Guide to Measuring Psychological Outcomes in Children

Overview of the Literature

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There are a wide range of measures that can be used for measuring psychological outcomes in children. Some of these have been developed for diagnostic or screening purposes and many have been developed for use in research studies rather than routine clinical practice. Furthermore some are generic (aimed at mental health in general) and some symptom/condition specific (eg Aspergers syndrome). This guide provides an overview of the literature on this area; as well as signposting more detailed literature on commonly used measures and how they compare.

In 2008, Wolpert et al published a "*Review and recommendations for national policy for England for the use of mental health outcome measures with children and young people*". Following a systematic search, review and consultation with key stakeholders, the report identified a small set of psychometrically robust measures that could be used alongside other measures to promote psychological well being in children with mental health problems. It noted that the number of measures is growing quickly and although all the recommended measures had strengths, the majority had some limitations. Key recommendations included:

- Population surveys – use of Kidscreen to gauge population level of well being
- Service level outcomes evaluation – routine evaluation for 3-17 year olds could be undertaken using the Strengths and Difficulties Questionnaire (SDQ), plus2 or more additional measures relevant to the specific setting (eg goals based measures, condition specific measures, measures of practitioner views eg HoNOSCA or Child Global Assessment Scales (CGAS)

The full report provides a comprehensive account of the methodology used and how the recommendations were made. Furthermore the recommendations have been provided in a booklet/guide format which provides an overview of each measure, how to obtain it, psychometric details and key references.
http://www.ucl.ac.uk/clinical-psychology/EBPU/publications/pub-files/Mental%20Health%20Outcome%20Measures%20for%20Children%20and%20Young%20People.pdf

This guide uses the above review as a starting point. Searches of a range of databases: Medline; Embase, Cochrane Library (using the same search strategy) were undertaken undertaken from 2008 onwards. Updated evidence regarding the recommended measures are provided in summary tables. In addition details of other reviews and comparisons of measures have been included to provide a general overview of the literature on measuring psychological outcomes in children.

Handbooks and reviews

Handbooks		
Citation	**Focus**	**Summary**
Shaffer, D., Lucas, C.P., and Richters, J.E. (1999) Diagnostic Assessment in Child and Adolescent Psychopathology Guildford Press.	General	Handbook providing update on range of issues in relation to assessment with a focus on DSM. Divided into 4 sections: Measures for Assessing General Psychopathology, Measures for Assessing Specific Syndromes (disruptive behavior problems, anxiety and mood disorders, and pervasive developmental and communication disorders) Special Aspects of Assessing Psychiatric Disorders (methodological issues related to functional impairment, family history, retrospective assessment, cross-cultural applications, and socioeconomic differences). The final section includes sleep, neuroendocrine, and neurochemical measures.
Asher, M. J., S. B. Gordon, et al. (2010) The behavior problems resource kit: Forms and procedures for identification, measurement, and intervention. Champaign, IL, Research Press; US.	Behaviour Problems	User-friendly resource of over 50 reproducible forms and numerous intervention procedures for identifying, measuring, and solving child and adolescent behavior problems. Includes case examples and numerous completed sample forms, as well as a companion CD-ROM of all the forms.
Verhulst, F., and van der Ende, J. (2006) Assessment scales in child and adolescent psychiatry. Informa	General	Compendium of rating scales have brought together information about nearly a 100 scales that could be of use to child mental health clinicians. Includes general rating scales, and those for specific problems: anxiety; obsessive-compulsive disorder; depression; suicide; eating disorder; tics; developmental disorders; ADHD; conduct disorder; substance use, and finally impairment.
Hughes, C. W. and A. G. Melson (2008). Child and adolescent measures for diagnosis and screening. Handbook of psychiatric measures (2nd ed.). Arlington, VA, US: American Psychiatric Publishing, Inc.: 251-308.	General	Reviews relative strengths and weaknesses of 13 diagnostic and screening instruments for pre-school and school-age children and adolescents

Reviews of Measures		
Citation	**Condition/Focus**	**Summary**
Alderfer, M. A., B. H. Fiese, et al. (2008). "Evidence-based assessment in pediatric psychology: family measures." J Pediatr Psychol 33(9): 1046-61; discussion 1062-4.	Family measures	Review of the evidence base of family measures relevant to pediatric psychology, based on selections from Division 54 listserv members, expert judgment, and literature review. CONCLUSIONS: Recommends 19 measures deemed as "well-established" in the general population which are proving to be reliable and useful in pediatric samples.
Brooks, S. J. and S. Kutcher (2003). "Diagnosis and Measurement of Anxiety Disorder in Adolescents: A Review of Commonly Used Instruments." Journal of Child and Adolescent Psychopharmacology 13(3): 351-400.	Anxiety	Identifies and reviews the design, strengths and weaknesses in psychometric properties of 15 different diagnostic and symptom measurement instruments from published research studies (1994-2001).Concludes: too many different instruments are being used; more than 20% of studies did not report the use of developmentally appropriate (i.e., child/adolescent-specific) diagnostic instruments; 15% of studies used diagnostic instruments that demonstrate substantial weaknesses in reliability and validity; the concordance between anxiety disorder diagnoses from different interview schedules is unknown; (5) the relative validity of diagnoses and ratings of anxiety severity based on information yielded by parents versus information yielded by adolescents is unclear; (6) clinician-rated symptom severity scales specific to anxiety disorder are rarely utilized; (7) the most commonly used self-report measures discriminate poorly between anxiety and depression,
Elmquist, J. M., T. K. Melton, et al. (2010) "A systematic overview of measurement-based care in the treatment of childhood and adolescent depression." J Psychiatr Pract 16(4): 217-34.	Depression	Systematic review and analysis of widely used depression rating scales and discussion of their utility in clinical practice. This review found evidence supporting the utility and benefit of depression rating scales to document depression severity in children and adolescents. We also found evidence suggesting that many of these scales are time efficient, and that both clinician-rated and self-rated scales provide accurate assessment of depressive symptomatology.
Gray, L. B., A. Dubin-Rhodin, et al.	Depression	Discusses how to choose an assessment instrument and gives an overview of

(2009). "Assessment of depression in children and adolescents." Curr Psychiatry Rep 11(2): 106-13.		currently available depression assessment instruments. Important considerations include how and by whom an instrument is administered, what kind of data are obtained by the instrument, and the validity and reliability of the instrument. Suggests the user must not over interpret or misinterpret the results.
Janssens, L., J. W. Gorter, et al. (2008). "Health-related quality-of-life measures for long-term follow-up in children after major trauma." Qual Life Res 17(5): 701-13.	Trauma	Reviews measures of health-related quality of life (HRQL) for long-term follow up in children after major trauma. Concludes DISABKIDS, KIDSCREEN 52, and PedsQL are suitable for long-term follow-up measurement of HRQL in children after major trauma. They cover a large age range, have good psychometric properties, and cover the ICF substantially.
Solans, M., S. Pane, et al. (2008). "Health-related quality of life measurement in children and adolescents: a systematic review of generic and disease-specific instruments." Value Health 11(4): 742-64.	Generic and disease specific HRQOL measures	30 generic and 64 disease-specific instruments were identified, 51 of which were published between 2001 and 2005. Many generic measures cover a core set of basic concepts related to physical, mental and social health, although the number and name of dimensions varies substantially. The lower age limit for self-reported instruments was 5-6 years old. Generic measures developed recently focused on both child self-report and parent-proxy report, although 26% of the disease-specific questionnaires were exclusively addressed to proxy-respondents. Most questionnaires had tested internal consistency (67%) and to a lesser extent test-retest stability (44.7%). Most questionnaires reported construct validity, but few instruments analyzed criterion validity (n = 5), structural validity (n = 15) or sensitivity to change (n = 14). CONCLUSIONS: Many of the instruments meet accepted standards for psychometric properties, although instrument developers should include children from the beginning of the development process and need to pay particular attention to testing sensitivity to change.
White, G. W., M. S. Jellinek, et al. (2010) The use of rating scales to measure outcomes in child psychiatry and mental health. Totowa, NJ, Humana Press; US.		Book chapter which describes a review of commonly used scales and provides a case study example of a recent set of decisions in Massachusetts. From 103 identified scales, reviewed 15 scales in terms of a sixteen dimensions that are important to consider in making selection decisions. Concluded. Results from the current review identified hundreds of instruments that potentially meet the

		requirements of insurers but just over a dozen broadband scales which appear to be in common recent use in child psychiatry. All of these rating scales have been used to establish profiles at intake and although all have been used as pre-post measures, none have been expressly validated as measures of clinically significant change. Thus, although there appears to be growing pressure to use standardized rating scales at intake in psychiatry, there is no evidence to support the validity of any available scale as a 'gold standard' yardstick to demonstrate diagnostic or treatment efficacy, let alone for using any scale to restrict access to care or length of treatment. Too little is known about the real world reliability and true clinical predictive validity of such measures to allow them to replace the judgment of experienced clinicians in these matters at this time. The Brief Psychiatric Rating Scale for Children is appended and discussed. (Adapted abstract from PsycINFO Database).

Comparisons of measures		
Citation	**Measures**	**Summary**
Hanssen-Bauer, K., Ã. y. Langsrud, et al. (2010) "Clinician-rated mental health in outpatient child and adolescent mental health services: Associations with parent, teacher and adolescent ratings." Child and Adolescent Psychiatry and Mental Health 4.	HoNOSCA, Achenbach System of Empirically Based Assessment, Child Behaviour Checklist and Youth Self-Report	Compares the properties of HoNOSCA with 3 other measures. Results: Moderate correlations between the total problems rated by the clinicians (HoNOSCA) and by the other informants (ASEBA) and good correspondence between eight of the nine HoNOSCA scales and the similar ASEBA scales. The exception was HoNOSCA scale 8 psychosomatic symptoms compared with the ASEBA somatic problems scale. In the regression analyses, the CBCL and TRF total problems scores together explained 27% of the variance in the HoNOSCA total scores (23% for the age group 11-17 years, also including the YSR). The CBCL provided unique information for the prediction of the HoNOSCA total score, HoNOSCA scale 1 aggressive behaviour, HoNOSCA scale 2 over activity or attention problems, HoNOSCA scale 9 emotional symptoms, and HoNOSCA scale 10 peer problems; the TRF for all these except HoNOSCA scale 9 emotional symptoms; and the YSR for HoNOSCA scale 9 emotional symptoms only. Conclusion: This study supports the concurrent validity of the HoNOSCA. It also demonstrates that parents, teachers and

		adolescents all contribute unique information in relation to the clinician-rated HoNOSCA, indicating that the HoNOSCA ratings reflect unique perspectives from multiple informants. (Abstract adapted from PsycINFO Database)
Amanda Jensen, D. (2005). "Evidence-Based Diagnosis: Incorporating Diagnostic Instruments Into Clinical Practice." Journal of the American Academy of Child & Adolescent Psychiatry 44(9): 947-952.	DISC-IV, K-SADS-PL, ASEBA	Compares 3 measures to provide a practical guide for practitioners interested in incorporating EBD instruments into their clinical practices to refine the diagnostic process. Includes: DISC-IV, the Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime version (K-SADS-PL), and the Achenbach System of Empirically Based Assessment (ASEBA) School-Age Forms.
McClendon, D. T., J. S. Warren, et al. (2010) "Sensitivity to change of youth treatment outcome measures: A comparison of the CBCL, BASC-2, and Y-OQ." Journal of Clinical Psychology 67(1): 111-125.	Child Behavior Checklist/6-18 (CBCL), the Behavior Assessment System for Children-2 (BASC-2), and the Youth Outcome Questionnaire 2.01 (Y-OQ).	Evaluated the relative sensitivity to change of the measures with 134 parents and 44 adolescents receiving routine outpatient services in a community mental health system. Results indicated that for parent-report measures, the Y-OQ was most change sensitive; the BASC-2 and CBCL were not statistically different from each other. Significant differences in change sensitivity were not observed for youth self-report of symptoms. Results suggest that the Y-OQ may be particularly useful for evaluating change in overall psychosocial functioning in children and adolescents. (Adapted abstract from PsycINFO Database)
Vogels, A. G., M. R. Crone, et al. (2009). "Comparing three short questionnaires to detect psychosocial dysfunction among primary school children: a randomized method." BMC Public Health 9: 489.	Child Behaviour Checklist, Strengths and Difficulties Questionnaire, Pediatric Symptom Checklist,	Compares 3 (using a randomized design) questionnaires for identifying school age children with psychosocial dysfunction in community based settings and showed no statistically significant differences between them. Concludes that each of the three questionnaires can improve the detection of psychosocial dysfunction among children substantially.

Methods/Administration of Measures		
Citation	**Measure/Condition**	**Summary**
Horn, R., S. Jones, et al. (2010) "The cost-effectiveness of postal and telephone methodologies in increasing routine outcome measurement response rates in CAMHS." Child and Adolescent Mental Health 15(1): 60-63.	Postal v Telephone Reminders	Compared the cost effectiveness of different methods of questionnaire administration (General system improvements, postal reminders and telephone reminders) Results: Comparison of return rates between baseline and intervention periods indicated that administrative improvements and a centralised mailing process increased the return rate of questionnaires by 11%. A further limited increase of 16% was achieved when a postal reminder was added, whilst an additional telephone reminder significantly increased the return rate by 34%. Telephone administration and telephone follow-up to initial postal administration is more expensive overall than postal methods alone; however, the cost per return is substantially less. An initial postal mailing plus telephone reminder is predicted to provide services with more representative data on service effectiveness and acceptability than postal methods alone. (Abstract adapted from PsycINFO Database)
Rettew, D. C., A. D. Lynch, et al. (2009). "Meta-analyses of agreement between diagnoses made from clinical evaluations and standardized diagnostic interviews." Int J Methods Psychiatr Res 18(3): 169-84.	Comparison in diagnoses between evaluations made in practice and in research	Standardized diagnostic interviews (SDIs) have become de facto gold standards for clinical research. However, because clinical practitioners seldom use SDIs, it is essential to determine how well SDIs agree with clinical diagnoses. A meta-analysis of 38 articles published from 1995 to 2006 showed that diagnostic agreement between SDIs and clinical evaluations varied widely by disorder and was low to moderate for most disorders. Thus, findings from SDIs may not fully apply to diagnoses based on clinical evaluations of the sort used in the published studies. Rather than implying that SDIs or clinical evaluations are inferior, characteristics of both may limit agreement and generalizability from SDI findings to clinical practice.

As noted above, Wolpert (2008) reviewed a wide range of measures which could be used to promote better psychological well being and effective intervention for children with mental health problems. Following a systematic review, assessment by psychometric experts and consultation with key stakeholders on using the measure in practice, the following measures were recommended. The tables below provide information regarding their psychometric properties as well as details of studies where they have been evaluated published since the Wolpert review.

Achenbach System of Empirically Based Assessment (ASEBA)

Achenbach, T. (2005). Achenbach System of Empirically Based Assessment. Mental health screening and assessment in juvenile justice., New York, NY, US: Guilford Press: 187-204.	Overview	Provides an overview of the Achenbach System of Empirically Based Assessment (ASEBA, which sounds like "zebra") was developed to meet the need for practical, low-cost assessment of youths. Used in a range of contexts including juvenile justice, mental health, medical, and educational settings. The ASEBA is designed to assess a broad spectrum of behavioral, emotional, and social problems as well as personal strengths and favorable aspects of functioning. Can be completed by parent figures and other caregivers, teachers, clinical interviewers, and psychological examiners and in group settings, such as classrooms and recreational activities.
Achenbach, T. M. (2007). Applications of the Achenbach System of Empirically Based Assessment to Children, Adolescents, and Their Parents. The clinical assessment of children and adolescents: A practitioner's handbook., Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers: 327-344.	Overview	ASEBA comprises a family of assessment instruments for ages 1 1/2 to 90+ years. The instruments are designed to assess a broad spectrum of problems and adaptive functioning, as reported by the people who are being assessed and by people who know them ("collaterals"), as well as by clinical interviewers, direct observers, and psychological examiners. Each form is tailored to the ages of the people being assessed and to the types of informants who complete the forms. The forms are scored on profiles of scales that enable users to compare the individual being assessed with scores obtained by normative samples of peers.
Achenbach, T. M., A. Becker,	Multicultural populations	The development of Achenbach System of Empirically Based Assessment (ASEBA)

et al. (2008). "Multicultural assessment of child and adolescent psychopathology with ASEBA and SDQ instruments: Research findings, applications, and future directions." Journal of Child Psychology and Psychiatry 49(3): 251-275.		and Strengths and Difficulties Questionnaire (SDQ) forms and their applications to multicultural research are presented. Comparisons of ASEBA and SDQ scale scores, psychometrics, and correlates are available for diverse populations.
Harris, M. E. and M. Tiedemann-Fuller (2010) "Frequencies of T score differences between Achenbach Child Behavior Checklist and Teacher's Report Form summary scales." Journal of Psychoeducational Assessment 28(1): 54-59.	Scoring of Checklist	Provides difference frequencies for caregiver versus teacher ratings of children on the Child Behavior Checklist and Teacher's Report Form Internalizing, Externalizing, and Total Problems scales per the original normative samples.
Montgomery, E. (2008). "Self- and parent assessment of mental health: Disagreement on externalizing and internalizing behaviour in young refugees from the Middle East." Clinical Child Psychology and Psychiatry 13(1): 49-63.	Mental Health of Refugees	Aimed to analyse levels of agreement and disagreement between self- and parent ratings of externalizing and internalizing behaviour and to identify predictors for the differences between the two sets of ratings. Self- and parent-rated scale scores correlated moderately. The mean score differences between self- and parent-rated internalizing and externalizing behaviour were 2.0 and 2.7, $p < 0.005$, respectively. A larger mean difference was found among boys concerning externalizing behaviour and among girls concerning internalizing behaviour. Individual (age, and sex) family (father's health situation) and ethnic background predicted this difference. This could indicate that parent ratings and children's self-ratings are two, qualitatively different constructs and not just a result of

		expected inter-observer disagreement. When assessing young refugees for possible treatment, this difference needs to be understood and taken into consideration. (Abstract adapted from PsycINFO Database)
Rescorla, L. A. (2005). "Assessment of young children using the Achenbach System of Empirically Based Assessment (ASEBA)." Mental Retardation and Developmental Disabilities Research Reviews 11(3): 226-237.	Pre-school and learning disabilities	Summarises clinical and research applications of ASEBA preschool forms. Discusses strengths and limitations.

Behaviour Assessment System for Children (BASC)

Allison Bender, H., D. Auciello, et al. (2008). "Comparing the convergent validity and clinical utility of the Behavior Assessment System for Children-Parent Rating Scales and Child Behavior Checklist in children with epilepsy." Epilepsy Behav 13(1): 237-42.	Epilepsy	Compares the convergent validity and clinical utility of two parent-report child behavior rating scales, the Behavior Assessment System for Children-Parent Rating Scales (BASC-PRS) and Child Behavior Checklist/Ages 6-18 (CBCL), in children with epilepsy were examined. The BASC captured significantly less composite internalizing symptoms (P<0.002), but more unusual thought processes (P<0.0002) and attention problems versus a CBCL DSM-oriented attention-deficit/hyperactivity disorder scale (P<0.002). Variation in the correlations between measures may stem from underlying differences between rationally-and empirically-derived approaches to test construction. Both the CBCL and BASC have diagnostic and clinical utility in assessing behavior problems in pediatric epilepsy.
Weis, R. and L. Smenner (2007). "Construct validity of the Behavior Assessment	Adolescents referred for residential treatment	Investigates the construct validity of the Behavior Assessment System for Children Self-Report of Personality with a sample of 970 adolescents (16-18 years) with histories of disruptive behavior problems and truancy. Results support the overall

System for Children (BASC) Self-Report of Personality: Evidence from adolescents referred to residential treatment." Journal of Psychoeducational Assessment 25(2): 111-126.		construct validity of the SRP with adolescents referred for behavior problems but suggest that the SRP composites and scales measure a wider range of psychopathology than their labels imply. (Abstract amended from PsycINFO Database)
Wolfe-Christensen, C., L. L. Mullins, et al. (2009). "Use of the Behavioral Assessment System for Children 2nd edition: Parent report scale in pediatric cancer populations." Journal of Clinical Psychology in Medical Settings 16(4): 322-330.	Cancer	Examines the use of the Behavioral Assessment System for Children 2nd Edition: Parent Report Scale (BASC-2; Reynolds & Kamphaus, Behavior assessment system for children, 2004) in a pediatric cancer population. Suggests that the BASC-2 can identify the cognitive and emotional differences between cancer survivors and controls. (Abstract Amended from PsycINFO Database)

BECK Youth Inventory

Moreau, V., L. BÃ©langer, et al. (2009). "Insomnia, sleepiness, and depression in adolescents living in residential care facilities." Residential Treatment for Children & Youth 26(1): 21-35.	Insomnia and depression	The main objective of this study was to document sleep patterns and disturbances reported by youths temporarily living in residential care facilities. A secondary objective was to examine the relationships between sleep disturbances and mood and daytime sleepiness. Results suggest a high rate of sleep disturbances in this sample, with 41% reporting insomnia symptoms and 21% meeting diagnostic criteria for an insomnia syndrome. Those with more severe insomnia syndrome showed more severe depressive symptoms and daytime consequences. (Amended Abstract from PsycINFO)
Runyon, M. K., R. A. Steer, et al. (2009). "Psychometric characteristics of the Beck Self-Concept Inventory for	Sexual abuse	Suggests the BYI-S was discussed as being a useful instrument for assessing the self-concepts of youth who have experienced sexual abuse.

Youth with adolescents who have experienced sexual abuse." Journal of Psychopathology and Behavioral Assessment 31(2): 129-136.		
Williams, C., D. Daley, et al. (2010) "Does item overlap account for the relationship between trait emotional intelligence and psychopathology in preadolescents?" Personality and Individual Differences 48(8): 867-871.	Comparison of results between Trait Emotional Intelligence Questionnaire and BYI	Trait emotional intelligence (EI) is associated with psychopathology when measured concurrently although recent research suggests that trait EI does not predict psychopathology longitudinally in preadolescents. A joint exploratory factor analysis conducted on all items from the TEIQuestionnaire and the BYI revealed that 16 items from the TEIQue overlapped BYI factors. After the removal of these items the relationships between the TEIQue and subscales of the BYI did not significantly differ from those using the original scale. In addition, the differences in the psychopathology scores of those high and low on trait EI persisted after the removal of the overlapping items from the TEIQue. Whilst further research into this issue is recommended the findings indicate that trait EI and psychopathology are not distinct constructs but that they are still related in preadolescents after controlling for item overlap. (Abstract amended from PsycINFO Database)

Behavioural and Emotional Rating Scale (BERs)

Benner, G. J., K. Beaudoin, et al. (2008). "Convergent validity with the BERS-2 Teacher Rating Scale and the Achenbach Teacher's Report Form: A replication and extension." Journal of Child and Family Studies 17(3): 427-436.	Emotional Disturbance	Provides further validation of the BERS by comparing with the Achenbach Teacher's Report Form. Both measures were conducted with 58 students with emotional disturbance in grades 2 through 12. The overall convergent validity of the BERS-2 and the TRF was strong, particularly for TRF externalizing problems and associated syndromes. However, less evidence emerged for the convergence of domain subscales characterized by behaviors of an internalizing nature. These results provide further support for the use of the BERS-2 in the assessment of the social and behavioral functioning of students with emotional disturbance. (Abstract Amended from PsycINFO)
Buckley, J. A., G. Ryser, et al. (2006). "Confirmatory factor analysis of the Behavioral and Emotional Rating Scale-2 (BERS-2) Parent and Youth Rating Scales." Journal of Child and Family Studies 15(1): 27-37.	Youths	Study to confirm the factor structure of the Behavioral and Emotional Rating Scale-2nd Edition (BERS-2) with a normative parent and youth sample. The BERS-2, based on the Behavioral and Emotional Rating Scale (BERS), is a standardized instrument that assesses children's emotional and behavioral strengths. The original BERS was renormed to create a separate parent scale (Parent Rating Scale) and a youth self-report scale (Youth Rating Scale). This study, investigated whether the five-factor structure of the original BERS could be replicated with normative parent and youth using 927 parents of students with and without disabilities and 1301 youth with and without disabilities. Results indicated that the five-factor structure demonstrated an acceptable fit with the normative parent and youth samples. (Abstract amended from PsycINFO Database)
Drevon, D. D.(2010) "Review of Preschool behavioral and emotional rating scale." Journal of Psychoeducational Assessment 29(1): 84-88.	Pre-school children	Reviews “Preschool Behavioral and Emotional Rating Scale” by Michael H. Epstein and Lori Synhorst (2009), a 42-item family member or school personnel completed rating scale designed to measure the behavioral and emotional strengths of preschool children ages 3-0 to 5-11.Describes its testing for reliability and validity. One major advantage of the PreBERS is that it can aid in the early identification of behavioral and emotional difficulties. (Abstract amended from PsycINFO Database)

Child Health Questionnaire

Beckung, E., M. White-Koning, et al. (2008). "Health status of children with cerebral palsy living in Europe: A multi-centre study." Child: Care, Health and Development 34(6): 806-814.	Cerebral Palsy	Describes the health status of 8-12-year-old children with cerebral palsy (CP) of all severities in Europe using the Child Health The CHQ was used to measure the parent's perception of their child's physical (PHY) and psychosocial (PSY) health. The severity of intellectual impairment was significantly associated with CHQ scores in most dimensions with higher scores for higher IQ level in PHY and PSY. Children with seizures during the last year had a significantly lower health compared with children without seizures. Concludes that Health status as measured using the CHQ was affected in all children and was highly variable. Gross motor function level correlates with health from the PHY well-being perspective but the PSY and emotional aspects do not appear to follow the same pattern. (Abstract amended from PsycINFO Database)
de Beer, M., G. H. Hofsteenge, et al. (2007). "Health-related-quality-of-life in obese adolescents is decreased and inversely related to BMI." Acta Paediatrica 96(5): 710-714.	Obesity	Aimed to compare health related quality of life (HRQoL) of obese adolescents with normal weight controls and to explore the relation between Body Mass Index (BMI) and HRQoL. HRQoL was assessed using the PedsQL 4.0 and Child Health Questionnaire (CHQ). The main outcome measure was difference in HRQoL between obese and control subjects. Results: In obese adolescents, lower HRQoL in three PedsQL and seven CHQ scales was found ($p < 0.05$). Variance in HRQoL scales explained by obesity ranged from 8% (CHQ Physical Functioning) to 28% (CHQ Global Health). BMI z-score was inversely correlated with five PedsQL and 10 CHQ scales while the percentage of scale variance explained by BMI z-score ranged from 7% (CHQ Physical summary scale) to 33% (CHQ Global Health). Conclusion: HRQoL in obese adolescents is less than in normal weight controls, and is partially explained by obesity-related comorbidity. (Abstract amended from PsycINFO Database)
Hamiwka, L., N. Singh, et al. (2008). "Perceived health in children presenting with a "first seizure."." Epilepsy &	Epilepsy	The goal of this study was to determine health perceptions of children and parents after a "first seizure." Children 5-17 years of age referred with a first recognized seizure (FRS) were included in the study. Children and primary caregivers completed the Child Health Questionnaire.

Behavior 13(3): 485-488.		
Karande, S., K. Bhosrekar, et al. (2009). "Health-related quality of life of children with newly diagnosed specific learning disability." J Trop Pediatr 55(3): 160-9.	Learning Disability	The objective of this study was to measure health-related quality of life (HRQL) of children with newly diagnosed specific learning disability (SpLD) using the Child Health Questionnaire-Parent Form 50.
McCullough, N. and J. Parkes (2008). "Use of the Child Health Questionnaire in children with cerebral palsy: A systematic review and evaluation of the psychometric properties." Journal of Pediatric Psychology 33(1): 80-90.	Cerebral Palsy	Reviews the psychometric performance of the Child Health Questionnaire (CHQ) in samples of children with cerebral palsy (CP). Three studies reported on the reliability of the CHQ (internal consistency), whilst six studies provided evidence on various dimensions of validity (concurrent; discriminant and item discriminant validity). Concludes that a number of psychometric issues need to be addressed, including assessment of additional types of reliability; an examination of the factor structure of the CHQ within the CP population; and the development of normative data using substantial representative samples. Until these issues are addressed, researchers utilizing the CHQ in children with CP should be cautious about its interpretation. (Abstract amended from PsycINFO Database)
McCullough, N., J. Parkes, et al. (2009). "Reliability and validity of the Child Health Questionnaire PF-50 for European children with cerebral palsy." Journal of Pediatric Psychology 34(1): 41-50.	Cerebral Palsy	Evaluates the psychometric performance of the Child Health Questionnaire (CHQ) in children with cerebral palsy (CP) across European Children. Conclusion: The CHQ has limited applicability in children with CP, although with judicious use of certain domains for ambulant and non ambulant children can provide useful and comparable data about child health status for descriptive purposes. (Abstract amended from PsycINFO Database)

Mohangoo, A. D., H. J. de Koning, et al. (2007). "Health-related quality of life in adolescents with wheezing attacks." Journal of Adolescent Health 41(5): 464-471.	Wheezing attacks	Evaluates health-related quality of life in adolescents with wheezing attacks using self-reported data. Quality of life was measured using the Child Health Questionnaire-Child Form (CHQ-CF). Higher scores indicated better quality of life.
Raat, H., R. T. Mangunkusumo, et al. (2007). "Feasibility, reliability, and validity of adolescent health status measurement by the Child Health Questionnaire Child Form (CHQ-CF): Internet administration compared with the standard paper version." Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care & Rehabilitation 16(4): 675-685.	Internet v paper administration	Compared the feasibility, reliability, and validity of the Child Health Questionnaire-Child Form (CHQ-CF) when administered in paper based form v an internet (online) version. Concludes that the study supports the feasibility, internal consistency reliability of the scales, and construct validity of the CHQ-CF administered by either a paper questionnaire or online questionnaire. Differences in CHQ-CF scale scores between paper and internet administration can be considered as negligible or small. (Abstract amended from PsycINFO Database)

HoNOSCA

Brann, P. and G. Coleman. (2010). "On the meaning of change in a clinician's routine measure of outcome: HoNOSCA." Australian and New Zealand Journal of Psychiatry 44(12): 1097-1104.	Routine practice	Presents a number of approaches and the implications of using. Health of the Nations Outcome Scales for Children and Adolescents (HoNOSCA) in clinical practice. Concludes that from a number of perspectives, change in HoNOSCA total and scale scores is valid. However, several clinical dilemmas must be faced in deciding which approach should be used. The implications of these choices may affect clinicians, patients, carers and managers in understanding change. (Abstract amended from PsycINFO Database)
Burgess, P., T. Trauer, et al. (2009). "What does 'clinical significance' mean in the context of the Health of the Nation Outcome Scales?" Australasian Psychiatry 17(2): 141-148.	Routine practice	Seeks to improve understanding the meaning of 'clinical significance' means in relation to the Health of the Nation Outcome Scales (HoNOS) and its older persons and child/adolescent equivalents (the HoNOS65+ and HoNOSCA). Concludes that the findings provide support for the content validity and clinical utility of the HoNOS/HoNOS65+/HoNOSCA. Further exploration of the question of clinical significance as reflected in these instruments could take a number of forms. (Abstract amended from PsycINFO Database)
Eggleston, M. J. and W. G. Watkins (2008). "Mental health services for children and adolescents in New Zealand, outcomes, and the Health of the Nation Outcome Scale for Children and Adolescents (HoNOSCA)." N Z Med J 121(1271): 83-91.	Routine practice	Reviews current access to Child and Adolescent Mental Health Services (CAMHS) in New Zealand as well as issues relevant to the introduction of routine outcome measurement in these services; and critically appraises the psychometric properties and clinical utility of the first routine outcome measure introduced for CAMHS by the Ministry of Health (MOH)--the Health of the Nation Outcome Scale for Children and Adolescents (the HoNOSCA).
Goodyer, I. M., B. Dubicka, et al. (2008). "A randomised controlled trial of cognitive behaviour therapy in adolescents with major depression treated by	Depression	Describes a UK pragmatic randomised controlled trial (RCT) conducted on depressed adolescents attending CAMHS who had not responded to a psychosocial brief initial intervention (BII) prior to randomisation. The trial comprised a 12-week treatment phase, followed by a 16-week maintenance phase. Follow-up assessments were at 6, 12 and 28 weeks. The primary outcome measure was the Health of the Nation Outcome Scales for Children and

selective serotonin reuptake inhibitors. The ADAPT trial." Health Technol Assess 12(14): iii-iv, ix-60.		Adolescents (HoNOSCA). Secondary outcome measures were self-report depressive symptoms, interviewer-rated depressive signs and symptoms, interviewer-rated psychosocial impairment and clinical global impression of response to treatment. Information on resource use was collected in interview at baseline and at the 12- and 28-week follow-up assessments using the Child and Adolescent Service Use Schedule (CA-SUS). CONCLUSIONS: For moderately to severely depressed adolescents who are non-responsive to a BII, the addition of CBT to fluoxetine plus routine clinical care does not improve outcome or confer protective effects against adverse events and is not cost-effective. SSRIs (mostly fluoxetine) are not likely to result in harmful adverse effects. The findings are broadly consistent with existing guidelines on the treatment of moderate to severe depression, responders and non-responders.
Hanssen -Bauer, K., O. O. Aalen, et al. (2007). "Inter-rater reliability of clinician-rated outcome measures in child and adolescent mental health services." Administration and Policy in Mental Health and Mental Health Services Research 34(6): 504-512.	Reliability and validity	This study investigated the inter-rater reliability of the following outcome measures: Health of the Nation Outcome Scales for Children and Adolescents (HoNOSCA), Children's Global Assessment Scale (CGAS) and Global Assessment of Psychosocial Disability (GAPD). Three clinicians rated both patients and vignettes. On vignettes the intraclass correlation coefficient (ICC) for the HoNOSCA total score was 0.81 (single scales 0.47-0.96), for the CGAS 0.61 and for the GAPD 0.60. The reliability was not lower on patients. The rater's profession, experience or clinic did not have effect on the scores. (Abstract amended from PsycINFO Database)
Hanssen-Bauer, K., T. Langsrud, et al. (2010) "Clinician-rated mental health in outpatient child and adolescent mental health services: Associations with parent, teacher and adolescent ratings." Child and Adolescent Psychiatry and Mental Health 4.	Reliability and validity	Compares the HoNOSCA with the well-established Achenbach System of Empirically Based Assessment (ASEBA) questionnaires: the Child Behavior Checklist (CBCL), the Teacher's Report Form (TRF), and the Youth Self-Report (YSR). This study supports the concurrent validity of the HoNOSCA. It also demonstrates that parents, teachers and adolescents all contribute unique information in relation to the clinician-rated HoNOSCA, indicating that the HoNOSCA ratings reflect unique perspectives from multiple informants.

Hunt, J. and M. Wheatley (2009). "Preliminary findings on the health of the nation outcome scales for children and adolescents in an inpatient secure adolescent unit." Child Care in Practice 15(1): 49-56.	Adolescents in secure care	Aims to examine the inter-rater reliability, concurrent validity and clinical utility of HoNOSCA in an adolescent secure psychiatric unit. The HoNOSCA was completed by two raters, and the Children's Global Assessment Scale/Global Assessment Scale, the Beck Depression Inventory and the Brief Psychiatric Rating Scale were administered. The mean total HoNOSCA score was consistent with previous studies using adolescent inpatient samples. The inter-rater reliability of HoNOSCA total scores and domain scores was significant. Concurrent validity in relation to the other scales. However, several issues were highlighted with regard to assessing outcome in this setting, and modifications have been suggested in order to make the scale more suitable to this patient group. (Abstract amended from PsycINFO Database)
McShane, G., C. Bazzano, et al. (2007). "Outcome of patients attending a specialist educational and mental health service for social anxiety disorders." Clinical Child Psychology and Psychiatry 12(1): 117-124.	Anxiety and school attendance	This study evaluated the outcome of adolescents with anxiety-based school attendance problems enrolled in a specialist adolescent educational and mental health program that provides educational assistance and social skills development, Pre and post staff ratings on the Health of the Nation Outcomes Scales Child and Adolescent (HoNOSCA), Children's Global Assessment Scale (CGAS) and Global Assessment of Functioning (GAF) indicated improvement in personal and social functioning. Parental satisfaction was rated as high. The findings confirm the effectiveness of, and need for, flexible programs to support adolescents with social anxiety disorder and other longer-term mental health problems to offset the adverse consequences of early withdrawal from educational and social environments. (Abstract amended from PsycINFO Database)
Wiggins, A., M. Oakley Browne, et al. (2010) "Depressive disorders among adolescents managed in a child and adolescent mental health service." Australasian Psychiatry 18(2): 134-141	Depressive disorders	Aimed to describe the prevalence and treatment of depressive disorders among case-managed adolescents attending a regional Child and Adolescent Mental Health Service (CAMHS). Method: The Health of the Nation Outcome Scale for Children and Adolescents (HoNOSCA) and Children's Global Assessment Scale (CGAS) were collected at the beginning of the study period or at entry into the service, and repeated at discharge from the service or at the conclusion of the study period. Adolescents also completed the Reynold's Adolescent Depression Scale, 2nd edition. Results: Depressive disorders were the most common clinician diagnosis reported (22%). There was no statistically significant difference in

		treatment for depressed compared to non-depressed adolescents. There was a statistically significant improvement in both the HoNOSCA scores and CGAS scores for the whole sample. (Abstract amended from PsycINFO Database)
Yates, P., T. Kramer, et al. (2006). "Use of a routine mental health measure in an adolescent secure unit." British Journal of Psychiatry 188(6): 583-584.	Secure Unit	Examined the use of a staff-completed measure, the Health of the Nation Outcome Scales for Children and Adolescents (HoNOSCA), to record mental health problems in adolescents in local authority secure accommodation. It proved possible to train staff and implement completion of the HoNOSCA on 64 consecutive admissions. Interrater reliability was high. HoNOSCA identified high levels of psychological problems on admission (mean 18.5, s.d.=5.5) and follow-up HoNOSCA ratings proved sensitive to change; however, correlation between HoNOSCA and adolescent-completed questionnaires was poor. Concludes that HoNOSCA can be helpful in documenting mental health problems among young people admitted to secure local authority units. (Abstract amended from PsycINFO Database)

KIDSCREEN

The KIDSCREEN questionnaires: Quality of life questionnaires for children and adolescents, Lengerich, Germany: Pabst Science Publishers, 2006.	Generic Quality of Life Measurement in Children	Handbook for KIDSCREEN measures which can be used to monitor and evaluate health-related QoL in public-health surveys, in clinical studies, and in research projects. The generic KIDSCREEN questionnaires were developed in the context of a European cross-cultural representative health survey in order to be able to compare health-related QoL across different countries and in order to be able to monitor the health status of children and adolescents. The measures have been validated to make them both conceptually and linguistically appropriate for use in different countries. The handbook provides full details for users, e.g. psychometrics, norm data for group and individual comparisons, and instructions on how to score the instrument and how to interpret the results. (Abstract amended from PsycINFO Database Record (c) 2010 APA, all rights reserved)
Davis, E., C. Nicolas, et al. (2007). "Parent-proxy and child self-reported health-related quality of life: Using qualitative methods to explain the discordance." Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care & Rehabilitation 16(5): 863-871.	Methods	Aimed of to use a qualitative methodology to examine why parents and children report different levels of HRQOL. Method: The sample consisted of 15 parent-child pairs. A think-aloud technique was used where parents and children were given a generic HRQOL instrument (KIDSCREEN) and instructed to share their thoughts with the interviewer. Results suggest a discordance between parents and children, in terms of rating scale and in terms of the reasoning for their answer. Children tended to have different response styles to parents, where for example, children tended to provide extreme scores (highest or lowest score) and base their response on one single example, more than parents. Parents and children interpreted the meaning of the items very similarly. Discussion: This study provides evidence to suggest that discordance among parent-child pairs on KIDSCREEN scores may be as a result of different reasoning and different response styles, rather than interpretation of items. This may have important implications when parent-proxy reported HRQOL is used to guide clinical/treatment decisions. (Abstract amended from PsycINFO Database)
Davis, E., A. Shelly, et al. (2010)"Measuring the quality of life of children with	Cerebral palsy	This study aimed to compare the conceptual differences, internal consistency, and validity of the Cerebral Palsy Quality of Life Questionnaire for Children (CP QOL-Child), the Child Health Questionnaire (CHQ), and the KIDSCREEN-10) for

cerebral palsy: Comparing the conceptual differences and psychometric properties of three instruments." Developmental Medicine & Child Neurology 52(2): 174-180.		children with cerebral palsy (CP). Results: All instruments were moderately correlated. Conceptually and psychometrically, KIDSCREEN-10 and CP QOL-Child performed more strongly than the CHQ, for children with CP. The choice between these two instruments will depend on the questions posed and outcomes sought by the researcher or clinician. (Abstract amended from PsycINFO Database)
Detmar, S. B., J. Bruil, et al. (2006). "The use of focus groups in the development of the KIDSCREEN HRQL questionnaire." Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care & Rehabilitation 15(8): 1345-1353.	Methods	Describes part of the development and validation of the KIDSCREEN, a generic HRQOL questionnaire developed for children between the ages of 8 and 18 on the basis of children's opinions about what constitutes HRQL. Provides evidence of children's views of important elements of HRQOL which were incorporated into the instrument design.
Erhart, M., C. Hagquist, et al. (2010)"A comparison of RASCH item-fit and Cronbach's alpha item reduction analysis for the development of a quality of life scale for children and adolescents." Child Care, Health & Development 36(4): 473-484.	Methods	Describes two methods used for reducing the number of items in the development of the KIDSCREEN questionnaire and the testing of its validity and reliability. Concludes that the Rasch method is the most suitable with this population group.
Erhart, M., V. Ottova, et al. (2009). "Measuring mental health and well-being of school-children in 15 European countries using the	Methods	Describes the testing and psychometric properties of the KIDSCREEN-10 Mental Health Index in school children from 15 European countries. Concludes that the KIDSCREEN-10 displayed good psychometric properties and measured differences between countries, age, gender, SES, and health complaints comply with theoretical considerations.

KIDSCREEN-10 Index." Int J Public Health 54 Suppl 2: 160-6.		
Erhart, M., U. Ravens-Sieberer, et al. (2009). "Rasch measurement properties of the KIDSCREEN quality of life instrument in children with cerebral palsy and differential item functioning between children with and without cerebral palsy." Value in Health 12(5): 782-792.	Cerebral Palsy	Describes a study to ascertain the validity of the KIDSCREEN-52 generic health-related quality of life measure was valid in children with cerebral palsy (CP). Concludes that the questionnaire functions in a similar way in children with CP and in the general population and that comparisons of quality of life between such children are therefore likely to be valid.
Michel, G., C. Bisegger, et al. (2009). "Age and gender differences in health-related quality of life of children and adolescents in Europe: A multilevel analysis." Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care & Rehabilitation 18(9): 1147-1157.		Uses the KIDSCREEN to determine age and gender differences in health-related quality of life (HRQOL) in children and adolescents across 12 European countries There was significant variation between countries both at the youngest age and for age trajectories. Conclusions: Gender and age differences exist for most HRQOL scales. Differences in HRQOL across Europe point to the importance of national contexts for youth's well-being. (Abstract amended from PsycINFO Database)
Ravens-Sieberer, U., P. Auquier, et al. (2007). "The KIDSCREEN-27 quality of life measure for children and adolescents: Psychometric results from a cross-cultural survey in 13 European	Methods	Describes a study to assess the validity of the KIDSCREEN-27 health-related quality of life (HRQoL) questionnaire, a shorter version of the KIDSCREEN-52. Concludes the KIDSCREEN-27 seems to be a valid measure of HRQoL in children and adolescents but further research is needed to assess longitudinal validity and sensitivity to change.

countries." Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care & Rehabilitation 16(8): 1347-1356.		
Ravens-Sieberer, U., M. Erhart, et al.(2010) "Reliability, construct and criterion validity of the KIDSCREEN-10 score: A short measure for children and adolescents' well-being and health-related quality of life." Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care & Rehabilitation 19(10): 1487-1500.	Methods	This study aimed to assess the validity of the KIDSCREEN-10 well-being and health-related quality of life (HRQoL) score, a short version of the KIDSCREEN-52 and KIDSCREEN-27 instruments. Concludes that the KIDSCREEN-10 provides a valid measure of a general HRQoL factor in children and adolescents, but does not represent well most of the single dimensions of the original KIDSCREEN-52. Test-retest reliability was slightly below a priori defined thresholds.
Robitail, S., U. Ravens-Sieberer, et al. (2007). "Testing the structural and cross-cultural validity of the KIDSCREEN-27 Quality of Life Questionnaire." Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care & Rehabilitation 16(8): 1335-1345.	Methods	Aimed to assess the structural and cross-cultural validity of the KIDSCREEN-27 questionnaire. Concludes that there is substantial evidence for the cross-cultural equivalence of the KIDSCREEN-27 across the countries studied and the factor structure was highly replicable in individual countries.

Pediatric Symptom Checklist

Boothroyd, R. A. and M. Armstrong (2010) "An examination of the psychometric properties of the Pediatric Symptom Checklist with children enrolled in Medicaid." Journal of Emotional and Behavioral Disorders 18(2): 113-126.	Psychometric properties in routine screening	Examines the psychometric properties of the Pediatric Symptom Checklist (PSC) for use as a routine screening tool. Study was conducted on 6,590 children ages 6-22 in Florida. Results suggest the PSC has both good internal consistency and stability over time across children with varying health and mental health conditions. The PSC demonstrated excellent discriminant validity regarding its ability to differentiate among children with varying levels of disabilities. Evidence of the PSCs construct validity was found based on its significant associations with other measures in predicted directions. At the recommended cut-off score of 28, the PSC exhibited good sensitivity, specificity, positive predictive value, and negative predictive value. Supports the use of the PSC as an appropriate measure for screening the psychosocial needs of children enrolled in Medicaid.
Hacker, K. A., S. Williams, et al. (2009). "Persistence and change in pediatric symptom checklist scores over 10 to 18 months." Acad Pediatr 9(4): 270-7.	Primary care	Documents the stability and change in PSC scores in a sample of ambulatory pediatric patients. Found a statistically significant association between pediatrician referral and improved PSC scores which provides evidence for the value of referral in primary care.
Hayutin, L. G., B. Reed-Knight, et al. (2009). "Increasing parent-pediatrician communication about children's psychosocial problems." J Pediatr Psychol 34(10): 1155-64.	Methods of administration	Aims to examine the differential effects of two scoring procedures for a parent-completed measure, the Pediatric Symptom Checklist (PSC), designed to assess children's behavioral and emotional functioning, on parent-pediatrician communication concerning psychosocial issues. Concludes that both the Staff-Scored and Parent-Scored administrations of the PSC improved parent-pediatrician communication on psychosocial issues. The Parent-Scored PSC removed the scoring burden on the medical personnel.

PedsQL

Clark, E.-E., S. S. Carlisle, et al. (2007). "Speaking your mind: Measuring the subjective quality of life of children with mental illnesses." Issues in Mental Health Nursing 28(12): 1277-1291.	Feasibility and Acceptability	Examined the feasibility, applicability, and utility of using the PedsQL with children and adolescent clients in the psychiatric setting. To determine whether this tool fully captures the essence of life quality as described by children who have mental illnesses, and to identify barriers to quality of life that might be addressed through nursing care. The results support the practice of administering both standard-form and open-ended quality of life assessments. They highlight the importance of listening closely to children's concerns and supplementing rating scales with open-ended questions that allow the child's subjective experience to be recognized. The PedsQL scale is quick and easy to administer. Children, ages 5 to 18, were able to follow instructions and readily provided answers. Abstract amended from PsycINFO)
Ewing, J. E., M. T. King, et al. (2009). "Validation of modified forms of the PedsQL Generic Core Scales and Cancer Module Scales for adolescents and young adults (AYA) with cancer or a blood disorder." Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care & Rehabilitation 18(2): 231-244.	Cancer	Aimed to validate two health-related quality of life (HRQOL) measures, the PedsQL Generic Core and Cancer Module adolescent forms (13-18 years), after modification for 16-25-year-old adolescents and young adults (AYA) with cancer or a blood disorder. Concludes the modified forms provide reliable and valid measures of HRQOL in AYA with cancer or a blood disorder, suitable for clinical trials, research, and practice.
Feichtl, R. E., B. Rosenfeld, et al.(2010) "Concordance of quality of life assessments following pediatric hematopoietic stem cell transplantation." Psycho-	Stem Cell Transplantation	Examines the concordance between pediatric patient's self-report and parent-report regarding a patient's quality of life (QoL) prior to and following hematopoietic stem cell transplantation (HSCT) and to identify potential medical and demographic covariates of concordance. Concludes that children typically rated their QoL as higher than parents at all time points and in virtually all domains; however, both perspectives are vital in providing a more accurate

Oncology 19(7): 710-717.		depiction of a patient's treatment experience.
Huang, I. C., L. A. Thompson, et al. (2009). "The linkage between pediatric quality of life and health conditions: Establishing clinically meaningful cutoff scores for the PedsQL." Value in Health 12(5): 773-781.	Scoring	Aims to establish clinically meaningful cutoff scores for, the Pediatric Quality of Life Inventory (PedsQL). For children <8 years, the recommended cutoff scores for using total functioning to identify CSHCN were 83, 79 for moderate, and 77 for major chronic conditions. For children >8 years, the cutoff scores were 78, 76, and 70, respectively. Conclusions: Pediatric HRQOL varied with health conditions. Establishing cutoff scores for the PedsQL's total functioning is a valid and convenient means to potentially identify children with special health-care needs or chronic conditions. The cutoff scores can help clinicians to conduct further in-depth clinical assessments. (Abstract amended from PsycINFO)
Limbers, C. A., R. W. Heffer, et al. (2009). "Health-related quality of life and cognitive functioning from the perspective of parents of school-aged children with Asperger's syndrome utilizing the PedsQL." Journal of Autism and Developmental Disorders 39(11): 1529-1541.	Asperger's Syndrome	Examines and confirms the feasibility, reliability, and validity of the PedsQL 4.0 Generic Core Scales and PedsQL Cognitive Functioning Scale parent proxy-report versions in school-aged children with Asperger's Syndrome.
Limbers, C. A., D. A. Newman, et al. (2008). "Factorial invariance of child self-report across healthy and chronic health condition groups: A confirmatory factor analysis utilizing the PedsQL 4.0 Generic Core Scales." Journal of Pediatric Psychology 33(6): 630-639.	Chronic Health conditions	Examines the factorial invariance of the PedsQL 4.0 Generic Core Scales for child self-report for children ages 5-18 with chronic health conditions and healthy children. Conclusions: The findings support an equivalent five-factor structure on the PedsQL 4.0 Generic Core Scales across healthy and chronic health condition groups. Suggests that differences in the two groups are in self-perceived health-related quality of life, rather than differences in interpretation of the instrument

Majnemer, A., M. Shevell, et al. (2008). "Reliability in the ratings of quality of life between parents and their children of school age with cerebral palsy." Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care & Rehabilitation 17(9): 1163-1171.	Cerebral Palsy	Uses the PedsQL to child with cerebral palsy (CP) of quality of life with a parent's perspective of their child's quality of life Concludes that ratings of parents and children with CP, are generally comparable Disparities do exist, particularly in psychosocial domains, and, therefore, the child's own perspective should be considered whenever feasible.
McClellan, C. B., J. Schatz, et al. (2008). "Validity of the Pediatric Quality of Life Inventory for youth with sickle cell disease." Journal of Pediatric Psychology 33(10): 1153-1162.	Sickle Cell Disease	Concludes the PedsQL appears to validly assess quality of life in youth with SCD. Domain-specific measurement of quality of life was limited by (a) low reliability for youth-report and (b) lack of discriminant validity. Choice of informant may be important when evaluating quality of life effects from pain or neurologic problems in SCD. (Abstract amended from PsycINFO)
Varni, J. W. and C. A. Limbers (2009). "The PedsQL 4.0 Generic Core Scales Young Adult Version: Feasibility, reliability and validity in a university student population." Journal of Health Psychology 14(4): 611-622.	Young adult version	This study determined the feasibility, reliability and validity of the 23-item PedsQL 4.0 Generic Core Scales Young Adult Version as a multidimensional measure of health related quality of life in 18-25 year olds.
Varni, J. W., C. A. Limbers, et al.(2010) "The PedsQLâ„¢ Infant Scales: Feasibility, internal consistency reliability, and validity in healthy and ill infants." Quality of Life	Infant Scales	Reports on the initial feasibility, internal consistency reliability, and validity of the PedsQL Infant Scales in healthy, acutely ill, and chronically ill infants. The findings suggest that the PedsQL Infant Scales may be utilized in the evaluation of generic HRQOL in infants ages 1-24 months.

Research: An International Journal of Quality of Life Aspects of Treatment, Care & Rehabilitation 20(1): 45-55.		
Varni, J. W., C. A. Limbers, et al. (2008). "Factorial invariance of the PedsQL 4.0 Generic Core Scales child self-report across gender: A Multigroup Confirmatory Factor Analysis with 11,356 children ages 5 to 18." Applied Research in Quality of Life 3(2): 137-148.	Gender Differences	Examined factorial invariance of the 23-item PedsQL 4.0 Generic Core Scales across gender groups for child self-report ages 5-18 and concludes that boys and girls interpreted items on the Scales in a similar manner.
Varni, J. W., C. A. Limbers, et al. (2008). "Longitudinal factorial invariance of the PedsQLâ„¢ 4.0 Generic Core Scales Child Self-Report Version: One year prospective evidence from the California State Children's Health Insurance Program (SCHIP)." Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care & Rehabilitation 17(9): 1153-1162.	Longitudinal studies	Concluded that over a one-year period children in our study interpreted items on the PedsQL 4.0 Generic Core Scales in a similar manner.

Strengths and Difficulties Questionnaire

Achenbach, T. M., A. Becker, et al. (2008). "Multicultural assessment of child and adolescent psychopathology with ASEBA and SDQ instruments: Research findings, applications, and future directions." Journal of Child Psychology and Psychiatry 49(3): 251-275.	Multicultural perspectives	Describes the development of Achenbach System of Empirically Based Assessment (ASEBA) and Strengths and Difficulties Questionnaire (SDQ) forms and their applications to multicultural research
Brown, J. D. and L. S. Wissow (2010) "Screening to identify mental health problems in pediatric primary care: considerations for practice." International Journal of Psychiatry in Medicine 40(1): 1-19	Screening	Uses the SDQ to examine the extent to which screening in primary care would increase the identification of mental health problems among a diverse population of children and youth. Concludes that screening substantially increased the number of children and youth who would be identified as possibly having a mental health problem particularly in those who have moderate mental health symptoms and those who are African American or Latino origin.
Collishaw, S., R. Goodman, et al. (2009). "How far are associations between child, family and community factors and child psychopathology informant-specific and informant-general?" J Child Psychol Psychiatry 50(5): 571-80.		Uses the SDQ to systematically test how far correlates of child psychopathology differ between informants. Concludes there is substantial variation across informants in the links between associated factors and child psychopathology.
Cooper, M., N. Rowland, et al. (2010) "Randomised	Schools	Tests the feasibility of a randomised controlled trial comparing six weeks of humanistic school-based counselling versus waiting list in the reduction of

controlled trial of school-based humanistic counselling for emotional distress in young people: Feasibility study and preliminary indications of efficacy." Child and Adolescent Psychiatry and Mental Health 4.		emotional distress in young people, and to obtain initial indications of efficacy. The emotional symptoms subscale of the Strengths and Difficulties Questionnaire (SDQ) acting as the primary outcome indicator. Trial procedures were acceptable to all involved in the research.
Crone, M. R., A. G. Vogels, et al. (2008). "A comparison of four scoring methods based on the parent-rated Strengths and Difficulties Questionnaire as used in the Dutch preventive child health care system." BMC Public Health 8: 106.	Scoring methods	Assesses the validity and added value of four scoring methods used with the Strengths and Difficulties Questionnaire (SDQ) for the identification of psychosocial problems among children aged 7-12 by the PCH. Concludes that the SDQ is a valid tool for the identification of psychosocial problems by PCH. As a first step, the use of a simple classification based on the SDQ TDS is recommended.
Dave, S., I. Nazareth, et al. (2008). "A comparison of father and mother report of child behaviour on the Strengths and Difficulties Questionnaire." Child Psychiatry Hum Dev 39(4): 399-413.	Methods	Aimed to investigate differences and agreement between parents on the various SDQ domains of child behaviour. There was higher interparental agreement on male rather than female children, but fathers were four times more likely to report hyperactivity among their boys compared with girls. Using combined parental reports in clinical settings would enhance the sensitivity of identifying children requiring clinical attention for their problem behaviours.
Ford, T., J. Hutchings, et al. (2009). "Strengths and Difficulties Questionnaire Added Value Scores: evaluating effectiveness in child mental health interventions." Br J Psychiatry	Scoring methods	AIMS: To test a computer algorithm designed to allow practitioners to compare their outcomes with epidemiological data from a population sample against data from a randomised controlled trial, to see if it accurately predicted the trial's outcome. The findings provide preliminary support for the validity of this approach as one tool in the evaluation of interventions with groups of children who have, or are at high risk of developing, significant psychopathology.

194(6): 552-8.		
Goodman, A. and R. Goodman (2009). Strengths and Difficulties Questionnaire as a dimensional measure of child mental health. 48: 400-403.	Validity and reliability	Validates SDQ across its full range against the prevalence of clinical disorder. Concludes that the findings support the use of the SDQ as a genuinely dimensional measure of child mental health.
Goodman, A., D. L. Lamping, et al. (2010) "When to use broader internalising and externalising subscales instead of the hypothesised five subscales on the Strengths and Difficulties Questionnaire (SDQ): Data from British parents, teachers and children." Journal of Abnormal Child Psychology: An official publication of the International Society for Research in Child and Adolescent Psychopathology 38(8): 1179-1191.	Methods	Concludes that there are advantages to using the broader internalizing and externalizing SDQ subscales for analyses in low-risk samples, while retaining all five subscales when screening for disorder.
Iizuka, C., Y. Yamashita, et al. (2010)"Comparison of the Strengths and Difficulties Questionnaire (SDQ) scores between children with high-functioning autism spectrum disorder (HFASD) and attention-deficit/hyperactivity	Autism	Compares the Strengths and Difficulties Questionnaire (SDQ) scores and subscale scores in children with high-functioning autism spectrum disorder (HFASD) and attention-deficit/hyperactivity disorder (AD/HD), and clarifies the differences between parent- and teacher-assessed SDQ scores/subscores in HFASD and AD/HD children. Results suggest that each subscale may reflect behavioral, emotional, and social characteristics of HFASD and AD/HD.

disorder (AD/HD)." Brain & Development 32(8): 609-612.		
McCrystal, P. and K. McAloney (2010) "Assessing the mental health needs of young people living in state care using the Strengths and Difficulties Questionnaire." Child Care in Practice 16(3): 215-226.	Children in care	The findings show that the SDQ is a tool that may assist professionals to make an informed decision on the health and wellbeing of young people entering the care system and possibly can lead to an empirically assisted decision on intervention planning.)
Ruchkin, V., S. Jones, et al. (2008). "The Strengths and Difficulties Questionnaire: the self-report version in American urban and suburban youth." Psychol Assess 20(2): 175-82.		Examined the factor structure of the Strengths and Difficulties Questionnaire (SDQ) in urban inner-city and suburban general population samples of American youth. Concluded that, although the SDQ scales do conform reasonably well to a 5-factor model, the scales are unsatisfactory in other respects and that, in its present form, the instrument has inadequate psychometric characteristics. Future research is needed for further scale development.
Stone, L. L., R. Otten, et al. (2010) "Psychometric properties of the parent and teacher versions of the strengths and difficulties questionnaire for 4- to 12-year-olds: a review." Clin Child Fam Psychol Rev 13(3): 254-74.		Aims to provide an overview of the psychometric properties of the SDQ for 4- to 12-year-olds by combining results from 48 studies. At subscale level, the reliability of the teacher version seemed stronger compared to that of the parent version. Concerning validity, 15 out of 18 studies confirmed the five-factor structure. Correlations with other measures of psychopathology as well as the screening ability of the SDQ are sufficient. This review shows that the psychometric properties of the SDQ are strong, particularly for the teacher version. For practice, this implies that the use of the SDQ as a screening instrument should be continued. Longitudinal research studies should investigate predictive validity. For both practice and research, we emphasize the use of a multi-informant approach.

Youth Outcome Questionnaire

Cannon, J. A. N., J. S. Warren, et al. (2010) "Change trajectories for the Youth Outcome Questionnaire Self-Report: Identifying youth at risk for treatment failure." Journal of Clinical Child and Adolescent Psychology 39(3): 289-301.	Routine use for identifying risk	Reports on a study which used longitudinal youth outcome data in routine mental health services to test a system for identifying cases at risk for treatment failure. Results showed that the predictive accuracy of the warning system yielded moderately high sensitivity rates for both youth self-report and parent-report measures. Incorporating data from multiple sources (youth, parents, and others) yielded the highest sensitivity in identifying at-risk cases. Results emphasize the importance of using empirically derived methods for identifying youth at risk for negative outcomes in usual care. (Abstract adapted from PsycINFO Database Record)
Ridge, N. W., J. S. Warren, et al. (2009). "Reliability and validity of the youth outcome questionnaire self-report." J Clin Psychol 65(10): 1115-26.	Reliability and validity	Examined the psychometric properties of the Youth Outcome Questionnaire Self-Report version [Y-OQ-SR] for adolescents with a mean age =15). Analyses revealed very good internal consistency and test-retest reliability of the Y-OQ-SR total score and subscales, and moderate to good concurrent validity with the SRP and YSR. The Y-OQ-SR appears to be a valid and reliable self-report measure of psychosocial distress that warrants further study in youth psychotherapy research.
Tzoumas, A. C., J. L. Tzoumas, et al. (2007). "The Y-OQ-12: Psychosocial screening of youth in primary care medicine using items from an outcome measure." Clinical Psychology & Psychotherapy 14(6): 488-503.	Reliability and validity	Describes the development and validation of a youth mental health screening instrument for identifying psychosocial distress in pediatric care patients. As a subset of 12 items from the well-established Youth Outcome Questionnaire-2.01 (Y-OQ-2.01), the Youth Outcome Questionnaire-12 (Y-OQ-12) screen intends to be the first stage in a two-stage screening process. Patients screened as positive complete the full-length Y-OQ-2.01 in the second stage. A stage two score in the clinical range can serve as a baseline in continuous outcome tracking using the Y-OQ-2.01. A second validation study involving 371 youth from pediatric settings in three US states compared the Y-OQ-12 with the Pediatric Symptom Checklist (PSC) and the Diagnostic Interview Schedule for Children-Present State. The Y-OQ-12 demonstrated sensitivity, specificity and predictive power that were comparable to the PSC and shows promise for screening in routine practice. (Abstract amended from PsycINFO Database Record)

References to other measures developed/validated since 2008

A number of other measures have been developed/validated since the publication of the Wolpert report. Bibliographic details of these studies are included below.

CES-D10

Bradley, K. L., A. L. Bagnell, et al. (2010) "Factorial validity of the center for epidemiological studies depression 10 in adolescents." Issues in Mental Health Nursing 31(6): 408-412.

KINDL-R

Bullinger, M., A. L. Brutt, et al. (2008). "Psychometric properties of the KINDL-R questionnaire: results of the BELLA study." Eur Child Adolesc Psychiatry 17 Suppl 1: 125-32.

Erhart, M., U. Ellert, et al. (2009). "Measuring adolescents' HRQoL via self reports and parent proxy reports: an evaluation of the psychometric properties of both versions of the KINDL-R instrument." Health Qual Life Outcomes 7: 77.

Brief Mental Health Screening Questionnaire

Chaparro, N. O. l., L. Ezpeleta, et al. (2009). "Brief mental health screening questionnaire for children and adolescents in primary care settings." International Journal of Adolescent Medicine and Health 21(1): 91-100.

DISABKIDS Smiley Questionnaire

Chaplin, J. E., H. M. Koopman, et al. (2008). "DISABKIDS Smiley Questionnaire: The TAKE 6 assisted health-related quality of life measure for 4 to 7-year-olds." Clinical Psychology & Psychotherapy 15(3): 173-180.

Internet Screening Questionnaires

Cuijpers, P., P. Boluijt, et al. (2008). "Screening of depression in adolescents through the Internet: Sensitivity and specificity of two screening questionnaires." European Child and Adolescent Psychiatry 17(1): 32-38.

Donker, T., A. van, et al. (2009). "A brief Web-based screening questionnaire for common mental disorders: development and validation." Journal of medical Internet research 11(3).

Lloyd, K. (2010) "Kids' Life and Times: Using an Internet survey to measure children's health-related quality of life." Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care & Rehabilitation 20(1): 37-44.

Ohio Scales Youth Form

Dowell, K. A. and B. M. Ogles (2008). "The Ohio Scales youth form: Expansion and validation of a self-report outcome measure for young children." Journal of Child and Family Studies 17(3): 291-305.

Satisfaction with Life Scale

Gadermann, A. M., K. A. Schonert-Reichl, et al. (2010) "Investigating validity evidence of the Satisfaction with Life Scale adapted for Children." Social Indicators Research 96(2): 229-247.

K6 Screening questionnaire

Green, J. G., M. J. Gruber, et al. (2010) "Improving the K6 short scale to predict serious emotional disturbance in adolescents in the USA." International journal of methods in psychiatric research 19(SUPPL. 1): 23-35.

Kessler, R. C., J. G. Green, et al. (2010) "Screening for serious mental illness in the general population with the K6 screening scale: Results from the WHO World Mental Health (WMH) survey initiative." International journal of methods in psychiatric research 19(SUPPL. 1): 4-22.

Summary

There are a wide range of measures available for assessing psychological outcomes in children. Many have been developed for specific purposes and in particular circumstances, and when selecting a measure it is important to take this into account. Handbooks and overviews of a wide range of measures can provide information to help choose an appropriate measure.

In 2008, a Department of Children Schools and Families and Department of Health report (Wolpert, 2008) provided recommendations of a number of measures, including KIDSCREEN (for population level measuring) and the SDQ for individual service level measurement. This overview provides more recent evidence on the psychometric properties of the measures recommended by Wolpert as well as details of studies where the measures have been used in specific situations or with particular conditions.