

**NINDS CDE Notice of Copyright
Pittsburgh Sleep Quality Index (PSQI)**

Availability:	Please click here for this instrument: Pittsburgh Sleep Quality Index Instrument Link
Classification:	Supplemental: Huntington's Disease (HD) and Parkinson's Disease (PD) Exploratory: Spinal Cord Injury (SCI) and SCI-Pediatric

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Short Description of Instrument:	<p>Summary/Overview of Instrument: A self-rated questionnaire that primarily assesses nighttime sleep problems. It focuses on sleep experiences over the past month. It has 19 self-rated questions and 5 additional questions for a bed partner or roommate.</p> <p>Construct measured: Sleep quality, sleep habits and sleep disturbances. Seven component scores: subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleeping medication, and daytime dysfunction.</p> <p>Generic vs. disease specific: Has been used in many different populations; it is not disease specific.</p> <p>Intended use of instrument/purpose of tool: Can be used as a screening instrument for nighttime sleep disturbance or for clinical studies. It cannot be used to diagnose specific sleep disorders, but instead may help distinguish “good” versus “poor” sleepers.</p> <p>Means of administration: Paper and Pencil</p> <p>Location of administration: Clinic, Home</p> <p>Intended respondent: Patient (with 5 supplemental questions for a bed partner or roommate).</p> <p># of items: 24 (19 self-rated items, and 5 supplemental items to be rated by a bed partner or roommate)</p> <p># of subscales and names of sub-scales: 7 – Subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleeping medication, and daytime dysfunction.</p> <p>Strengths: Extensive literature of its use in other populations. Includes a number of questions for bed partners (though these are not comprehensive and are not used in the scoring.)</p> <p>Weaknesses: Primarily assesses nighttime sleep problems; wording might be confusing; does not directly address changes in circadian rhythms (sleep time shifting to the day and awake all night) that clinically is often observed in HD patients; the wording of certain questions is likely problematic for patients with HD and measures other constructs such as mood or motivation, e.g., “during the past month, how much of a problem has it been for you to keep up enough enthusiasm to get things done.” One study in an HD population found the edication, daytime dysfunction SCOPA-S more internally consistent, and much easier to score and use than the PSQI (Aziz et al., 2010). The scoring algorithm is unusually complex.</p> <p>SCI-Pediatric-specific: Frequently used in adults, but no data in children. Most questions will be applicable to children, but more appropriate for parent report or adolescents to complete.</p> <p>Translations available: Translated into 56 languages. Versions can be requested from University of Pittsburgh Sleep Medicine Institute website.</p>
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<p>Scoring:</p>	<p>Scoring: Seven component scores are calculated, each scored from 0 to 3, the total score ranges from 0 to 21, with higher scores indicating more severe sleep problems in many areas. Scoring requires closely following a complex algorithm and is not a simple summation of answers. A cutoff of 5/6 for the total score is used in general populations to distinguish between “good” and “poor” sleepers. Scoring can be time consuming.</p> <p>Standardization of scores to a reference population (z scores, T scores): The PSQI scores are not standardized to a particular population but this instrument has been used in many different populations.</p> <p>If scores have been standardized to a reference population, indicate frame of reference for scoring (general population, HD subjects, other disease groups). (See above.) While the scores are not standardized to a particular reference population, the cutoff of 5/6 for “good” versus “poor” sleepers was developed from general population samples and thus it may not carry over as the best screening cutoff for specific populations such as HD subjects.</p>
<p>Psychometric Properties:</p>	<p>Reliability: Test-retest or intra-interview (within rater) reliability (as applicable): The Pearson correlation coefficient for test-retest reliability in a non-HD population was 0.87 and is stable over time (Högl et al., 2010). Inter-interview (between-rater) reliability (as applicable): not available in reviewed references Internal consistency: A Cronbach’s alpha of 0.72 was found in a one HD study (Aziz et al. 2010); Cronbach’s alphas of between 0.80 and 0.83 have been reported for the PSQI in different studies of non-HD populations.</p> <p>Validity: Content validity: Not available in reviewed references Construct validity: In the original study, the instrument successfully discriminated between clinical populations of good sleepers (normal healthy controls) and patients from a sleep evaluation clinic. In a HD sample, the measure correlated highly with another sleep measure, the SCOPA-SLEEP.</p> <p>Sensitivity to Change/ Ability to Detect Change (over time or in response to an intervention): Unknown</p> <p>Known Relationships to Other Variables: Not available in reviewed references Diagnostic Sensitivity and Specificity, if applicable (in general population, HD population- premanifest/ manifest, other disease groups): Not useful for diagnosis of sleep disorders.</p>

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References:	<p>Key Reference:</p> <p>Buysse D.J., C.F Reynolds., T.H Monk., S.R Berman. and D.J. Kupfer (1989). Psychiatry Research 28:193–213.</p> <p>Other References:</p> <p>Aziz N.A., G.V. Anguelova, J. Marinus, G.J. Lammers and R.A.C Roos (2010). Sleep and Circadian rhythm alterations correlate with depression and cognitive impairment in Huntington’s disease. Parkinsonism and Related Disorders 16:345–350.</p> <p>Högl B, I. Arnulf, C. Comella, J. Ferreira, A. Iranzo, B. Tilley, C. Trenkwalder, W. Poewe, O. Rascol, C. Sampaio, G.T. Stebbins, A. Schrag and C.G. Goetz (2010). Scales to assess sleep impairment in Parkinson's disease: critique and recommendations. Mov Disord 25(16):2704–2716.</p> <p>Videnovic A, S. Leurgans, W. Fan, J. Jaglin and K. Shannon (2009). Daytime somnolence and nocturnal sleep disturbances in Huntington disease. Parkinsonism and Related Disorders 15:471–474.</p>
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