National Best Practice Framework for Early Childhood Intervention

Outcome Measures for Children

This is a suite of outcome measures for Children. What is measured needs to be based on the priorities and goals of the child, parents, carers and families. The **Decision-Making Guide** can support your choice, and the **Measurement Overview** provides information about choosing and using outcome measures.

Aims of Early Childhood Intervention (ECI) for children

To build on child strengths and interests to enhance learning, development and meaningful participation in everyday activities

Outcome statements

Children:

- have secure, stable and safe relationships with parents, carers, siblings, family members and significant others
- interact with family members, other children and people in the community to build relational skills and connections
- develop their sense of agency and have a voice in matters that affect them
- have a positive sense of belonging to their family and community
- build strong identities and connections to their culture and community
- participate and feel they belong in everyday home, community, early childhood education and care (ECEC) and school environments
- acquire, develop and generalise new knowledge and skills
- follow their interests and enjoy play opportunities
- develop positive health habits over time
- build capacity to regulate their behaviour

Healthy Trajectories A Child and Youth Disability Research Hub · preci Professionals & Researchers in Early Childhood Intervention · murdoch children's research institute · SNAICC National Voice for our Children · ACD Advocating for children with disability · cyda Children and Young People with Disability Australia · The University of Melbourne · Melbourne Disability Institute · STRONG kids, STRONG Future Supporting child development pathways

Outcome Measures		Abbreviated Child Outcome Statements: Secure, stable and safe relationships	Interact with family and others	Develop agency and voice	Positive sense of belonging	Build identity and connection to culture	Participate at home and community	Acquire new knowledge and skills	Follow interests and enjoy play	Develop positive health habits	Build capacity to regulate behaviour
Ages & Stages Questionnaire-Talking about Raising Aboriginal Kids	ASQ-TRAK	◒	◒					●			◒
Australian Therapy Outcome Measure for Indigenous clients	ATOMIC		◒	◒	◒	◒	●	●	◒	◒	◒
Canadian Occupational Performance Measure	COPM	◒	◒	◒	◒		◒	●	◒	●	◒
Child Engagement in Daily Life	CEDL		◒				●	●	●		
Devereux Early Childhood Assessment	DECA	●	●								●
Emotional Regulation Checklist	ERC										●
Functional Independence Measure for Children	WeeFIM						◒	●			
Goal Attainment Scale	GAS		◒	●	◒	◒	◒	●	◒	◒	◒
Infant Toddler Social Emotional Assessment	ITSEA	●									●
Kindl	KINDL	◒	◒		◒				●		

Outcome Measures		Abbreviated Child Outcome Statements: Secure, stable and safe relationships	Interact with family and others	Develop agency and voice	Positive sense of belonging	Build identity and connection to culture	Participate at home and community	Acquire new knowledge and skills	Follow interests and enjoy play	Develop positive health habits	Build capacity to regulate behaviour
Participation and Environment Measure for Children and Youth	PEM-CY						●				
Pediatric Evaluation of Disability Inventory - Computer Adaptive Test	PEDI-CAT		◒	◒				●		◒	
Vineland Adaptive Behavior Scales	VABS		●				◒	●			◒
Young Children's Participation and Environment Measure	YC-PEM						●				

Note: Use the hyperlinked measure abbreviation to move to the information about that measure.

● Yes, measure addresses this outcome area; ◒ Partial, measure provides some information about this outcome.

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Ages and Stages Questionnaire-Talking about Raising Aboriginal Kids (ASQ-TRAK)

Framework Outcome Statement(s)	**Children:** - acquire, develop and generalise new knowledge and skills Provides some information about: - have secure, stable and safe relationships with parents, carers, siblings, family members and significant others - interact with family members, other children, and people in the community to build relational skills and connections - build capacity to regulate their behaviour

ASQ-TRAK Overview

General description	A culturally adapted developmental screening tool designed for Aboriginal and Torres Strait Islander children. Based on the Ages & Stages Questionnaire (ASQ-3) but modified to be more culturally appropriate and relevant. Purpose of the tool is to identify Aboriginal and Torres Strait Islander children with possible developmental difficulties who require more in-depth assessment; to enable better access to high-quality developmental monitoring and targeted early intervention. Note: A culturally adapted developmental outcome measure, derived from the ASQ-TRAK, is in development (as of May 2025). The ASQ-Steps for measuring Aboriginal child development (ASQ-STEPS) psychometric properties are still being established.

Domains / subscales	Communication, Gross motor, Fine motor, Problem-solving, Personal-social
Ages	From 2 months to 5½ years with 21 age intervals
Special considerations	The ASQ-TRAK is a developmental screening tool. Screening is a brief evaluation intended to identify those children with potential difficulties who require a more in-depth assessment. Screening tools are not designed to be used as outcome measures. However, in the absence of an appropriate outcome measure, using the ASQ-TRAK to measure outcomes is better than using nothing at all or using a measure that has not been culturally adapted. Please refer to the Measurement Overview document for a more detailed explanation of the limitations of using a screening tool as an outcome measure.
Cultural adaptation	Specifically adapted for Aboriginal and Torres Strait Islander children; Available in modified English; Uses culturally relevant examples and visual aids; Developed in collaboration with Aboriginal communities
Administration	Interview format with parent/carer. In contrast to ASQ-3 not designed for parent self-administration. Parent/carer and child encouraged to demonstrate all activities while practitioner observes. Takes between 30-60 minutes, depending on age interval.
Training requirements	2-day interactive workshop plus half-day Workplace Practice Task. Annual re-certification recommended. Cultural Safety Training recommended for non-Indigenous participants.
How to access	Available for purchase through Royal Children's Hospital Shop, Melbourne ASQ-TRAK – RCH Shop

ASQ-TRAK Evidence Summary

Link to ASQ-TRAK Reference List

Overview	7 studies were identified that report on the measurement properties of the ASQ-TRAK or use the tool as an outcome measure in the ECI practice setting (2016 – 2024). 2 studies were identified that report on measurement properties of the ASQ-STEPS (2024 – 2025).
Review papers	*No references identified*
Measurement properties	To date, there is no research that has collected psychometric data on the ASQ-TRAK as an outcome measure. While an outcome measure (ASQ-STEPS) is in development for this context, there are currently no culturally responsive, validated alternatives. Key findings for the ASQ-TRAK as a developmental screening tool include: High inter-rater and inter-instrument reliability; demonstrates consistent results across different evaluators. Moderate concurrent validity with Bayley Scales III and BDI-2. Sensitivity (71-83%) and specificity (83-92%). High acceptability among staff and caregivers with high levels of satisfaction reported. Early findings for the ASQ-STEPS focus on pre-testing and acceptability.
Cultural adaptation papers	Paper describing the adaptation of the ASQ-3 to create the ASQ-TRAK (2016).
Outcome studies in ECI settings	The LEAP-CP prospective cohort study is investigating the efficacy of early screening programmes to identify Aboriginal and Torres Strait Islander infants who are at risk of adverse neurodevelopmental outcomes or disorders.

This Evidence Summary was developed with rapid synthesis methods, combining a comprehensive PubMed search, augmented literature identification, and dual reviewer screening. It represents a living resource that maps key evidence on measurement properties, cultural adaptations, and relevant applications in the ECI practice setting for each outcome measure. For complete methodology, see our Methods Explainer.

ASQ-TRAK Reference List

Link to ASQ-TRAK Evidence Summary

Reviews

No references identified

Measurement Properties

D'Aprano A, Brookes I, Browne L, Bartlett C. (2023). Uptake of the culturally appropriate ASQ-TRAK developmental screening tool in the Australian Aboriginal and Torres Strait Islander context. *Child Care Health Dev*, 49(1):54-61. https://doi.org/10.1111/cch.13006

Luke CR, Benfer K, Mick-Ramsamy L, Ware RS, Reid N, Bos AF, Bosanquet M, Boyd RN. (2022). Early detection of Australian Aboriginal and Torres Strait Islander infants at high risk of adverse neurodevelopmental outcomes at 12 months corrected age: LEAP-CP prospective cohort study protocol. *BMJ Open*, 12(1):e053646. https://doi.org/10.1136/bmjopen-2021-053646

Simpson S, Eadie T, Khoo ST, Titmuss A, Maple-Brown LJ, Thompson R, Wunungmurra A, Jeyaseelan D, Dunham M, D'Aprano A. (2021). The ASQ-TRAK: Validating a culturally adapted developmental screening tool for Australian Aboriginal children. *Early Hum Dev*, 63:105481. https://doi.org/10.1016/j.earlhumdev.2021.105481

D'Aprano A, Johnston H, Jarman R, Jeyaseelan D, Chan YP, Johansen K, Finch S. (2020). Practitioners' perceptions of the ASQ-TRAK developmental screening tool for use in Aboriginal children: A preliminary survey. *J Paediatr Child Health*, 56(1):94-101. https://doi.org/10.1111/jpc.14502

Johansen K, Jeyaseelan D, Chan YP, Simpson S, O'Keefe M, D'Aprano A. (2020). Acceptability of the culturally adapted ASQ-TRAK developmental screening tool to caregivers of Aboriginal children. *J Paediatr Child Health*, 56(12):1946-1951. https://doi.org/10.1111/jpc.15099

Simpson S, D'Aprano A, Tayler C, Toon Khoo S, Highfold R. (2016). Validation of a culturally adapted developmental screening tool for Australian Aboriginal children: Early findings and next steps. *Early Hum Dev*, 103:91-95. https://doi.org/10.1016/j.earlhumdev.2016.08.005

Cultural Adaptations

D'Aprano A, Silburn S, Johnston V, Robinson G, Oberklaid F, Squires J. Adaptation of the Ages and Stages Questionnaire for Remote Aboriginal Australia. *Qual Health Res.* 2016 Apr;26(5):613-25. https://doi.org/10.1177/1049732314562891

Outcome Studies

Luke CR, Benfer K, Mick-Ramsamy L, Ware RS, Reid N, Bos AF, Bosanquet M, Boyd RN. (2022). Early detection of Australian Aboriginal and Torres Strait Islander infants at high risk of adverse neurodevelopmental outcomes at 12 months corrected age: LEAP-CP prospective cohort study protocol. *BMJ Open*, 12(1):e053646. https://doi.org/10.1136/bmjopen-2021-053646

ASQ-STEPS Reference List

Reviews

No references identified

Measurement Properties

D'Aprano A, Lindrea-Morrison L, Stubbs E, Bisset J, Wunungmurra A, Boyle C, Hull C, Campbell J, Naylon M, Brunette R, Simpson S, & Brookes I. (2024). Pre-testing a culturally adapted developmental outcome measure for Aboriginal and Torres Strait Islander children. *First Nations Health and Wellbeing - The Lowitja Journal*. 2(2024) https://doi.org/10.1016/j.fnhli.2024.100034

D'Aprano A, Boyle C, Lindrea-Morrison L, Brunette R, Stubbs E, Simpson S, Eadie P, Cloney D, Nguyen C, Lami F, Brookes I. Culturally adapted developmental outcome measure for Aboriginal and Torres Strait Islander children: Study protocol for the validation of the ASQ-STEPS. *BMJ Open.* 2025 Mar 12;15(3):e093029. https://doi.org/10.1136/bmjopen-2024-093029

National Best Practice Framework for Early Childhood Intervention

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Australian Therapy Outcome Measure for Indigenous Clients (ATOMIC)

Framework Outcomes Statement(s)	**Children:** - participate and feel they belong in everyday home, community, ECEC and school environments. - acquire, develop and generalise new knowledge and skills Depending on the goal chosen, provides information about: - interact with family members, other children, and people in the community to build relational skills and connections - develop their sense of agency and have a voice in matters that affect them - have a positive sense of belonging to their family and community - build strong identities and connections to their culture and community - follow their interests and enjoy play opportunities - develop positive health habits over time - build capacity to regulate their behaviour

ATOMIC Overview

General description	The ATOMIC is a goal-setting tool that aligns with the holistic view of health and wellbeing held by Aboriginal and Torres Strait Islander peoples. ATOMIC measures children's therapy outcomes and supports collaborative practice by facilitating a flexible and dynamic approach to goal setting and evaluation.
Ages	The ATOMIC is designed for children aged 2 to 16 years.
Domains / subscales	The ATOMIC uses a yarn-based approach enabling children and families to express their goals in their own language. ATOMIC uses visual analogue scales to evaluate goals throughout the therapy process and facilitate collaboration.
Cultural adaptation	The ATOMIC has been specifically designed for Aboriginal and Torres Strait Islander children and their families.
Administration	ATOMIC is used by service providers (e.g., occupational therapists and speech pathologists) who provide therapy services for Aboriginal and Torres Strait Islander children. The ATOMIC is administered with children and families in a paper-based format.
Training requirements	Training is recommended to administer the ATOMIC. This is not yet publicly available.
How to access	Service providers may access ATOMIC through professional networks or research collaborations.

ATOMIC Evidence Summary

Link to ATOMIC Reference List

Overview	3 studies were identified that report on the measurement properties of the ATOMIC (2019-2024)
Review papers	*No references identified*
Measurement properties	The ATOMIC was developed through an action research process for evaluating therapy outcomes for urban Aboriginal and Torres Strait Islander children (2019). Initial testing explored interrater reliability with Aboriginal and Torres Strait Islander children aged 2-16 years attending interprofessional therapy sessions. Further development refined the tool to a second version with improved clinical utility for interprofessional Aboriginal and Torres Strait Islander health services, focusing on goal-setting flexibility and responsiveness (2021). Testing with Aboriginal and Torres Strait Islander adults attending an urban health service examined the tool's responsiveness to change and clinical utility (2024). The pilot research indicates the ATOMIC is useful, reliable and responsive to change in children's outcomes.

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ATOMIC Reference List

Link to ATOMIC Evidence Summary

Reviews

No references identified

Measurement Properties

Sheahan N, Harrington R, Nelson A, Sheppard L, Potgieter A, Bartlett A, White R, Brown R. (2025). The responsiveness and clinical utility of the Australian therapy outcome measure for indigenous clients. *Aust Occup Ther J*, 72(2):e13001. https://doi.org/10.1111/1440-1630.13001

Copley JA, Nelson A, Hill AE, Castan C, McLaren CF, Brodrick J, Quinlan T, White R. (2021). Reflecting on culturally responsive goal achievement with indigenous clients using the Australian Therapy Outcome Measure for Indigenous Clients (ATOMIC). *Aust Occup Ther J*, 68(5):384-394. https://doi.org/10.1111/1440-1630.12735

Hill AE, Nelson A, Copley JA, Quinlan T, McLaren CF, White R, Castan C, Brodrick J. (2020). Real gains: development of a tool to measure outcomes for urban First Australian children accessing culturally responsive interprofessional therapy. *J Interprof Care*, 1-8. https://doi.org/10.1080/13561820.2020.1801611

Cultural Adaptations

No references identified

Outcome Studies

No references identified

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Outcome Measures for Children

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Canadian Occupational Performance Measure (COPM)

Framework Outcomes Statement(s)	**Children:** - acquire, develop and generalise new knowledge and skills - develop positive health habits over time Depending on goals chosen, can provide some information about: - have secure, stable and safe relationships with parents, carers, siblings, family members and significant others - interact with family members, other children, and people in the community to build relational skills and connections - develop their sense of agency and have a voice in matters that affect them - have a positive sense of belonging to their family and community - Participate and feel they belong in everyday home, community, ECEC and school environments - follow their interests and enjoy play opportunities - build capacity to regulate their behaviour

COPM Overview

General description	The Canadian Occupational Performance Measure (COPM) is a child and family-centred outcome measure that enables children and their carers/families to identify and prioritise everyday issues that restrict participation in daily activities. The primary focus of the measure is 'occupational performance' – the knowledge, skills and abilities to carry out daily activities that individuals need to, want to, or have to do. Because the measure asks about occupational performance in daily activities, the focus of the measure can be tailored to the circumstances of the child and family. The COPM has been used as an outcome measure for early childhood intervention programs, helping therapists identify functional goals for children and measure changes in self-perceived performance and satisfaction over time.
Ages	The COPM is designed for children with a developmental age of at least 8 years. For younger children or those with cognitive and/or complex communication needs, the COPM can be used with responses provided by parents, carers or family members on behalf of the child. The COPM can also be used to set goals with and for parents, carers and families.
Domains / subscales	The COPM measures self-perception of occupational performance and satisfaction with performance in areas of self-care, productivity, and leisure. It focuses on client-identified priorities in daily activities within the framework of the Canadian Model of Occupational Performance and Engagement (CMOP-E).
Cultural adaptation	The COPM has been adapted for use in various cultural contexts and translated into more than 40 languages, including Danish and Turkish versions.
Administration	The COPM is administered by a clinician through a semi-structured interview available in paper format or through the COPM Web-App. The web application allows therapists to complete the COPM with clients using a laptop or tablet. The COPM takes approximately 20-40 minutes to administer.
Training requirements	The COPM is primarily designed for use by occupational therapists. It can also be administered by other trained health professionals such as members of multidisciplinary teams,

	provided they have the necessary training and understanding of the tool. The COPM Learning Module (an online, self-directed course) is available through the official COPM website. https://www.thecopm.ca/learning-module/
How to access	In Australia, the COPM manual and forms can be purchased from The Therapy Store. https://www.thetherapystore.com.au/product/canadian-occupational-performance-measure-copm-manual-5th-edition/ The COPM is available internationally through the official COPM website www.thecopm.ca

COPM Evidence Summary

Link to COPM Reference List

Overview	65 papers were identified that report on the measurement properties of the COPM or its use as an outcome measure in the ECI practice setting (1990; 2000-2024).
Review papers	A scoping review of 100 studies found no empirical support for the commonly cited two-point change threshold for clinical significance (Canada, 2023). A systematic review using COSMIN methodology found the COPM lacks high-quality validation, with inconsistent reliability, validity, and responsiveness (Japan, 2021). Two narrative reviews examined the COPM's history and application, emphasising its flexibility across different situations while maintaining its client-centred approach (Canada, 2005, 2004). A narrative review of individualised outcome measures found the COPM met criteria as a standardised, client-centred tool with increased responsiveness compared to traditional questionnaires (Canada, 2002). Systematic reviews identified the COPM as a well-established multidisciplinary outcome measure for children with developmental disability (Australia, 2018) and as one of only two tools demonstrating adequate responsiveness to detect clinically significant change in children with cerebral palsy (Australia, 2007). The COPM was identified as one of the most commonly used measures for preschool children with autism spectrum disorder (Iran, 2024) and among potential participation tools for children with power mobility needs (Canada, 2016).
Measurement properties	The COPM was developed as an individualised outcome measure to assess client-identified problem areas in daily function across self-care, productivity, and leisure domains (Canada, 1990). The measurement properties of the COPM have been examined in children with cerebral palsy (Australia, 2006, 2007, 2012), where it was adapted for young children by removing work and household management categories and using parent-proxy ratings. The COPM has been compared with Goal

	Attainment Scaling for paediatric rehabilitation research (Australia, 2006), with the Pediatric Outcomes Data Collection Instrument in paediatric hand therapy (USA, 2020) and tested for feasibility in paediatric telehealth rehabilitation (USA, 2021). In adult populations, the COPM has been tested for validity as an outcome measure in pain management programs (UK, 2001), with community-dwelling adults with disabilities (Canada, 2000), in primary care settings (Canada, 2017), and with older adults in sub-acute rehabilitation where it was compared with the Functional Independence Measure and SF-36 (Australia, 2018). Studies have examined various aspects of validity, reliability, responsiveness, and clinical utility across these populations.
Special considerations	Because the COPM can be tailored to circumstances of the child and family, it is possible to set goals related to a range of ECI goal areas. However, to be consistent with the goal area chosen requires clear identification of the outcome desired.
Cultural adaptation papers	The measurement properties of the COPM have been explored in 19 identified studies across multiple countries and languages (2002-2022). Translation and cross-cultural validation processes were documented for Danish (2019) and Turkish (2021) versions. In Denmark, clinical utility was assessed with occupational therapists (2021), content validity was examined in hospital and community rehabilitation (2020), construct validity was tested across settings (2020), and utility as an admission and outcome measure was assessed in geriatric rehabilitation (2012). In the Netherlands, studies have examined responsiveness in children with developmental coordination disorder (2022); children's and parents' experiences with the COPM (2021); construct validity and responsiveness in chronic pain (2014); reproducibility, construct validity and criterion validity with parents of children with disabilities (2006); reproducibility with adult outpatients (2005); convergent and divergent validity with hospital outpatients (2004); and reliability and discriminant validity in stroke patients (2003). The measurement properties of the COPM have also been explored in Italy (construct validity, test-retest reliability in spinal cord injury, 2019; validity, responsiveness, feasibility in ankylosing spondylitis, 2010), Norway (test-retest reliability in

	ankylosing spondylitis, 2005; validity, responsiveness in hand osteoarthritis, 2004), Spain (convergent validity, responsiveness in carpometacarpal osteoarthritis, 2021), and Sweden (clinical utility with occupational therapists, 2002). 12 studies were identified that use the COPM as an outcome measure in the ECI practice setting in different cultural contexts including: Belgium: a randomised clinical trial evaluating hand-arm bimanual intensive therapy including lower extremities (HABIT-ILE) in infants aged 6 to 18 months with unilateral cerebral palsy (2024). Brazil: Two studies of children with cerebral palsy, including: a randomised trial comparing structured skill and unstructured practice during intensive bimanual training (2014); and a pilot study examining dosage effects of hand-arm bimanual intensive training on hand and daily functioning (2018). Israel: Three studies of children with ADHD, including: a controlled study of Cognitive-Functional (Cog-Fun) occupational therapy intervention for young children (2014); a pilot study of a cognitive-functional group intervention for preschoolers (2015); and a randomised controlled trial (RCT) of Parental Occupation Executive Training (POET), a short-term parental training program focusing on occupational goals and executive functions (2019). South Korea: One study comparing three different intensities of robot-assisted gait training for achieving favourable outcomes in children with cerebral palsy classified in Gross Motor Function Classification System levels II and III (2024). Sweden: a RCT examining botulinum toxin A injections and occupational therapy in children with unilateral spastic cerebral palsy aged 2.5 to 8 years (2015). Taiwan: a RCT of routines-based early intervention for children with or at risk for developmental delay (2013); and a RCT of an environment-based intervention for participation of autistic children aged 6-10 years (2023). Netherlands: Two studies of children with cerebral palsy, including: a RCT of modified constraint-induced movement therapy followed by bimanual task-specific training for children with unilateral spastic cerebral palsy (2010); and a clinical trial examining the effects of botulinum toxin A and/or bimanual task-

	oriented therapy on upper extremity activities in unilateral cerebral palsy (2015).
Outcome studies in ECI settings	15 primary studies were identified that use the COPM as an outcome measure in the ECI practice setting (2007-2024). In Australia, these include a double-blind RCT of occupational therapy home programmes for children with cerebral palsy (2009); a RCT of botulinum toxin-A injections combined with occupational therapy in the upper limbs of children with cerebral palsy (2007); a RCT of repeat botulinum toxin-A injections in the upper limb of children with hemiplegia (2010); an assessor-blinded pragmatic randomised trial of modified constraint-induced therapy compared with intensive occupational therapy for children with hemiplegic cerebral palsy (2011); a single-blind RCT of group versus individual physiotherapy following lower limb botulinum toxin-A injections for ambulant children with cerebral palsy (2016); a single-blind RCT of Goals-Activity-Motor Enrichment (GAME) intervention in infants at high risk of cerebral palsy (2016); and a feasibility study of an intensive interdisciplinary programme for preschool-aged children with neurodisabilities requiring daily equipment and physical assistance (2023). One study in the UK used the COPM as an outcome measure in a pilot single-blind multicentre RCT evaluating computer-assisted arm rehabilitation gaming technology for children with spastic cerebral palsy aged five to 12 years (2016). In the USA, studies using the COPM as an outcome measure in the ECI practice setting include a controlled study of parent-directed intervention using reflective guidance occupational therapy for improving participation in children with autism spectrum disorders (2012); a RCT evaluating the effects of a collaborative intervention process on parent empowerment and child performance for children with physical disabilities (2019); a prospective cohort study examining repeated episodes of paediatric constraint induced movement therapy with a gross motor training component for children with unilateral upper extremity impairment aged 14 months to 6 years (2020); a RCT comparing structured skill and unstructured practice during intensive bimanual training in children with unilateral spastic cerebral palsy (2014); a RCT of caregiver-directed home-based intensive bimanual training in young children with unilateral spastic cerebral palsy aged 2.5 to 10 years (2017); and a RCT assessing participation and quality of life in a supported speed

	treadmill training exercise program versus a strengthening program for children with cerebral palsy (2012).

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COPM Reference List

Link to COPM Evidence Summary

Reviews

Ghahramani S, Hassani Mehraban A, Alizadeh Zarei M, Ghahramani S. (2024). Occupational Therapy Outcome Measures in Preschool Children With Autism Spectrum Disorders: A Scoping Review. *OTJR (Thorofare N J)*, 44(4):568-576. https://doi.org/10.1177/15394492241246547

McColl MA, Denis CB, Douglas KL, Gilmour J, Haveman N, Petersen M, Presswell B, Law M. (2023). A Clinically Significant Difference on the COPM: A Review. *Can J Occup Ther*, 90(1):92-102. https://doi.org/10.1177/00084174221142177

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Calder S, Ward R, Jones M, Johnston J, Claessen M. (2018). The uses of outcome measures within multidisciplinary early childhood intervention services: a systematic review. *Disabil Rehabil*, 40(22):2599-2622. https://doi.org/10.1080/09638288.2017.1353144

Field DA, Miller WC, Ryan SE, Jarus T, Abundo A. (2016). Measuring Participation for Children and Youth With Power Mobility Needs: A Systematic Review of Potential Health Measurement Tools. *Arch Phys Med Rehabil*, 97(3):462-477.e40. https://doi.org/10.1016/j.apmr.2015.08.428

Sakzewski L, Boyd R, Ziviani J. (2007). Clinimetric properties of participation measures for 5- to 13-year-old children with cerebral palsy: a systematic review. *Dev Med Child Neurol*, 49(3):232-40. https://doi.org/10.1111/j.1469-8749.2007.00232.x

McColl MA, Law M, Baptiste S, Pollock N, Carswell A, Polatajko HJ. (2005). Targeted applications of the Canadian Occupational Performance Measure. *Can J Occup Ther*, 72(5):298-300. https://doi.org/10.1177/000841740507200506

Carswell A, McColl MA, Baptiste S, Law M, Polatajko H, Pollock N. (2004). The Canadian Occupational Performance Measure: a research and clinical literature review. *Can J Occup Ther*, 71(4):210-22. https://doi.org/10.1177/000841740407100406

Donnelly C, Carswell A. (2002). Individualized outcome measures: a review of the literature. *Can J Occup Ther*, 69(2):84-94. https://doi.org/10.1177/000841740206900204

Measurement Properties

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National Best Practice Framework for Early Childhood Intervention

Outcome Measures for Children

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Child Engagement in Daily Life (CEDL)

Framework Outcomes Statement(s)	**Children:** - participate and feel they belong in everyday home, community, ECEC and school environments - acquire, develop and generalise new knowledge and skills - follow their interests and enjoy play opportunities Provides some information about: - interact with family members, other children and people in the community to build relational skills and connections

CEDL Overview

General description	The Child Engagement in Daily Life (CEDL) is a parent-report measure designed to evaluate how children participate in daily activities. Parents or caregivers who know the child well complete the questionnaire, rating both how often the child participates in specific activities and how much the child enjoys them. The CEDL may help service providers and families to understand participation levels and identify areas where support or intervention is needed. The original CEDL was released in 2014. An updated version (CEDL, Version 2) was released in 2022.
Ages	The CEDL is designed for children aged 18 months to 12 years.
Domains / subscales	The CEDL has two subscales: 1) Participation in Family and Recreational Activities and 2) Performance in Self-Care

Cultural adaptation	The CEDL has been adapted for use in other languages and countries. For example, it has been translated and validated in Greek. The Self-Care Domain of the CEDL has been adapted for Arabic language and Saudi culture.
Administration	The CEDL is completed by a parent or caregiver. It is available as a paper questionnaire. The CEDL takes 10-20 minutes to complete.
Training requirements	No specific training is required to administer or score the CEDL.
How to access	The CEDL and CEDL Version 2 (including some translated versions) are freely available as a downloadable PDF from CanChild website https://canchild.ca/en/research-in-practice/current-studies/move-play-study-understanding-determinants-of-motor-abilities-self-care-and-play-of-young-children-with-cerebral-palsy/measures

CEDL Evidence Summary

Link to CEDL Reference List

Overview	7 studies were identified that report on the measurement properties of the CEDL or its use as an outcome measure in the ECI practice setting (2014-2025).
Review papers	The CEDL was reported as having the strongest psychometric properties of four tools identified in a systematic review of participation measures for infants and toddlers aged birth to 23 months, based on the Family of Participation-Related Constructs (Australia, 2021).
Measurement properties	The CEDL has been evaluated for internal consistency, test-retest reliability, and construct validity to assess participation in family and recreational activities and self-care for young children with and without cerebral palsy (USA, 2014). The responsiveness of the CEDL has also been explored for young children with cerebral palsy, with further research recommended (USA, 2014). Structural validity and test-retest reliability of the CEDL (Version 2) have been explored and supported for parents of children with cerebral palsy (USA, 2023).
Cultural adaptation papers	The CEDL has been culturally adapted for Greece and evaluated for internal consistency, test-retest reliability, measurement error, and validity to assess participation in family and recreational activities and self-care for young children with and without cerebral palsy (Greece, 2024). The self-care domain of the CEDL has been culturally adapted for Saudi Arabia (requiring minor linguistic adjustments) and evaluated for internal consistency, test-retest reliability, and measurement precision to assess self-care performance in Arabic-speaking children with cerebral palsy (Saudi Arabia, 2021).
Outcome studies in ECI settings	The CEDL has been used as an outcome measure in a randomised controlled trial (RCT) of 2 short-term powered mobility interventions for young children with cerebral palsy (USA, 2025).

This Evidence Summary was developed with rapid synthesis methods, combining a comprehensive PubMed search, augmented literature identification, and dual reviewer screening. It represents a living resource that maps key evidence on measurement properties, cultural adaptations, and relevant applications in the ECI practice setting for each outcome measure. For complete methodology, see our Methods Explainer.

CEDL Reference List

Link to CEDL Evidence Summary

Reviews

Mobbs CA, Spittle AJ, Johnston LM. (2021). Participation Measures for Infants and Toddlers Aged Birth to 23 Months: A Systematic Review. *Phys Occup Ther Pediatr*, 41(6):567-589. https://doi.org/10.1080/01942638.2021.1900488

Measurement Properties

Chiarello LA, Alghamdi MS, McCoy SW, Avery L, Palisano RJ. (2023). Child engagement in daily life measure V2: validation of psychometric properties for children with cerebral palsy. *Disabil Rehabil*, 45(23):3912-3921. https://doi.org/10.1080/09638288.2022.2140849

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Cultural Adaptations

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Outcome Studies

Feldner HA, Logan SW, Otieno S, Fragomeni A, Kono C, Riordan K, Sloane B, Kenyon LK. (2025). Short-Term Powered Mobility Intervention Is Associated With Improvements in Development and Participation for Young Children With Cerebral Palsy: A Randomized Clinical Trial. *Phys Ther*, 105(1):pzae152. https://doi.org/10.1093/ptj/pzae152

National Best Practice Framework for Early Childhood Intervention

Outcome Measures for Children

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Devereux Early Childhood Assessment (DECA)

Framework Outcomes Statement(s)	**Children**: - have secure, stable and safe relationships with parents, carers, siblings, family members and significant others - interact with family members, other children, and people in the community to build relational skills and connections. - build capacity to regulate their behaviour

DECA Overview

General description	The Devereux Early Childhood Assessment (DECA) is a standardised, norm-referenced behaviour rating scale that provides information about a child's social-emotional strengths and needs. Its main purpose is to promote resilience in young children by assessing and strengthening protective factors central to social and emotional health. Separate versions of the DECA are available for infants (DECA-I), toddlers (DECA-T) and preschool children (DECA-P2). The DECA Clinical Form (DECA-C) is designed for young children already showing significant behavioural concerns.
Ages	The DECA-I can be used with infants from 4 weeks to 18 months of age. The DECA-T can be used with toddlers from 18 to 36 months of age. The DECA-P2 can be used with preschool children from 3 to <6 years of age.

	The DECA-C can be used with children aged 2 to 5 years.
Domains / subscales	The DECA-I includes two subscales of protective factors related to resilience: Initiative and Attachment / Relationships. The DECA-T, DECA-P2 and DECA-C include three subscales of protective factors related to resilience: Initiative, Self-Regulation and Attachment / Relationships. In addition, the DECA-P2 includes a Behavioural Concerns screener score, and the DECA-C includes Attention Problems, Aggression, Withdrawal/Depression, and Emotional Control Problems scales.
Cultural adaptation	The DECA has been adapted for use in Spanish and Chinese.
Administration	The DECA-I, DECA-T and DECA-P2 are observer-report scales completed by adults familiar with the child, including parents, carers and teachers. The DECA-C is designed to be administered and interpreted by early childhood mental health consultants and other mental health professionals. All versions of the tool take approximately 5-10 minutes to complete. They can be administered as paper-based scales or through a web-based platform, the e-DECA. https://www.e-deca2.org/
Training requirements	No specific training required to administer the DECA-I, DECA-T and DECA-P2. The DECA-C is a clinical tool and has stricter requirements. To interpret and use the DECA-C results, users must have a relevant degree such as psychology, social work, early childhood education, or special education. Professional development opportunities for the DECA are available through the Devereux Advanced Behavioural Health Center for Resilient Children. https://centerforresilientchildren.org/
How to access	The DECA can be purchased from the Kaplan Early Learning Company in the USA. https://www.kaplanco.com/devereux

DECA Evidence Summary

Link to DECA Reference List

Overview	10 studies were identified that report on the psychometric properties of the DECA or use the tool an outcome measure in the ECI setting (2004-2024).
Review papers	*No references identified*
Measurement properties	The psychometric properties of the DECA have been examined in culturally and linguistically diverse Head Start children (USA, 2009, 2013, 2018), preschoolers with and without emotional and behaviour problems (USA, 2014), and kindergarten children (USA, 2012). Studies have assessed internal consistency, test-retest reliability, construct validity, and discriminant validity. The psychometric properties of different versions of the DECA require further investigation in ECI practice settings.
Cultural adaptation papers	The measurement properties of the DECA have been examined in Chinese preschool children (teacher-reported DECA-P2), Taiwanese toddlers (Chinese-DECA-T), and Spanish-speaking ethnically diverse preschoolers in the US (DECA English and Spanish forms). These studies demonstrate acceptable to good reliability and validity across different cultural contexts, though parent-teacher agreement was only moderate when assessed. The psychometric properties of the DECA should be investigated further in ECI practice settings.
Outcome studies in the ECI practice setting	The DECA was used as an outcome measure in a cluster randomised control trial of Teacher-Child Interaction Training-Universal (TCIT-U) for racially and ethnically diverse children with disabilities (USA, 2024).

This Evidence Summary was developed with rapid synthesis methods, combining a comprehensive PubMed search, augmented literature identification, and dual reviewer screening. It represents a living resource that maps key evidence on measurement properties, cultural adaptations, and relevant applications in the ECI practice setting for each outcome measure. For complete methodology, see our Methods Explainer.

DECA Reference List

[Link to DECA Evidence Summary]

Reviews

No references identified

Measurement Properties

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LeBuffe, P., & Shapiro, V. (2004). Lending "Strength" to the assessment of preschool social-emotional health. *The California School Psychologist*, 9:51-61. https://doi.org/10.1007/BF03340907

Cultural Adaptations

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Outcome Studies

Rothenberg WA, Schmidt E, Davidson B, Garcia D, Barnett M, Fernandez C, Mills K, Jent JF, Davis E. (2024). Universal teacher-child interaction training in early childhood special education: Identifying mechanisms of action that explain why it works. *J Sch Psychol*, 107:10192. https://doi.org/10.1016/j.jsp.2024.101392

National Best Practice Framework for Early Childhood Intervention

Outcome Measures for Children

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Emotional Regulation Checklist (ERC)

Framework Outcomes Statement(s)	**Children:** - build capacity to regulate their behaviour.

ERC Overview

General description	The Emotion Regulation Checklist (ERC) measures a child's capacity to manage and modulate their emotional responses in various situations. It helps identify patterns of emotional regulation and dysregulation in children, to guide interventions.
Ages	The ERC was originally developed for children 6 to 12 years of age. It has been applied to children as young as 3 years of age.
Domains / subscales	The ERC has two main scales. Emotion Regulation (assessing the child's expression of emotions, empathy, and emotional self-awareness) and Emotional Lability/Negativity (assessing the child's lack of flexibility, anger dysregulation, and mood lability).
Cultural adaptation	The ERC has been translated and adapted for use in different cultural contexts, including Chinese, French, Italian, Malay, Persian, Portuguese and Turkish.
Administration	The ERC is completed by adults who are familiar with the child, including parents, carers and teachers. It is administered as a paper-based scale. The ERC takes approximately 5 minutes to complete.

Training requirements	While no specific training is required to administer the ERC, scores should be interpreted by psychologist or mental health clinician, familiar with the scale characteristics and scoring guidelines. This information is freely available at https://novopsych.com/assessments/child/child-emotional-health-assessment/
How to access	Can be downloaded from NovoPsych. In Australia, ERC normative data can be accessed by psychologists and mental health clinicians through NovoPsych. A range of subscription plans for individuals and organisations are available to access these data. https://novopsych.com/pricing/

ERC Evidence Summary

Link to ERC Reference List

Overview	7 studies were identified that report on the measurement properties of the ERC or use of the tool as an outcome measure in the ECI practice setting.
Review papers	*No references identified*
Measurement properties	ERC normative data have been presented for a sample of preschool children with autism spectrum disorder (USA, 2023).
Cultural adaptation papers	The measurement properties of the ERC have been explored in several countries, including Brazil (parents and teachers of children aged 3-12 years old, 2016), Iran (mothers of children aged 3-6 years, 2018), Italy (mothers and teachers of kindergarten and elementary school children, 2014), Malaysia (parents of school-aged children, 2021), and Turkey (teachers of preschool children aged 4-5 years, 2016). These studies have examined factor structure, internal consistency, test-retest reliability, and convergent and divergent validity across these populations.
Outcome studies in ECI settings	The ERC has been used as an outcome measure in a cross-sectional study examining the effects of visual experience and age on emotion regulation in children (Switzerland, 2022).

This Evidence Summary was developed with rapid synthesis methods, combining a comprehensive PubMed search, augmented literature identification, and dual reviewer screening. It represents a living resource that maps key evidence on measurement properties, cultural adaptations, and relevant applications in the ECI practice setting for each outcome measure. For complete methodology, see our Methods Explainer.

ERC Reference List

Link to ERC Evidence Summary

Reviews

No references identified

Measurement Properties

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Cultural Adaptations

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Outcome Studies

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National Best Practice Framework for Early Childhood Intervention

Outcome Measures for Children

This is one measure in the **Outcome Measures for Children** suite. What is measured needs to be based on the priorities and goals of the child. The **Decision-Making Guide** can support your choice, and the **Measurement Overview** provides information about choosing and using outcome measures.

The Functional Independence Measure for Children (WeeFIM)

Framework Outcomes Statement(s)	**Children:** - Acquire, develop and generalise new knowledge and skills Provides some information about: - Participate and feel they belong in everyday home, community, ECEC and school environments

WeeFIM Overview

General description	The WeeFIM is an assessment tool designed to evaluate functional independence in children with disabilities. It is based on the Functional Independence Measure (FIM) for adults but adapted to account for developmental stages of children. The WeeFIM can be used to track changes in functional ability during rehabilitation.
Ages	Primarily designed for children aged 6 months to 7 years. It may be used for children with developmental disabilities aged 6 months to 21 years of age.
Domains / subscales	Functional independence across six subscales: Self-care, Sphincter control, Transfers, Locomotion, Communication and Social cognition.
Cultural adaptation	Adapted for use in multiple languages, including Chinese, Japanese, Turkish, and Urdu.

Administration	The WeeFIM is administered by WeeFIM credentialed professionals. It takes approximately 20-30 minutes to administer. The WeeFIM can be administered through direct observation, interview with the child or caregiver, or telephone interview with the caregiver.
Training requirements	Registered Nurses, Enrolled Nurses, Doctors, Registrars and Allied Health staff can enrol in a WeeFIM training workshop and must pass an online credentialing exam to become a credentialed WeeFIM clinician. Credentials are valid for two years, after which recertification is required. https://www.uow.edu.au/australasian-health-outcomes-consortium/aroc/fim-weefim/training-credentialing/
How to access	The WeeFIM is available through the Australasian Rehabilitation Outcomes Centre based at the University of Wollongong. https://www.uow.edu.au/australasian-health-outcomes-consortium/aroc/fim-weefim/

WeeFIM Evidence Summary

Link to WeeFIM Reference List

Overview	28 studies were identified reporting on the measurement properties of the WeeFIM (1994-2024).
Review papers	5 systematic reviews exploring the psychometric properties of the WeeFIM, including for its use in children with Cerebral Palsy (Spain, 2020), children with disabilities 0 to 6 years of age (The Netherlands, 2015) and as a measure of capacity in activities of daily living in children with Developmental Coordination Disorder (The Netherlands, 2015). The WeeFIM is recommended for children following moderate to severe TBI following a review by the Australian Traumatic Brain Injury Initiative (Australia, 2024) and has been explored in a systematic review comparing the WeeFIM and PEDI in neurorehabilitation for children with acquired brain injury (UK, 2017).
Measurement properties	The WeeFIM has established reliability across raters and time for children with developmental disabilities (USA, 1997); good agreement for total ratings when the WeeFIM is administered by direct observation and by interview with a parent (USA, 1997); and demonstrated equivalence between direct observation and telephone interview (USA, 1996). The WeeFIM has established concurrent validity with the Pediatric Evaluation of Disability Inventory when used with children with developmental disabilities and acquired brain injury (Australia, 2001). WeeFIM scores have been associated with level of assistance ratings by parents and teachers for activities of daily living in children with developmental disabilities (USA, 2000). The construct validity of the WeeFIM has been explored for children undergoing inpatient rehabilitation (USA, 2005). The tool has demonstrated the ability to detect change over time in functional abilities in children with disabilities (USA, 2000) but there may be significant ceiling effects when used following orthopaedic surgery for children with Cerebral Palsy (USA, 2006).

Cultural adaptation papers	The measurement properties of the WeeFIM have been explored in different cultural contexts including Hong Kong (children from different social classes, children with neurodevelopmental disabilities), Poland (preterm children with very low birthweight), Singapore (paediatric acute encephalitis), South Korea (Cerebral Palsy) and Turkey (Cerebral Palsy). The WeeFIM has been translated to Urdu and validated for preterm children (Pakistan, 2023). Normative data have been collected in Turkey (2007), Thailand (2006), Hong Kong (2002) and Japan (1998).
Outcome studies in the ECI practice setting	*No references identified*

This Evidence Summary was developed with rapid synthesis methods, combining a comprehensive PubMed search, augmented literature identification, and dual reviewer screening. It represents a living resource that maps key evidence on measurement properties, cultural adaptations, and relevant applications in the ECI practice setting for each outcome measure. For complete methodology, see our Methods Explainer.

WeeFIM Reference List

Link to WeeFIM Evidence Summary

Reviews

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Measurement Properties

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Cultural Adaptations

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Outcome Studies

No references identified

National Best Practice Framework for Early Childhood Intervention

Outcome Measures for Children

This is one measure in the **Outcome Measures for Children** suite. What is measured needs to be based on the priorities and goals of the child. The **Decision-Making Guide** can support your choice, and the **Measurement Overview** provides information about choosing and using outcome measures.

Goal Attainment Scale (GAS)

Framework Outcomes Statement(s)	**Children**: - develop their sense of agency and have a voice in matters that affect them - acquire, develop and generalise new knowledge and skills Depending on the goal chosen, can provide information about: - interact with family members, other children, and people in the community to build relational skills and connections - have a positive sense of belonging to their family and community - build strong identities and connections to their culture and community - participate and feel they belong in everyday home, community, ECEC and school environments - follow their interests and enjoy play opportunities - develop positive health habits over time - build capacity to regulate their behaviour

GAS Overview

General description	The Goal Attainment Scaling (GAS) is a method used to measure the achievement of personalised goals including in early childhood intervention settings. It provides a structured way to set personalised goals and objectively evaluate the degree to which these goals are achieved.

Ages	No specific age restrictions. The GAS may be used to set individualised personally relevant goals throughout the course of life and range of abilities.
Domains / subscales	The GAS provides a standardised way to measure and compare progress across different goals and children, even when the specific goals vary widely.
Special considerations	The GAS has potential limitations including sources of bias in the setting and evaluation of goal achievement. For this reason, it is important to consider appropriate training of staff using it, including quality appraisal criteria. Related to this, and because the GAS is an 'empty' scale, goals from a range of outcome areas can be set. To be consistent with the goal area chosen, however, requires clear identification of the outcome desired, and careful writing of the scales that will be used to measure change.
Cultural adaptation	The GAS as a method has been used to assess individualised goals in therapy settings in multiple countries including Australia, Belgium, Canada, Finland, France, Israel, Korea, the Netherlands, Sweden, Taiwan, UK and USA. The GAS can be used with Aboriginal and Torres Strait Islander peoples. There have been efforts to adapt and apply the approach to goal setting in culturally appropriate ways, such as the Australian Therapy Outcome Measure for Indigenous Clients (ATOMIC), which is a purpose-designed tool based on the GAS principles for measuring therapy outcomes for Aboriginal and Torres Strait Islander peoples.
Administration	The GAS is a person-centred and collaborative approach, between the recipient of an intervention and their professionals. The GAS is typically used at multiple points during an intervention process: at the beginning of an intervention to set personalised goals, at regular reviews, and at the conclusion of treatment to evaluate overall goal attainment. The healthcare or intervention professional collaborates with the recipient of the intervention to set goals, using the SMART criteria (Specific, Measurable, Achievable, Relevant, and Time-bound). The process, which involves filling out the GAS form with the practitioner and child and/or family, usually takes 20 to 40 minutes.

Training requirements	The GAS can be administered by various healthcare professionals, including: nurses, physiotherapists, occupational therapists, speech therapists, rehabilitation specialists, and other healthcare providers involved in patient care and goal setting. Training is crucial for effective administration of GAS, and it should cover the process of collaborating with children and their parents, carers and families in goal setting using the SMART approach, goal scaling and scoring. Ideally, those new to GAS should have their goal setting reviewed by peers to ensure reliability and validity. While the tool itself is free, healthcare professionals may need education, support, and practice to effectively implement GAS. Some organisations may choose to invest in training for their staff to ensure proper use of the tool.
How to access	The GAS is freely available from multiple sources.

GAS Evidence Summary

Link to GAS Reference List

Overview	42 papers were identified that report on the measurement properties of GAS or its use as an outcome measure in the ECI practice setting (1992-2025).
Review papers	Several reviews have specifically examined GAS in populations relevant to early childhood intervention. A systematic review identified GAS as a well-established multidisciplinary outcome measure for children with developmental disability, alongside other measures (Australia, 2018). Two systematic reviews of measurement properties for children with cerebral palsy found GAS responsive for individual goal setting and treatment evaluation (Australia, 2007; Netherlands, 2007). A narrative review identified GAS as a client-centred technique with unique attributes for measuring individualised change in communication disorders (USA, 2004). However, recent systematic reviews of GAS implementation highlighted significant variability in application across healthcare settings, with several recommending standardisation through practical guides or catalogues (Canada, 2024; Australia, 2022). Multiple reviews identified gaps in GAS validation evidence and methodological rigour, recommending improved standardisation in administration and reporting (Canada, 2020; USA, 2019; Netherlands, 2016). Guidance for GAS implementation has evolved over time, with a foundational narrative review establishing GAS as meeting criteria for a standardised, client-centred tool with promising properties for assessing progress across disciplines (Canada, 2002). A literature-based update later presented specific implementation best practices, such as setting initial status at -2 and describing all five levels in detail (France, 2013). Most recently, a comprehensive educational review provided detailed guidance for implementing GAS in rehabilitation, addressing practical concerns in clinical and research settings (France, 2023).
Measurement properties	The sensitivity and convergent validity of GAS has been examined against the Canadian Occupational Performance Measure for children with cerebral palsy (Australia, 2006). Validity, responsiveness, and potential sources of bias in GAS as a measure of motor change have been investigated in

	infants with developmental delays aged 3 to 30 months (USA, 1992, 1993). Methodological assumptions of GAS, including scaling level and inter-rater reliability across different behavioural observation methods, have been assessed when used as an outcome measure in autism interventions (USA, 2012). Therapist goal writing and scoring consistency has been evaluated in an inter-rater reliability study with children with sensory processing disorder (2012). The validity, sensitivity, and clinical utility of a simplified "GAS-light" method has been compared against standard GAS for adults undergoing upper limb rehabilitation (2019).
Cultural adaptation papers	The measurement properties of GAS have been explored in several European countries across different populations. Responsiveness and concurrent validity have been examined by comparing GAS with standardised instruments for children with cerebral palsy (Netherlands, 2011). Interrater reliability has been assessed in interdisciplinary rehabilitation for children with cerebral palsy, demonstrating good reliability particularly when scales were constructed by children's own therapists (Netherlands, 2010). Implementation feasibility and content validity were evaluated through a training programme with predetermined quality criteria for professionals from five disciplines, identifying common challenges in scale development (Netherlands, 2008). A modified "3-milestones" GAS method was tested for clinical feasibility and score distribution validity in a paediatric spasticity clinic (France, 2017). Construct validity and responsiveness were investigated in neuropsychological rehabilitation for adults with multiple sclerosis, examining whether GAS could detect changes not captured by standardised measures (Finland, 2015). Comparative validity of different goal-setting approaches (child versus parent identified goals) was assessed in a randomised trial of children with disabilities, measuring goal attainment outcomes and stability over time (Sweden, 2016). Six studies were identified that use GAS as an outcome measure in the ECI practice setting in different cultural contexts. GAS has been used as an outcome measure in a randomised trial comparing individualised versus general physical therapy programs for children with bilateral spastic cerebral palsy

	(Belgium, 2014), in a study examining the effects of different physiotherapeutic programs in a post-botulinum toxin regime for children with cerebral palsy (Belgium, 2012), and in a comparative study of goal-directed functional therapy versus activity-focused therapy for preschool children with cerebral palsy (Sweden, 2009). It has also been used to evaluate the effectiveness of routines-based early intervention compared to traditional home visiting for children with or at risk for developmental delay (Taiwan, 2013), to assess a tablet computer-based cognitive training program for young children with cognitive impairment (Korea, 2020), to evaluate an environment-based intervention on participation outcomes for autistic children (Taiwan, 2024), and to measure functional improvement after a cognitive-functional occupational therapy intervention for preschoolers with attention deficit hyperactivity disorder (Israel, 2015).
Outcome studies in ECI settings	GAS has been used as an outcome measure in several Australian ECI studies, including: a randomised controlled trial evaluating multi-modal neuro-developmental treatment versus standard care for children with cerebral palsy, demonstrating significant differences in goal attainment between intervention and control groups with a large effect size (2023); a feasibility study of an intensive interdisciplinary programme (Kindy Moves) for preschool-aged children with neurodisabilities requiring daily equipment and physical assistance, showing improvements in goal attainment that were maintained at follow-up (2023); a randomised trial compared modified constraint-induced therapy with intensive occupational therapy for children with hemiplegic cerebral palsy, using GAS alongside other measures to assess treatment outcomes (2011); a comparison study of two constraint-based upper limb interventions (modified constraint-induced movement therapy versus bimanual occupational therapy) following botulinum toxin A injection in young children with unilateral cerebral palsy (2013); and to evaluate family-centred early intervention programmes for young children with vision impairment, demonstrating sufficient clinical sensitivity to detect small changes in individuals and small groups over several weeks of intervention (2011). GAS has also been used as an outcome measure in several USA ECI studies, including: a comparison of consultative model versus direct-indirect intervention for preschoolers with mild motor delays (2003); a randomised trial comparing bimanual

	training and constraint-induced movement therapy in children with hemiplegic cerebral palsy (2011); a comparison of high-intensity periodic therapy versus weekly therapy for children with cerebral palsy (2021); an evaluation of sensorimotor groups combined with individual intervention versus solely individual intervention for young children with Down syndrome (2009); and a comparison of play versus non-play interventions within a specialist school setting for children aged 5-8 years (2011).

This Evidence Summary was developed with rapid synthesis methods, combining a comprehensive PubMed search, augmented literature identification, and dual reviewer screening. It represents a living resource that maps key evidence on measurement properties, cultural adaptations, and relevant applications in the ECI practice setting for each outcome measure. For complete methodology, see our Methods Explainer.

GAS Reference List

Link to GAS Evidence Summary

Reviews

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National Best Practice Framework for Early Childhood Intervention

Outcome Measures for Children

This is one measure in the **Outcome Measures for Children** suite. What is measured needs to be based on the priorities and goals of the child. The **Decision-Making Guide** can support your choice, and the **Measurement Overview** provides information about choosing and using outcome measures.

Infant Toddler Social Emotional Assessment (ITSEA)

Framework Outcomes Statement(s)	**Children:** - have secure, stable and safe relationships with parents, carers, siblings, family members and significant others - build capacity to regulate their behaviour

ITSEA Overview

General description	The Infant-Toddler Social Emotional Assessment (ITSEA) is designed to measure social-emotional problems and competencies in infants and toddlers. The ITSEA is used for early identification of social-emotional and behavioural concerns, profiling of strengths and weaknesses, and intervention planning. It is available in a brief version (**BITSEA**) as a **screening tool.**
Ages	12-36 months
Domains / subscales	The ITSEA evaluates four psychological domains: Externalizing, Internalizing, Dysregulation, and Competence. It also provides scores on three indices: Maladaptive, Social Relatedness, and Atypical. These indices draw from items across domains to flag specific areas of concern. The BITSEA reports just two scores: a Problem Total Score and a Competence Total Score.
Special considerations	Screening is a brief evaluation intended to identify those children with potential difficulties who require a more in-depth assessment. Screening tools are not designed to be used as outcome measures.

	However, in the absence of an appropriate outcome measure, using the BITSEA to measure outcomes may be better than using nothing at all. Please refer to the Measurement Overview document for a more detailed explanation of the limitations of using a screening tool as an outcome measure.
Cultural adaptation	Adaptations include Korean (K-ITSEA), Turkish, Dutch, Japanese (J-ITSEA), French, and Chinese versions.
Administration	The ITSEA and the BITSEA have parent/carer and childcare provider forms. Approximate administration time is 20-30 minutes for the ITSEA and 5-10 minutes for the BITSEA. The forms are scored and interpreted by qualified service providers (e.g., psychologists, psychiatrists, mental health care providers, early interventionists, social workers, paediatricians).
Training requirements	The ITSEA requires users to have a degree in psychology, education, or a relevant field.
How to access	The ITSEA and BITSEA can be accessed from the Mapi Research Trust. https://eprovide.mapi-trust.org/instruments/brief-infant-toddler-social-emotional-assessment https://eprovide.mapi-trust.org/instruments/infant-toddler-social-emotional-assessment

ITSEA Evidence Summary

Link to ITSEA Reference List

Link to BITSEA Reference List

Overview	31 studies were identified that report on the psychometric properties of the ITSEA or BITSEA, or use these tools as an outcome measure in the ECI setting (2003-2024).
Review papers	No reviews were identified describing the ITSEA. A systematic review (USA, 2016) found that few studies have examined the BITSEA as a screening tool for identifying overall psychopathology in paediatric primary care, limiting evidence of its effectiveness in this specific context.
Measurement properties	The ITSEA and BITSEA have established reliability (internal consistency with Cronbach's alpha >0.7, excellent test-retest reliability, good interrater reliability between parents and between parents and childcare providers) and validity (concurrent, predictive and discriminate validity) in early intervention settings, though some subscales may show floor or ceiling effects in very young children. This evidence spans observational studies, children referred for early intervention, children referred for psychiatric evaluation, and low-income and Hispanic/Spanish-speaking families (USA, Netherlands, and Norway, 2003 – 2016). The BITSEA demonstrates moderate to high discriminative power for autism spectrum disorder and for general social-emotional/behavioural problems across different populations.
Cultural adaptation papers	The psychometric properties of the ITSEA have been explored for low-risk infants using the Korean version (2018), Japanese version (2015) and Chinese version (2009). The psychometric properties of the BITSEA have been explored for low-risk infants using the French version (2014), the Dutch version (2012) and the Turkish version (2009).
Outcome studies in ECI settings	No studies were identified that used the ITSEA as an outcome measure in the ECI practice setting

This Evidence Summary was developed with rapid synthesis methods, combining a comprehensive PubMed search, augmented literature identification, and dual reviewer screening. It represents a living resource that maps key evidence on measurement

properties, cultural adaptations, and relevant applications in the ECI practice setting for each outcome measure. For complete methodology, see our Methods Explainer.

ITSEA Reference List

Link to ITSEA / BITSEA Evidence Summary

Link to BITSEA Reference List

Reviews

No references identified

Measurement Properties

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Outcome Studies

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BITSEA Reference List

Link to ITSEA / BITSEA Evidence Summary

Reviews

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Measurement Properties

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Outcome Studies

No references identified

National Best Practice Framework for Early Childhood Intervention

Outcome Measures for Children

This is one measure in the **Outcome Measures for Children** suite. What is measured needs to be based on the priorities and goals of the child. The **Decision-Making Guide** can support your choice, and the **Measurement Overview** provides information about choosing and using outcome measures.

KINDL

Framework Outcomes Statement(s)	**Children**: - follow their interests and enjoy play opportunities Provides some information about: - have secure, stable and safe relationships with parents, carers, siblings, family members and significant others - interact with family members, other children, and people in the community to build relational skills and connections - have a positive sense of belonging to their family and community

KINDL Overview

General description	The KINDL (derived from the German word “kinder” meaning “children”), first published in 1994, assesses Health-Related Quality of Life (HRQoL) in children and adolescents. There are different versions for specific age groups, including the Kiddy-KINDL, Kid-KINDL and Kiddo-KINDL. A revised version (KINDL-R) was published in 1998.
Ages	The Kiddy-KINDL is designed for children aged 3 to 6 years (parent-proxy report) and 4 to 6 years (child interview version). The Kid-KINDL is designed for children aged 7 to 13 years (self-report). The Kiddo-KINDL is designed for adolescents aged 14 to 17 years (self-report). The parent-proxy for the Kid/Kiddo KINDL-R is for 7 to 17 years.

Domains / subscales	The KINDL has 6 subscales: Physical Well-being, Emotional Well-being, Self-esteem, Family, Friends, and Everyday Functioning.
Cultural adaptation	The KINDL has been adapted for various cultures and languages, including Filipino, Persian, Serbian, Spanish, Brazilian Portuguese, and Arabic versions. A complete list of language translations is available on the KINDL website Language versions - kindl.org
Administration	The KINDL can be administered as a paper-based questionnaire, interview, or electronic survey. The KINDL can be completed by children themselves (self-report), parents (proxy-report), researchers, clinicians, and healthcare professionals. For children with limited reading skills, it can be administered as an interview. The average completion time is about 10 minutes (younger children may require more time).
Training requirements	No specific training is required to administer or score the KINDL. A guide to using the KINDL is available online www.kindl.org
How to access	The tool can be downloaded from the official KINDL website (www.kindl.org).

KINDL Evidence Summary

Link to KINDL Reference List

Overview	23 papers were identified that report on the measurement properties of the KINDL (1998-2024).
Review papers	In an umbrella review (a review of systematic reviews), the KINDL was one of only two generic HRQoL instruments (of 20 identified) for children and adolescents that was recommended for service providers to measure the HRQoL of children with a disability, given its alignment with the Convention on the Rights of Persons with a Disability (2018, Australia). The KINDL has been included in a systematic review comparing the measurement properties of six widely used generic patient-reported outcome measures for children's health-related quality of life (2021) and is discussed in a mixed-methods review of patient-reported outcomes measures for children and young people with neurodisability to inform the NHS Outcomes Framework (UK, 2014).
Measurement properties	The measurement properties of the KINDL have been explored for children (ages 2-19) enrolled in a medical assistance program providing access to health care for low-income families and individuals (USA, 2014).
Cultural adaptation papers	The measurement properties of the Kiddy-KINDL have been explored in several cultural settings including Germany (kindergarten children, 2015), Iran (healthy and ill 4- to 7-year old children, 2016), the Philippines (young children, 2023), South Africa (parents of children aged 5-10, 2024), and Spain (preschool children, 2019). The measurement properties of the Kid-KINDL and/or Kiddo-KINDL have been explored across a wide range of countries and cultural settings including Chile (hospitalised children, 2018), China (8- to 12-year-old students, 2014), Germany (children with chronic illness, 1998; adolescents, 2009; and children and adolescents, 2008), Hong Kong (children in grades 3 to 6, 2017), Iran (children with attention-deficit hyperactivity disorder, 2021; children and parents, 2014), Iran & Serbia (children and adolescents, 2016), Nepal (adolescents, 2010), Norway (adolescents, 2005), Taiwan (8- to 12-year-old children, 2016;

	adolescents, 2008) and Tunisia (children with type 1 diabetes, 2019).
Outcome studies in ECI settings	*No references identified*

This Evidence Summary was developed with rapid synthesis methods, combining a comprehensive PubMed search, augmented literature identification, and dual reviewer screening. It represents a living resource that maps key evidence on measurement properties, cultural adaptations, and relevant applications in the ECI practice setting for each outcome measure. For complete methodology, see our Methods Explainer.

KINDL Reference List

Link to KINDL Evidence Summary

Reviews

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Measurement Properties

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Cultural Adaptations

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Outcome Studies

No references identified

National Best Practice Framework for Early Childhood Intervention

Outcome Measures for Children

This is one measure in the **Outcome Measures for Children** suite. What is measured needs to be based on the priorities and goals of the child. The **Decision-Making Guide** can support your choice, and the **Measurement Overview** provides information about choosing and using outcome measures.

Participation and Environment Measure for Children and Youth (PEM-CY)

Framework Outcomes Statement(s)	**Children:** - participate and feel they belong in everyday home, community, ECEC and school environments

PEM-CY Overview

General description	The Participation and Environment Measure for Children and Youth (PEM-CY) is a measure designed to evaluate the participation of young children in various activities and the environmental factors that influence this participation. The PEM-CY assesses participation across home, school, and community settings.
Ages	The PEM-CY is designed for children and youth aged 5 to 17 years.
Domains / subscales	The PEM-CY consists of Participation Scales and an Environment Scale. The PEM-CY Participation Scales have three subscales: Frequency of Participation, Level of Involvement and Desire for Change. The PEM-CY Environment Scale has one subscale: Environmental Support.

Cultural adaptation	The PEM-CY has been translated into Arabic, Brazilian Portuguese, Dutch, French, Georgian, German, Greek, Hebrew, Hindi, Icelandic, Indian, Italian, Japanese, Korean, Lithuanian, Portuguese, Serbian, Spanish, Turkish, and Vietnamese.
Administration	The PEM-CY is a parent-report survey that takes approximately 25-40 minutes to complete. It can also be administered by healthcare professionals (such as occupational therapists, physical therapists), other professionals working with children and youth, and researchers. The PEM-CY is available in multiple formats, including downloadable PDF, electronic version for personal computers, online survey (in development), and paper forms.
Training requirements	No specific training is required to administer the PEM-CY. Professional development opportunities, including information on the development of the PEM-CY, are available from CanChild. https://www.canchild.ca/en/resources/248-participation-and-environment-measure-for-children-and-youth-pem-cy
How to access	The PEM-CY is available for purchase through the CanChild website. A single license allows service providers to make unlimited copies, while educational institutions and healthcare organisations can purchase multi-user licenses. https://canchild.ca/en/shop/2-pem-cy-participation-and-environment-measure-children-and-youth

PEM-CY Evidence Summary

Link to PEM-CY Reference List

Overview	13 studies were identified that report on the psychometric properties of the PEM-CY (2011-2024).
Review papers	The PEM-CY was the only tool to reach consensus for inclusion in a participation measure toolkit for children who need or use power mobility (Canada, 2016). In a review of 16 identified participation measures, the PEM-CY was one of two measures to align with all Activity and Participation domains of the International Classification of Functioning, Disability and Health – Children and Youth (Australia, 2014).
Measurement properties	One paper describes the conceptual development of the PEM-CY (USA and Canada, 2012). The measurement properties of the PEM-CY have been explored in three studies conducted in the USA and Canada (2014, 2014, 2011). These studies report acceptable internal consistency, moderate to good test-retest reliability, and evidence of construct and concurrent validity, supporting its use with children with disabilities in North American contexts.
Cultural adaptation papers	The PEM-CY has undergone cultural adaptation and psychometric testing for children with and without disabilities in multiple countries, including Brazil (2024), China (2020), Germany/Austria/Switzerland (2020), India (2021), Korea (2017, 2016) and Turkey (2020). These studies have examined various aspects of reliability, validity, and cultural equivalence in the adapted versions, with several demonstrating acceptable internal consistency, test-retest reliability, and construct validity, while others focus on establishing cultural relevance in preparation for further psychometric evaluation.
Outcome studies in the ECI practice setting	*No references identified*

This Evidence Summary was developed with rapid synthesis methods, combining a comprehensive PubMed search, augmented literature identification, and dual reviewer screening. It represents a living resource that maps key evidence on measurement properties, cultural adaptations, and relevant applications in the ECI

practice setting for each outcome measure. For complete methodology, see our Methods Explainer.

PEM-CY Reference List

Link to PEM-CY Evidence Summary

Reviews

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Outcome Studies

No references identified

National Best Practice Framework for Early Childhood Intervention

Outcome Measures for Children

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Pediatric Evaluation of Disability Inventory - Computer Adaptive Test (PEDI-CAT)

Framework Outcomes Statement(s)	**Children:** - acquire, develop and generalise new knowledge and skills Provides some information about: - interact with family members, other children, and people in the community to build relational skills and connections - develop positive health habits over time - develop their sense of agency and have a voice in matters that affect them

PEDI-CAT Overview

General description	The Pediatric Evaluation of Disability Inventory-Computer Adaptive Test (PEDI-CAT) is a standardised assessment tool designed to evaluate the functional abilities and performance of children and young people. It is a computerised adaptive version of the Pediatric Evaluation of Disability Inventory (PEDI). By employing a computer adaptive testing format, it tailors the assessment to each child's ability level. Two versions that differ in the average number of items administered exist: a PEDI-CAT Speedy (less than 10 items per domain) and a PEDI-CAT Content-Balanced (less than 30 items per domain) version. The PEDI-CAT (ASD) is a specific module that has been adapted and validated for use in children and adolescents with autism spectrum disorder.

Ages	The PEDI-CAT is designed for children and young people from birth to 20 years.
Domains / subscales	The PEDI-CAT has four subscales: Daily Activities Mobility Social/Cognitive Responsibility
Special considerations	The NDIA endorses the PEDI-CAT as a source of evidence for a child's functional capacity assessment.
Cultural adaptation	The PEDI-CAT has been translated and adapted into Brazilian Portuguese and Dutch.
Administration	The PEDI-CAT is administered by a professional through an online version via Pearson's Q-global platform (accessible on computers, tablets, and smartphones). https://qglobal.pearsonclinical.com/qg/au/login.seam The PED-CAT is completed by parents, carers or any persons familiar with the child's behaviour. The content-balanced version takes approximately 45 minutes while the speedy version takes about 10-20 minutes.
Training requirements	The PEDI-CAT should be administered and interpreted by a 'User Level B' professional according to the Pearson Clinical Australia qualifications policy. 'User Level B' professional includes special education or social work, or a bachelor's degree in psychology, speech language therapy, occupational therapy, physiotherapy, psychiatry or paediatrics. https://www.pearsonclinical.com.au/ordering/how-to-order/qualifications/qualifications-policy.html It is highly recommended that professionals review the PEDI-CAT manual prior to administration to understand the administration procedures, content, item intent, response scales, and score interpretation. Pearson Clinical Australia also offers a Pearson's User Level B Accreditation Course that is designed to upskill professionals in education and healthcare in statistical and psychometric foundations, and practical administration and interpretation skills to assist with the administration and interpretation of User Level B assessments.

	https://www.pearsonclinical.com.au/en-au/c/User-Level-B-Assessment-Training/p/P100051003?productId=A103000360924
How to access	In Australia, the PEDI-CAT can be purchased through Pearson Clinical Australia website. https://www.pearsonclinical.com.au/products.html

PEDI-CAT Evidence Summary

Link to PEDI-CAT Reference List

Overview	35 papers were identified that report on the measurement properties of the PEDI-CAT or its use as an outcome measure in the ECI practice setting (2005-2024).
Review papers	*No references identified*
Measurement properties	The measurement properties of the PEDI-CAT have been tested in 15 studies in the USA (2005-2021) with diverse populations including children with and without disabilities, those in post-acute hospital settings, and children with specific conditions such as cerebral palsy, fragile X syndrome, spinal muscular atrophy, complex medical needs, and children using mobility devices. Studies have examined various measurement properties including reliability, validity (concurrent, construct, convergent, discriminant), responsiveness, and feasibility of administration. The PEDI-CAT has been compared with the original PEDI and other functional measures, with studies exploring item performance, score distributions, and ability to discriminate between functional levels. The measurement properties of the PEDI-CAT speedy version and Vineland-3 have been compared in measuring the functional abilities of young children with neurodevelopmental disorders (Australia, 2020). Longitudinal trajectories on the PEDI-CAT have also been explored compared to Gross Motor Function Classification System (GMFCS) level (2022) and Manual Ability Classification System (MACS) level (2020) for children with cerebral palsy in Australia. The PEDI-CAT Mobility domain has been specifically evaluated for concurrent validity with the original PEDI Functional Skills Mobility Scale (USA, 2012) and for discriminant validity in children who use walking aids or wheelchairs (USA, 2012). The content validity of the PEDI-CAT Speedy Mobility domain has been explored in a retrospective study of children with motor impairment (USA, 2021). Youth perspectives on the PEDI-CAT Responsibility domain have been explored to determine if the way responsibility is defined and measured is meaningful and relevant to youth with developmental disabilities (USA, 2019).

	The reliability, validity and acceptability of the PEDI-CAT (ASD) has been explored in a large Australian sample of autistic children and young people (2024), and two studies of autistic children and young people in the USA (2016).
Cultural adaptation papers	The PEDI-CAT has been described as theoretically consistent, culturally appropriate, and a reliable instrument following translation and cultural adaptation into Brazilian Portuguese (2016). The measurement properties of PEDI-CAT daily activity and mobility items have been explored in children with cerebral palsy in Brazil (2020) and the measurement properties of the PEDI-CAT content-balanced and speedy version administered via telehealth have also been explored for young people with Down Syndrome in Brazil (2024). The PEDI-CAT has been translated and adapted in the Dutch language and culture, including testing with parents of children and adolescents with and without disabilities (The Netherlands, 2019).
Outcome studies in ECI settings	The PEDI-CAT has been used as an outcome measure in a randomised controlled trial of home-based virtual reality-enhanced upper limb training in children with brain injury (Korea, 2023). The PEDI-CAT has been used in a feasibility study exploring changes in activity and participation following hippotherapy for children with movement impairments (USA, 2023), in a randomised study comparing two treatment service delivery models in outpatient physical therapy for children with cerebral palsy (USA, 2021), in a pilot study to evaluate the feasibility of implementing technology-based function assessment into early intervention practice (USA, 2018), and in a case series exploring power mobility training for young children with neurodevelopmental conditions (USA, 2016).

This Evidence Summary was developed with rapid synthesis methods, combining a comprehensive PubMed search, augmented literature identification, and dual reviewer screening. It represents a living resource that maps key evidence on outcome measure psychometric properties, cultural adaptations, and relevant applications in the ECI practice setting. For complete methodology, see our Methods Explainer.

PEDI-CAT Reference List

Link to PEDI-CAT Evidence Summary

Reviews

No references identified

Measurement Properties

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National Best Practice Framework for Early Childhood Intervention

Outcome Measures for Children

This is one measure in the **Outcome Measures for Children** suite. What is measured needs to be based on the priorities and goals of the child. The **Decision-Making Guide** can support your choice, and the **Measurement Overview** provides information about choosing and using outcome measures.

Vineland Adaptive Behaviour Scales (VABS)

Framework Outcomes Statement(s)	**Children:** - interact with family members, other children, and people in the community to build relational skills and connections - acquire, develop and generalise new knowledge and skills Provides some information about - participate and feel they belong in everyday home, community, ECEC and school environments - build capacity to regulate their behaviour

VABS Overview

General description	The Vineland Adaptive Behavior Scales (VABS) is a comprehensive standardised assessment tool that evaluates adaptive behaviour—a person's ability to carry out everyday activities necessary for personal and social sufficiency. The main purpose of the VABS is to support the diagnosis of developmental disabilities, including intellectual disability, autism spectrum disorder (ASD), and developmental delay. It also serves to develop educational and treatment plans, and monitor progress over time. The current version in use is the Vineland-3, which includes Comprehensive (full-length) and Domain-Level (abbreviated) versions. Each format can be completed with the parent/caregiver and/or the teacher, making it useful to provide a comprehensive view of a child's functioning.

Ages	The Vineland-3 is designed for individuals from birth to 90+ years with some age restrictions depending on the version and the subscale considered.
Domains / subscales	The Vineland-3 has 4 domains and each includes specific subscales: • Communication (Receptive, Expressive, Written) • Daily Living Skills (Personal, Domestic, Community) • Socialisation (Interpersonal Relationships, Play and Leisure, Coping Skills) • (optional) Motor Skills (Fine Motor, Gross Motor). These domains are combined to produce the Adaptive Behavior Composite (ABC) score. The Vineland-3 also includes an additional optional domain assessing Maladaptive Behavior.
Cultural adaptation	The VABS has been translated and adapted for various cultures and countries. Translations include Arabic, French, Hindi, Spanish and Vietnamese.
Administration	The Vineland-3 can be administered as a semi-structured interview or completed as a parent/caregiver or teacher completed survey. Parents/caregivers and teachers familiar with the child can complete the Vineland-3 survey forms independently (including remotely), but results should be interpreted by 'User Level B' and 'User Level C' professional as indicated in the Pearson Clinical Australia qualifications policy. The Vineland-3 interview is administered by 'User Level B' and 'User Level C' professionals who are familiar with the tool. https://www.pearsonclinical.com.au/ordering/how-to-order/qualifications/qualifications-policy.html All the versions and formats of the Vineland-3 can be administered using a paper form or online. The administration of the Comprehensive (full-length) Interview version can take up to 90 minutes. Administration time for the Domain-Level (abbreviated) Interview version is approximately 20 minutes, and for Parent/Caregiver and Teacher Forms 10 minutes..
Training requirements	The administration of the Vineland-3 semi-structured interview format requires training and experience. In Australia, the Pearson Clinical website offers on-demand introductory and practical trainings targeted to 'User Level B'

	professionals. On the same website, 'User Level A' can access on-demand or live webinar training for their upskilling for the administration of the Vineland-3, and similar assessments. https://www.pearsonclinical.com.au/en-au/Store/Professional-Assessments/Motor-Sensory/Vineland-Adaptive-Behavior-Scales%2C-Third-Edition/p/P100010149?format=TRAINING
How to access	In Australia, the Vineland-3 can be purchased through Pearson Clinical Australia website. Pearson Clinical Australia https://www.pearsonclinical.com.au/products.html Pearson's G-Global https://qglobal.pearsonclinical.com/qg/au/login.seam

VABS Evidence Summary

Link to VABS Reference List

Overview	30 studies were identified that report on the measurement properties of the VABS, VABS-II or VABS-3 or use as outcome measures in the ECI practice setting (1989-2024).
Review papers	The VABS, VABS-2 and VABS-3 have been included in multiple systematic reviews: as the most used parent-reported communication measures for rare neurodevelopmental disorders (2023); as assessment instruments for executive and adaptive functioning in children in low- and middle-income countries (2022); and as one of three most frequently used tools measuring social skills in children with autism spectrum disorder (ASD) (2021). The VABS-3 has been included in a realist review examining digital administration of multi-domain child development assessment and screening tools for children 0-5 years (2023), and in a scoping review evaluating content validity against International Classification of Functioning Core Sets for Autism (2021). A scoping review identified the VABS-2 as one of three commonly used outcome measures for occupational therapy interventions in preschool children with ASD, mapped to the International Classification of Functioning, Disability, and Health (2024).
Measurement properties	The factor structure and dimensionality of the VABS-3 Comprehensive Interview Form have been evaluated using exploratory and confirmatory factor analyses across different age groups from preschool to adulthood (2022), and specifically in the 11–20-year age range (2021). The VABS-3 has been evaluated for convergent validity as a potential outcome measure for individuals with CLN3 disease (Batten disease) in a prospective observational study (2022). The concurrent validity between the VABS-3 and VABS-II has been evaluated in individuals with neurodevelopmental disabilities, examining reliability and score differences between the two editions and noting care must be taken in interpreting scores from the VABS-3 relative to those obtained from the previous edition (2020).

	The Adaptive Behaviour Composite score of the VABS-II has been evaluated for concurrent validity with patient-centred and caregiver-centred measures of progress in children receiving Applied Behaviour Analysis for autism spectrum disorder (2022), and the VABS-II has been analysed for congruence with the International Classification of Functioning, Disability and Health for Children and Youth (ICF-CY) framework (2013). The VABS has been compared with multiple measures: the Functional Independence Measure for Children (WeeFIM) and Battelle Developmental Inventory Screening Test (BDIST) in children with developmental disabilities (1996); the Bayley Scales' Mental Development Index in high-risk infants aged 12 months suspected of developmental delay (1992); and the AAMD Adaptive Behavior Scale-School Edition for autistic children and adolescents aged 8 to 18 years (1986). The VABS Interview Form has been evaluated for sensitivity to change in measuring adaptive functioning of preschool children with ASD over a two-year educational program (1994), while the reliability and construct validity of the VABS Survey Form have been evaluated in children and adolescents with intellectual disability across different levels of functioning (1999). The VABS has been evaluated as a comprehensive measure of functional outcomes in extremely low-birthweight children (1995).
Cultural adaptation papers	The VABS-II has been translated to Hindi and adapted for use in evaluating 3 to 9 year-old Indian children, with findings revealing differences in scores based on urban/rural setting and socioeconomic status (India, 2016). The VABS has been translated and adapted to form the Vietnamese version (VVABS) for use with preschool-age children, demonstrating acceptable reliability and validity when used with typically developing children and those with intellectual disabilities (Vietnam, 2009). An Arabic version of the VABS-II has been validated for measuring adaptive behaviours of children aged 2-9 years in the Palestinian context through comparison with the Portage scale domains in both high-risk and typically developing children (Palestine, 2020). The VABS-II has been translated from English to French following standard cross-cultural translation methods with

	norms established for the French population based on data from over 1,600 questionnaires (France, 2021).
Outcome studies in ECI settings	The VABS-3 has been used as part of an assessment battery to evaluate the accuracy of novel telehealth instruments for autism assessment in toddlers aged 17-36 months (USA, 2023) and as a primary outcome measure in a randomised clinical trial comparing a modular approach (MAYAC) with comprehensive behavioural intervention for young autistic children aged 18-60 months (USA, 2022). The VABS-II has been used in randomised controlled trials (RCTs) to evaluate parent-mediated interventions, including as a secondary outcome measure for infants aged 9-14 months showing early behavioural risk signs of autism spectrum disorder (Australia, 2019), and to measure the impact of parent training on adaptive behaviour in young children with ASD and disruptive behaviour (USA, 2016). The VABS-II Socialisation subscale has been used to model longitudinal reciprocal associations between social competence and language pathways in young children aged 2-4 years recently diagnosed with ASD (Canada, 2015) and to measure outcomes in preschool children with ASD receiving the Early Start Denver Model in a community group setting (Australia, 2013). The VABS has been used to measure adaptive behavioural functioning in young children with ASD receiving different forms of early teaching interventions over a 10-month period (UK, 2010) and to assess general adaptive behaviours in relation to language and motor development in preschool children with autism (USA, 2008).

This Evidence Summary was developed with rapid synthesis methods, combining a comprehensive PubMed search, augmented literature identification, and dual reviewer screening. It represents a living resource that maps key evidence on measurement properties, cultural adaptations, and relevant applications in the ECI practice setting for each outcome measure. For complete methodology, see our Methods Explainer.

VABS Reference List

Link to VABS Evidence Summary

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National Best Practice Framework for Early Childhood Intervention

Outcome Measures for Children

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Young Children's Participation and Environment Measure (YC-PEM)

Framework Outcomes Statement(s)	**Children:** - participate and feel they belong in everyday home, community, ECEC and school environments

YC-PEM Overview

General description	The Young Children's Participation and Environment Measure (YC-PEM) is a measure designed to evaluate the participation of young children in various activities and the environmental factors that influence their participation. The YC-PEM assesses participation across home, daycare/preschool, and community settings.
Ages	The YC-PEM is designed for children aged 0 to 5 years.
Domains / subscales	The YC-PEM consists of Participation Scales and an Environment Scale. The YC-PEM Participation Scales have three subscales: Frequency of Participation, Level of Involvement and Desire for Change. The YC-PEM Environment Scale has one subscale: Environmental Support.
Cultural adaptation	The YC-PEM has been translated into Brazilian Portuguese, Chinese, French (Canadian), German, Hebrew, Italian, Japanese, Serbian, Spanish and Turkish.

Administration	The YC-PEM is a parent-report survey that takes approximately 20-30 minutes to complete. It is a paper-based scale, self-administered or administered via parent interview by healthcare professionals or researchers. The YC-PEM has been piloted as an electronic patient-reported outcome (e-PRO) in the ECI practice setting.
Training requirements .	No specific training is required to administer the YC-PEM. Professional development opportunities, including video tutorials explaining how to use the YC-PEM, are available from CanChild. https://www.canchild.ca/en/resources/223-young-children-s-participation-and-environment-measure-ycpem
How to access	The YC-PEM is available for purchase through the CanChild website as a downloadable PDF. A single license allows service providers to make unlimited copies, while educational institutions and healthcare organisations can purchase multi-user licenses. https://www.canchild.ca/en/shop/23-yc-pem-young-children-s-participation-and-environment-measure

YC-PEM Evidence Summary

Link to YC-PEM Reference List

Overview	14 studies were identified that report on the measurement psychometric properties of the YC-PEM or use the tool as an outcome measure in the ECI practice setting (2015-2024).
Review papers	A systematic review examining the psychometric properties of participation measures, including the YC-PEM, for infants and toddlers aged birth to 23 months concluded further research is needed to establish sound participation measures (Australia, 2021).
Measurement properties	The psychometric properties of the YC-PEM have been reported for North American caregivers of children with and without developmental delays and disabilities across three studies (2015). These studies demonstrated acceptable internal consistency, mixed test-retest reliability, and evidence of construct and concurrent validity. The feasibility, acceptability, and value of implementing the YC-PEM as an electronic patient-reported outcome measure (YC-PEM e-PRO) in early intervention settings has been evaluated (2020).
Cultural adaptation papers	The YC-PEM has undergone cultural adaptation and psychometric testing for children with and without disabilities in multiple countries, including Germany/Austria/Switzerland (2024), China (2021), Singapore (2016, 2018), Sweden (2018), Turkey (2024), and with historically minoritized populations in the USA including Black, non-Hispanic caregivers of children in early intervention (2023), and caregivers of Mexican descent with special health care needs (2017). These studies have examined various aspects of reliability, validity, and cultural equivalence, with most adapted versions demonstrating acceptable psychometric properties.
Outcome studies in the ECI practice setting	The YC-PEM e-PRO has been used as an outcome measure in evaluating the relationship between early intervention service intensity and young children's home participation (USA, 2020).

This Evidence Summary was developed with rapid synthesis methods, combining a comprehensive PubMed search, augmented literature identification, and dual reviewer screening. It represents a living resource that maps key evidence on

measurement properties, cultural adaptations, and relevant applications in the ECI practice setting for each outcome measure. For complete methodology, see our Methods Explainer.

YC-PEM Reference List

Link to YC-PEM Evidence Summary

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