

Outcome Measure	Pittsburg Sleep Quality Index (PSQI)
Sensitivity to Change	Yes
Population	Adult
Domain	TBI-Related Symptoms: Sleep Disturbance
Type of Measure	Self-report
ICF-Code/s	b4
Description	<p>The Pittsburgh Sleep Quality Index (PSQI) is an effective instrument used to measure the self-reported quality and patterns of sleep in adults. It differentiates “poor” from “good” sleep by measuring seven areas: subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleeping medication, and daytime dysfunction over the last month. The client self-rates each of these seven areas of sleep. Scoring of answers is based on a 0 to 3 scale, whereby 3 reflects the negative extreme on the Likert Scale. Scores range from 0-21, Higher scores are indicative of poorer sleep quality and a global score of >5 is indicative of poor sleep quality. Although there are several questions that request the evaluation of the client’s bedmate or roommate, these are not scored.</p> <p>Administration time is only a few minutes.</p>
Properties	<p>The PSQI has internal consistency and a reliability coefficient (Cronbach’s alpha) of 0.83 for its seven components. Numerous studies using the PSQI in a variety of older adult populations throughout the world have supported high validity and reliability.</p> <p>In primary insomnia patients, the overall PSQI global score correlation coefficient for test-retest reliability was .87 (Backhaus et al. 2002). Validity analyses showed high correlations between PSQI and sleep log data and lower correlations with polysomnography data. A PSQI global score >5 resulted in a sensitivity of 98.7 and specificity of 84.4 as a marker for sleep disturbances in insomnia patients versus controls.</p> <p>Fichtenberg et al. (2001) reported its validity in 50 TBI patients and found 94% agreement with DSM-IV diagnosis of insomnia, 100% sensitivity and 96% specificity. When PSQI-derived sleep onset latency, sleep duration and sleep efficiency calculations were compared using a sleep diary, the mean paired differences were small and Pearson product moment correlation coefficients ranged from 0.633 to 0.796 (p<.05). The proposed global PSQI cut-off score of 8 discriminated 96% of insomnia cases and a cut-off score of 9 accurately established sleep dysfunction in 98% of cases. Masel et al (2001) reported the concurrent validity of the PSQI and ESS in 71 TBI patients relative to the Multiple Sleep latency Test (MSLT) and found no significant correlations between self-report scores and the mean MSLT sleep latency. No data on reliability.</p>

Advantages	Has been used extensively in the TBI population in recent years.
Disadvantages	Association between self-reported sleep quality and objectively measured sleep on polysomnography is not strong.
Additional Information	
Reviewers	Jennie Ponsford

References

- Backhaus J; Junghanns K; Broocks A; Riemann D; Hohagen F.(2002). Test-retest reliability and validity of the Pittsburgh Sleep Quality Index in primary insomnia. *Journal of Psychosomatic Research. 53, 737-40*
- Fichtenberg, N. L., Putnam, S. H., Mann, N. R., Zafonte, R. D., & Millard, A. E. (2001). Insomnia screening in postacute traumatic brain injury: Utility and validity of the Pittsburgh Sleep Quality Index. *American Journal of Physical Medicine and Rehabilitation, 80, 339-345.*
- Masel, B. E., Scheibel, R. S., Kimbark, T., & Kuna, S. T. (2001). Excessive daytime sleepiness in adults with brain injuries. *Archives of Physical Medicine and Rehabilitation, 82, 1526-1532.* doi: 10.1053/apmr.2001.26093