM. Insomnia: psychological assessment and management. New York: Guilford Press, 1993.	7	Sleep pattern (3 items), Impact from sleep (4 items)	0-28, higher values indicating more problems with sleep, values $\geq 15$ indicating clinical insomnia	past 2 weeks
<b>MFI (Multidimensional Fatigue Inventory)</b>	Fatigue	Smets EM, Garssen B, Bonke B, De Haes JC. The Multidimensional Fatigue Inventory (MFI) psycho-metric qualities of an instrument to assess fatigue. J Psychosom Res 1995;39:315–325.	20	General fatigue, Physical fatigue, Reduced motivation, Reduced activity and Mental fatigue	7-140, higher scores indicating higher levels of fatigue (some questions reversly scored)	not specified
<b>PANAS (Positive and Negative Affect Schedule)</b>	Affect (positive and negative)	Watson D, Clark LA, Tellegen A. Development and validation of brief measures of positive and negative affect: the PANAS scales. J Pers Soc Psychol (1988) 54(6):1063. doi: 10.1037/0022-3514.54.6.1063	20	Negative affect (10 items), positive affect (10 items)	10-50 for both, higher scores indicating higher impact from either	past week

<b>PCS (Pain Catastrophizing Scale)</b>	Catastrophic thinking	Sullivan MJL, Bishop SR, Pivik J. The Pain Catastrophizing Scale: Development and validation. <i>Psychological Assessment</i> , 1995, 7(4), 524–532. <a href="https://doi.org/10.1037/1040-3590.7.4.524">https://doi.org/10.1037/1040-3590.7.4.524</a>	13	Rumination (4 items), Magnification (3 items), Helplessness (6 items)	0-52, higher values indicating a tendency for catastrophizing	not specified
<b>PHQ (Patient Health Questionnaire Depression Scale)</b>	Depression	Kroenke K, Spitzer RL, Williams JB. The PHQ-9: validity of a brief depression severity measure. <i>J Gen Intern Med</i> . 2001 Sep;16(9):606-13. doi: 10.1046/j.1525-1497.2001.016009606.x.	9	Symptoms of depression (9 items) plus one question impact on work	0-27, higher values indicating increasingly relevant depression	past 2 weeks
<b>PMS (Profile of Mood States)</b>	Stability of mood	McNaird DM, Lorr M, Droppleman F. Manual for the Profile of Mood States. San Diego: Educational & Industrial Testing Service, 1971.	65	Anger (12 items), Confusion (7 items), Depression (15 items), Fatigue (7 items), Tension (9 items), Vigour (8 items)	minus 32-200 (sum of Tension, Depression, Anger, Fatigue minus Vigour), lower values indicate a more stable mood profile	not specified
<b>PRIME-MD (Primary Care Evaluation of Mental Disorders)</b>	Health screening tool including mental health	Spitzer RL, Williams JB, Kroenke K et al. Utility of a new procedure for diagnosing mental disorders in primary care. The PRIME-MD 1000 study. <i>JAMA</i> . 1994 Dec 14;272(22):1749-56.	26	Screening questions: Mood (2 items), Anxiety (3 items), Somatoform screening (16 items), Alcohol (4 items), Eating disorder (1 item) plus one question on general health perception	0-26, higher values indicate a higher risk of health problems	past month
<b>PSEQ (Pain Self-Efficacy Questionnaire)</b>	Self efficacy despite pain	Nicholas MK. The Pain Self-Efficacy Questionnaire: Taking pain into account. <i>European Journal of Pain</i> , 2007, 11, 153-163	10	Interference from pain on daily activities (10 items)	0-60, higher values indicating higher self efficacy	not specified
<b>PSOCQ (Pain Stages of Change Questionnaire)</b>	Readiness to adopt a self-management approach to chronic pain	Kerns RD, Rosenberg R, Jamison RN. Readiness to adopt a self-management approach to chronic pain: the Pain Stages of Change Questionnaire (PSOCQ). <i>Pain</i> . 1997 Aug;72(1-2):227-34. doi: 10.1016/s0304-3959(97)00038-9.	30	Precontemplation (7 items), Contemplation (10 items), Action (6 items), Maintenance (7 items)	30-150, higher values indicating higher readiness to engage in coping strategies	not specified
<b>PSQI (Pittsburgh Sleep Quality Index)</b>	Sleep quality	Buysse DJ, Reynolds CF 3rd, Monk TH et al. The Pittsburgh Sleep Quality Index: a new instrument for psychiatric practice and research. <i>Psychiatry Res</i> . 1989 May;28(2):193-213. doi: 10.1016/0165-1781(89)90047-4.	24 (19 self rated, 5 rated by roommate)	Sleep quality (1 item), Sleep latency (2 items), Sleep duration (1 item), Sleep efficacy (3 items), Sleep disturbance (9 items), Sleep medication (1	0-21, as sum of 7 component scores 0-3, higher values indicating greater difficulty in respective areas and overall	past month

				item), Daytime dysfunction (2 items)		
<b>SOPA (Survey of Pain Attitudes)</b>	Attitudes and beliefs about pain	Jensen MP, Karoly P, Huger R. The development and preliminary validation of an instrument to assess patients' attitudes towards pain <i>J. Psychosom. Res.</i> , 31, 1987, pp. 393-400	24	Medical cure (4 items), Pain control (6 items), Solicitude (5 items), Disability (5 items), Medication (4 items)	0-4 for each dimension, higher values reflecting a higher impact of the dimension on pain	not specified
<b>STAI (State-Trait Anxiety Inventory)</b>	Anxiety as state or trait	Spielberger D, Gorsuch, Lushene RE. <i>Manual for the State-Trait Anxiety Inventory</i> . Palo Alto, CA: Consulting Psychologists Press. 1970.	40	Anxiety state (20 items), Anxiety trait (20 items)	20-80 for each dimension, higher values indicating more severe anxiety	not specified
<b>TSK (Tampa Scale for Kinesiophobia)</b>	Kinesiophobia	Miller RP, Kori S, Todd D. The Tampa Scale: a measure of kinesiophobia. <i>Clin J Pain.</i> 1991;7(1):51-52.	17	Activity Avoidance (12 items), Somatic Focus (5 items)	17-68, higher scores indicating increasing kinesiophobia	not specified
<b>WHYMPI (West Haven-Yale Multidimensional Pain Inventory)</b>	Components of chronic pain experience	Kerns, R.D., Turk DC, Rudy TE. The West Haven-Yale Multidimensional Pain Inventory (WHYMPI). <i>Pain</i> , 1985, 23, 345-356.	52	Part I Interference with functioning (9 items), Support/Concern from significant other (3 items), Pain severity (3 items), Life control (2 items), Affective distress (3 items). Part II Solicitous responses (4 items), Distracting responses (6 items), Negative responses (4 items) from significant other. Part III Engagement in Household Chores (5 items), Outdoor Work (5 items), Activities Away from Home (4 items) Social Activities (4 items)	Part I: 0-6, higher values indicating higher impact from respective domain. Part II: 0-6, higher values indicating high frequency of respective behaviour. Part III 0-6, higher values indicating high activity	past week
<i>Scores for burden of comorbidity</i>						
see Stirland LE, González-Saavedra L, Mullin DS et al. Measuring multimorbidity beyond counting diseases: systematic review of community and population studies and guide to index choice <i>BMJ</i> 2020; 368 :m160 doi:10.1136/bmj.m160						