Measuring pain

Lesson 5.3.2 | Health psychology

Core ideas

Pain is subjective, so self-report is often central because the person experiencing pain has direct access to its intensity and quality.

Numerical rating scales and visual analogue scales turn pain into a score, making changes over time easier to compare.

Questionnaires can measure more than intensity by asking about the quality, location, duration and emotional impact of pain.

Pain diaries record pain in everyday life, helping researchers see patterns linked to activity, mood, medication or time of day.

Behavioural observation can record visible signs such as guarding, facial expression, movement limits or requests for help.

Physiological measures may show arousal or bodily stress, but they cannot prove exactly how much pain a person feels.

Key terms

Self-report: A person's own account of their pain experience.

Numerical rating scale: A scale where pain is rated with numbers, such as 0 to 10.

Visual analogue scale: A line or visual scale where a person marks how strong their pain feels.

Pain questionnaire: A structured set of questions about pain intensity, quality or impact.

Pain diary: A record of pain episodes, triggers, activities and changes over time.

Behavioural observation: Recording visible pain-related behaviour rather than only asking the patient.

Physiological measure: A bodily measure such as heart rate, muscle tension or stress response.

Subjective measure: A measure based on personal experience or judgement.

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Further detail and evidence

Key study: Brudvik et al. compared children's pain ratings with parent and physician ratings and examined links to pain-relief decisions.

The syllabus labels this 2016 and its Reference List cites the 2017 journal issue: online-first and issue dates of the same study.

This cross-sectional study involved 243 children aged 3-15 at Bergen emergency outpatients in 2011. Children used age-adapted scales; parents and physicians made independent numerical ratings.

The same child supplied the basis for three assessments; participants were not randomly assigned to pain conditions.

Mean ratings were 5.5 for children, 4.8 for parents and 3.2 for physicians. Physicians underestimated pain; only 42.1% of children with severe pain received pain relief.

The McGill Pain Questionnaire uses sensory, affective and evaluative descriptors to capture more than pain intensity: what pain feels like, its emotional qualities and the person's overall appraisal. Selecting words creates structured self-report data; language and cultural interpretation can influence scores.

A visual analogue scale (VAS) normally asks the person to mark a point on a line between endpoints such as no pain and the worst pain. It differs from choosing a numbered category on a numerical rating scale; both quantify a subjective experience.

The University of Alabama at Birmingham (UAB) Pain Behavior Scale is a standardised observational measure of observable pain behaviours. Richards et al. (1982) developed it for rapid use by pain-team staff, with inter-rater reliability and validity evaluated. Behavioural indicators do not provide direct access to another person's experience.

Compare clinical interviews, McGill descriptors, visual ratings and behavioural observation: each captures different information. Observer agreement can support reliability without establishing validity, and absent visible behaviour does not prove absence of pain. These are separate required methods; do not assume the Brudvik study used every measure listed in the topic.

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Continued

Clinical interviews explore location, onset, duration, intensity, quality and interference. McGill Pain Questionnaire uses descriptors addressing sensory and emotional qualities, alongside other pain information. A visual analogue scale marks intensity along a line between defined endpoints, usually converted to a distance score.

The UAB Pain Behavior Scale structures observation of visible pain-related behaviours such as facial/vocal expressions, movement and protective posture. Behavioural indicators are not identical to private experience: people differ in expression and suppression.

Brudvik compares children's own ratings with independent parent/physician estimates in an outpatient setting. Mean ratings differed substantially, with doctors estimating less pain. Inter-rater differences here can reflect differing access to experience, rather than the child's report simply being wrong.

Applying the ideas

A child reporting severe pain while appearing quiet may still be in pain. A face scale can help younger children communicate, while an interview adds quality/context. Repeated ratings should use an appropriate consistent instrument. A lower score and improved functioning are related but separate outcomes.

Evaluation and connections

The conclusion supports listening to children's age-appropriate self-reports and parental information rather than automatically treating professional estimates as objective.

Independent ratings aid comparison, but subjective scales do not directly measure tissue damage. One centre and observational data limit causal claims.

Evaluate psychometrics, subjective/objective data, child participation and agreement versus validity.

Self-report is essential to subjective experience but depends on comprehension and scale use. Structured observation improves consistency yet may underestimate hidden distress. Brudvik has real clinical relevance; age-appropriate scale differences and one setting restrict direct comparisons/generalisation. Combine information without assuming that objective-looking behaviour overrides the patient.