

Outcome Measure	Hospital Anxiety and Depression Scale (HADS)
Sensitivity to Change	Yes
Population	Adult
Domain	Psychological Status (Anxiety and Depression)
Type of Measure	Self-report scale
ICF-Code/s	b152 (Emotional functions)
Description	<p>The HADS is a 14-item self-report measure, with seven items forming a depression subscale and another seven measuring anxiety (Zigmond & Snaith, 1983). Each item is rated on a four-point scale, ranging from 0 to 3, with 3 indicating higher symptom frequency. Total scores for each subscale range from 0 to 21, categorized as: normal (0–7), mild (8–10), moderate (11–14) or severe (15–21).</p> <p>The scale was originally developed for use in a hospital setting, although it is now widely used across all settings, including screening in normal population. The scale avoids reliance on aspects of these conditions that are also common somatic symptoms of illness (e.g., fatigue and insomnia or hypersomnia, irritability, poor concentration). The HADS is said to be the most common measure of emotional status employed in ABI research.</p> <p>The Hospital Anxiety and Depression Scale (HADS) can be used as a diagnostic aid with adolescents, with modifications to the cut-offs reflecting lower rates of depression among adolescents than among adults and higher rates of anxiety.</p>
Properties	<p><i>Sensitivity and specificity</i> - The anxiety subscale (HADS-A) has a specificity of 0.78 and a sensitivity of 0.9. The depression subscale (HADS-D) has a specificity of 0.79 and a sensitivity of 0.83. (Bjelland, Dahl, Haug, & Neckelmann, 2002). The cut-off scores and categories may not be useful in predicting caseness of depression and anxiety in a TBI sample -- using the manual-defined cut-off of 7/8, the HADS-D had a sensitivity of 62% and a specificity of 92% as compared to the SCID 'gold standard' diagnoses of depression. For the HADS-A scale, a cut-off of 7/8 yielded a sensitivity of 75% and a specificity of 69% as compared with SCID-diagnosed anxiety disorders (Whelan-Goodinson, Ponsford, & Schönberger, 2009).</p> <p><i>Internal consistency</i> – Cronbach's alpha for the scale is 0.78-0.93 for HADS-A and 0.82-0.90 for HADS-D (Velligan, Ritch, Sui, DiCocco, & Huntzinger, 2002). In a more recent Australian study, the overall HADS scale, and the depression and anxiety subscales, Cronbach's alpha was .94, .88, and .92, respectively (Whelan-Goodinson et al., 2009).</p> <p><i>Internal validity</i> - Many studies support the two-factor structure but there other studies suggest a three or four factor structure. Some argue that the tool is best used as a unidimensional measure of psychological distress. In a TBI sample, a two-factor solution is supported (Schönberger & Ponsford,</p>

	<p>2010). Correlations between the HADS-A and HADS-D have been reported as between 0.49 and 0.63. A tendency toward higher correlations is reported in studies with more somatic pathology than healthy samples. (Velligan et al., 2002)</p> <p><i>Test-retest reliability</i> – in an adolescent sample is .74 for HADS-A and .62 for HADS-D after 2 weeks (White, Leach, Sims, Atkinson, & Cottrell, 1999).</p> <p>Correlations between HADS and DASS-42 subscales appear to lack discriminant validity with the DASS. In a brain tumour sample population, the HADS-D is correlated with the DASS-42 Depression ($r = .64$), Anxiety ($r = .59$), and Stress ($r = .73$). The HADS-A is correlated .53, .53, and .76, with these DASS-42 subscales, respectively. (Ownsworth, Little, Turner, Hawkes, & Shum, 2008). In a TBI cohort Dahm et al (2013) found large and significant correlations between corresponding HADS and DASS scales (both $r = .76$, $p < .001$). Correlations with discriminant measures were also large and significant, with $r = .70$ ($p < .001$) between DASS-D and HADS-A, and $r = .59$ ($p < .001$) between DASS-A and HADS-D.</p> <p>Dahm, Wong & Ponsford (2013) found HADS scales demonstrated validity compared with SCID diagnoses of anxiety and mood disorders as measured by Area Under ROC Curve, sensitivity and specificity. Dahm et al. (2013) found the validity of the HADS anxiety scale benefited from items reflecting symptoms of tension and worry that are measured separately for the DASS on the stress scale.</p>
Advantages	Has relatively few items reflecting injury/illness-related symptoms, apart from cognitive slowing. Has been extensively used in TBI studies and validated against the SCID and DASS. Has shown responsiveness to change in intervention studies.
Disadvantages	Measures symptoms in past week only
Additional Information	
Reviewers	Jennie Ponsford

References

- Bjelland, I., Dahl, A. A., Haug, T. T., & Neckelmann, D. (2002). The validity of the Hospital Anxiety and Depression Scale-An updated literature review. *Journal of psychosomatic research*, 52(2), 69-78.
- Dahm, J., Wong, D., Ponsford, J. (2013). Utility of the Depression Anxiety Stress Scales in assessing depression and anxiety following traumatic brain injury. *Journal of Affective Disorders*, 151(1): 392-396.
- Ownsworth, T., Little, T., Turner, B., Hawkes, A., & Shum, D. (2008). Assessing emotional status following acquired brain injury: The clinical potential of the depression, anxiety and stress scales. *Brain Injury*, 22(11), 858-869.
- Schönberger, M., & Ponsford, J. (2010). The factor structure of the Hospital Anxiety and Depression Scale in individuals with traumatic brain injury. *Psychiatry research*, 179(3), 342.
- Velligan, D. I., Ritch, J. L., Sui, D., DiCocco, M., & Huntzinger, C. D. (2002). Frontal Systems Behavior Scale in schizophrenia: relationships with psychiatric symptomatology, cognition and adaptive function. *Psychiatry Research*, 113(3), 227-236.
doi: [http://dx.doi.org/10.1016/S0165-1781\(02\)00264-0](http://dx.doi.org/10.1016/S0165-1781(02)00264-0)
- Whelan-Goodinson, R., Ponsford, J., & Schönberger, M. (2009). Validity of the Hospital Anxiety and Depression Scale to assess depression and anxiety following traumatic brain injury as compared with the Structured Clinical Interview for DSM-IV. *Journal of Affective Disorders*, 114(1-3), 94-102. doi: <http://dx.doi.org/10.1016/j.jad.2008.06.007>
- White, D., Leach, C., Sims, R., Atkinson, M., & Cottrell, D. (1999). Validation of the Hospital Anxiety and Depression Scale for use with adolescents. *The British Journal of Psychiatry*, 175(5), 452-454.
- Zigmond, A. S., & Snaith, R. P. (1983). The hospital anxiety and depression scale. *Acta psychiatrica Scandinavica*, 67, 361-370.