ОБЗОРЫ

A review on neuropsychological assessment of cognitive domains in children

Winifred M.Z.[1], **Kiselev S.Yu.**[1]

[1] Ural Federal University, Ekaterinburg, Russia

Abstract

Background: This study examined the relative contributions of general cognitive abilities. Neuropsychological assessment (NA) of cognitive domains (CDs) plays a crucial role in understanding early childhood development, as the assessment of these domains provides valuable insights into brain function. **Aim**: This study aimed to highlight the use of neuropsychological assessments and to identify the cognitive domains most commonly evaluated in studies involving children and child development. **Methods**: Following the guidelines for systematic reviews and meta-analyses, we searched PubMed, OpenAlex, and Google Scholar, identifying 1,700 articles for screening based on the predefined inclusion criteria. The methodological quality of the included studies was evaluated with respect to neuropsychological assessment and cognitive domains, and relevant data were systematically extracted. **Results**: Of the 1,700 articles identified, 69 met the inclusion criteria and were included in the final analysis. The age groups and cognitive domains assessed in each study were analyzed to provide an overall synthesis of current research.

Keywords: neuropsychological assessment, cognitive domains, cognition, development

For citation

Winifred M.Z., Kiselev S.Yu. A review on neuropsychological assessment of cognitive domains in children. Psikhologicheskie Issledovaniya, 2026, Vol. 19, No. 108, p. 2. https://psystudy.ru

Article address:
https://doi.org/10.54359/ps.v19i108.2203

Received 08.11.2025
Revised 08.02.2026
Accepted 13.07.2026
Published 31.08.2026

Обзор методов и результатов нейропсихологического обследования когнитивных функций у детей

Винифред М.З.[1], **Киселев С.Ю.**[1]

[1] Уральский федеральный университет, Екатеринбург, Россия

Аннотация

Введение: в данном исследовании изучался относительный вклад общих когнитивных способностей. Нейропсихологическая оценка (НП) когнитивных доменов (КД) важна для понимания развития детей раннего возраста, поскольку результаты, полученные в ходе оценки этих когнитивных доменов, дают четкое представление о функциях мозга. **Цель**: исследование было сосредоточено на освещении использования НП и аспектов КД, которые обычно измеряются у детей или в исследованиях развития. **Метод**: в соответствии с рекомендациями по систематическому обзору и метаанализу, поиск в базах данных PubMed, OpenAlex и Google Scholar выявил 1700 исследовательских статей, прошедших проверку на соответствие критериям включения. Качество статей анализировалось в соответствии с НП и КД, и данные были тщательно извлечены. **Результаты**: из 1700 статей только 69 прошли в финальный этап. Возраст и когнитивные домены, оцениваемые в каждой статье, измерялись для получения кумулятивного результата.

Ключевые слова: нейропсихологическая оценка, когнитивные домены, познание, развитие

Ссылка для цитирования

Винифред М.З., Киселев С.Ю. Обзор методов и результатов нейропсихологического обследования когнитивных функций у детей. Психологические исследования. 2026. Т. 19, № 108. С. 2. URL: https://psystudy.ru

Адрес статьи:
https://doi.org/10.54359/ps.v19i108.2203

Поступила в редакцию 08.11.2025
Поступила после рецензирования 08.02.2026
Принята к публикации 13.07.2026
Опубликована 31.08.2026

Introduction

Neuropsychology studies the relationship between the human brain and behavior. Its development as a specific area of study is relatively recent, although its scientific basis results from several decades of knowledge and investigation. Neuropsychological screening initially sought to identify and locate focal brain lesions. Today, it is based upon the dynamic location of functions, with the aim of investigating higher cortical functions, such as attention, memory, language, among others [Costa et al., 2004]. Neurocognitive assessment has continued to serve as a primary method to study both the development and the degeneration of the brain, and improvements in the testing process have helped to solidify its role in the field of neuropsychology. The introduction of standardized methods of test administration, scoring and interpretation represents one of the most important advances in the past century [Clark et al., 2006]. Typical approaches to the characterization and classification of cognitive performance in clinical neuropsychology refer to domains of cognitive performance. Within each domain there are typically subdomains, which refer to component ability processes within the larger constructs. Individual neuropsychological tests are characterized under these subdomains, with these tests measuring one or more discrete abilities [Harvey, 2019]. Within today's society, quick and accurate reading skills are essential to participate in societal activities (e.g., education, using social media, communication) and to achieve professional success [Franzen et al., 2021].

Neuropsychology can prepare different health professionals (e.g.: physicians, psychologists, speech therapists, etc.) by subsidizing the investigation of children's intellectual functions and promoting a more efficient therapeutic intervention [Costa et al., 2004]. Many medical and neurological conditions are associated with changes in cognitive functioning. Neuropsychological assessment (NA) via standard paper-and-pencil measures continues to be the gold standard for assessment of cognitive and behavioral functioning but may not always be practical in certain situations [Plourde et al., 2018]. For instance, in healthy children, long-term memory capacities rise steadily during development in close relation to processing skills and immediate memory processes [Bergemann et al., 2015]. Additionally, a proliferation of tests exists for the assessment of auditory-verbal memory processes. However, from a clinical practice perspective, the situation is less clear when it comes to the ready availability of reliable and valid tests for the evaluation of visual/visuo-spatial memory processes. While, at face value, there appears to be a wide range of available tests of visual/visuo-spatial memory, utilizing different types of materials and assessment strategies [Diaz-Orueta et al., 2022].

The origin of these domains was originally linked (i.e., localized) to the areas of the brain in which these processes were seen to be occurring, a perspective that is still important today [Harvey, 2019]. These skills allow us to monitor and flexibly adapt our behavior to changes in context, and to learn new actions and strategies to solve new and complex problems [Scionti et al., 2020]. This way, by knowing the normal development and functioning of the brain, we may understand cerebral abnormalities, such as cognitive and behavioral disorders that result from injuries, diseases or abnormal brain development [Costa et al., 2004].

Child neuropsychology, whose aim is the early identification of cognitive and behavioral disorders, has become one of the key elements of regular well-child visits. In this case, appropriate tools (neuropsychological tests and developmental assessment scales) are necessary [Costa et al., 2004] because at this age, deficits in specific cognitive domains (CD) such as attention, memory, executive functions, visual motor and language functions have been reported [Bergemann et al., 2015]. Therefore, subtle neuropsychological dysfunctions might contribute to a worsened use of the child's intellectual capacity and poor academic achievement. Cognitive abilities supporting intellectual performance include memory, attention and concentration [Bergemann et al., 2015].

Neuropsychological screening is recommended in any case in which a cognitive or behavioral difficulty of neurological etiology is suspected. This screening can help with the diagnosis and treatment of several neurological diseases, childhood developmental disabilities, psychiatric involvement, conduct disorders, among others. The contribution of such screening in children also applies to the teaching-learning process, as it allows establishing some relations between higher cortical functions, such as language, attention, memory, symbolic learning (concepts, writing, reading, etc.) [Costa et al., 2004]. Assessment as it is widely understood and used within educational contexts: as an umbrella term for measurement, charting, monitoring, tracking, evaluating, characterising, observing, indicating, and so on [Shearer et al., 2021]. The first principle of quality cognitive assessments addresses this negative perception [Worrell et al., 2002]. However, this integration between systems is possible only with the support of general cognitive abilities (e.g., language, working memory, executive functions) [Träff, 2013].

Generally, there are issues with the validation of classical neuropsychological assessments, one of the tools used to detect cognitive deficits [Gkintoni, Nikolaou, 2024]. The only way to know if that knowledge has «passed on» is to assess the extent of student understanding [Worrell et al., 2002]. Assessment can therefore only be captured through subjective, qualitative, interpretivist methods and is centered on an assessment-for-learning approach to monitor progress [Shearer et al., 2021]. In this paper, we will organize our review of assessment of cognitive domains by the general ability area and will comment in each domain where that domain fits into [Harvey, 2019]. The primary aim of this project was to apply rigorous systematic review methods to synthesize the literature [Fisher et al., 2022].

Method

Literature search

The author used the global search [Shearer et al., 2021] of literature using the following electronic databases: PubMed, OpenAlex, and Google Scholar. Each of these studies was unique in scope, and specific topics we identified included broad satisfaction with specific components of the neuropsychological service (e.g. the report), knowledge, efficacy, and clinician-parent alliance [Fisher et al., 2022]. The search strategy (i.e. terms and fields) varied slightly by database in response to differences in indexing.

Inclusion and exclusion criteria

Studies identified through the literature search were [Shearer et al., 2021]. This study does not impose restrictions on the subjects' gender, age, ethnicity, or socioeconomic background. Age classification adheres to common age standards [Xiao et al., 2024]. The study included only research articles with experimental methodology and results which covered the topic of interest. Books and abstracts were excluded as well as systematic reviews. The study included only research articles from the year 2000 (from 25 years) and excluded articles before this period.

Data extraction

The researchers created and used data extraction form to organize bibliographic information, methodological variables, risk of bias issues, and primary findings from each study [Fisher et al., 2022]. This procedure was manually and accurately completed by the authors.

Data analysis

Statistical analyses were performed with the statistical software package [Bergemann et al., 2015] Minitab

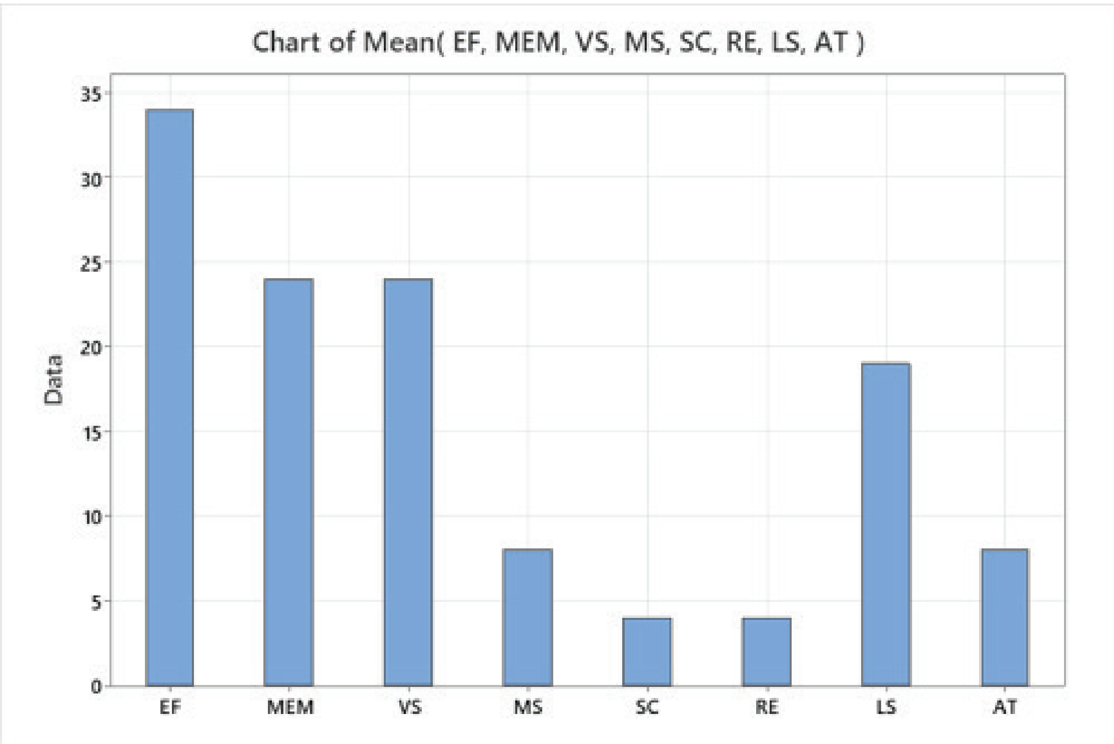

Fig. 1. *Detailed display of the number of studies which measured each of the group of cognitive domains.* / **Рис. 1**. *Данные по количеству исследований, в которых оценивалась каждая из групп когнитивных доменов.*

Statistical Software. The analysis was classified into two sessions (age and cognitive domains) and measured respectively.

Age

This variable was classified into two groups (0–12 years, 0–18 years). Age was extracted from each study in order to measure the age range which is frequently assessed in neuropsychological and cognitive research. A unit of 1 represented that a specific age group was measured in a study while a unit of 0 means the age group was not assessed. It is important to note that some studies cut across both ages therefore a particular study might fall under both age groups.

Chart of Mean (EF, MEM, VS, MS, SC, RE, LS, AT)

This battery taps the primary cognitive domains including attention, learning and memory, speed of processing, verbal versus visuomotor ability and executive function [Clark et al., 2006]. These cognitive domains were classified into eight major groups as follow: executive function (EF); memory (MEM); visual skills (VS); motor skills (MS); social cognition (SC); recognition (RE); language skills (LS); attention (AT). It is important to note that some of the research articles assessed more than one cognitive domain (see Figure 1).

Results

The aim was to apply the results of the systematic review to identify gaps in the extant literature and describe priorities for future research [Fisher et al., 2022].

Country of research

Despite the limited amount of research in this topic, through a systematic review of 1700 research articles were generated from carefully planned search, with the use of adequate keywords 69 research articles (mean = 7.667, SD = 4.213) met the final inclusion criteria. Among 69 studies 14 was conducted in the **United States of America** [Brunner et al., 2013; Charvet et al., 2014; Davis et al., 2005; Hou et al., 2020; Kreidler et al., 2023; Kuwabara et al., 2012; Luciana et al., 2002; Newberry, 2025; Schraegle et al., 2022; Sepeta et al., 2017; Shi et al., 2022; Silver et al., 2007; Wells et al., 2008; Williams et al., 2014]. Interestingly only 6 studies were obtained from the **United Kingdom** [Davis et al., 2011; Dörrenbächer et al., 2014; Ellis et al., 2020; Flaugnacco et al., 2015; Heffelfinger et al., 2009, Papini et al., 2020], and 7 from the **Netherlands** [Butcher et al., 2012, Pel et al., 2010; Prins et al., 2011; Van der Zee et al., 2019; Van der Zee et al., 2021; Van't Noordende et al., 2016; Van Zellem et al., 2015]. From **Italy** [Duma et al., 2021; Liguoro et al., 2025; Morelli et al., 2022; Operto et al., 2021; Portaccio et al., 2009; Zilli et al., 2015], **Spain** [Costa-López et al., 2023; Iglesias-Vázquez et al., 2023; Parrilla-Escobar et al., 2024; Magallón et al., 2016], **Sweden** [Gran Ekstrand et al., 2021; Lindquist et al., 2008]; **Brazil** [Braga et al., 2007; Guimarães et al., 2007; Neri et al., 2012; Santos et al., 2005], **Canada** [Kotsopoulos et al., 2021; Lichtenstein et al., 2017], **Germany** [Heine et al., 2010; Johann et al., 2020; Tacke et al., 2016]. 1 paper came from **France** [Hamdioui et al., 2022]. However, there were 2 papers from **Belgium** [Ben Itzhak et al., 2021; Miatton et al., 2007], **Australia** [Bornholt et al., 2004; Lawrence et al., 2004], **Switzerland** [Martarelli et al., 2011; Schneider et al., 2008], and **Finland** [Haavisto et al., 2012, Loukusa et al., 2018] respectively. And the rest from **Norway** [Furnes et al., 2009], **Denmark** [Eiberg, 2024], **Russian Federation** [Zashchirinskaia, 2021], **Indonesia** [Ayu, 2020], **Saudi Arabia** [Alsaedi et al., 2020], **China** [Feng et al., 2025], **Japan** [Ide-Okochi et al., 2022], **Chile** [Rojas-Líbano et al., 2019], **Hong Kong** [Cheung et al., 2006], **Iraq** [Hadi, 2021], **Iran** [Mahani et al., 2011], **Kenya** [Malmberg et al., 2011]. This critical breakdown shows the dominance of the United States and other developed countries in scientific research.

Assessed Cognitive Domains

The study focused on eight (8) cognitive domains which are further subdivided and classified according to relatedness with domains studied in the research articles. The major cognitive domains comprised of: executive function (EF), visual skills (VS), memory (MEM), Attention (AT), social cognition (SC), recognition (RE), language skills (LS) and motor skills (MS). It is important to note that some studies measured more than one of the categories of cognitive domain. Based on this the researcher classified reading, processing speed, intelligence, and learning as EF. In the same vein, memory and recall was classified as MEM which were assessed in 24 studies, 24 studies assessed VS (perception and visual perception, visuospatial perception, visual orienting) while LS (verbal skills, phonemic fluency, auditory skills, audiovisual) was measured in 19 studies. 8 studies assessed motor skills and interestingly only 4 studies assessed RE and 4 studies — attention (see Figure 2).

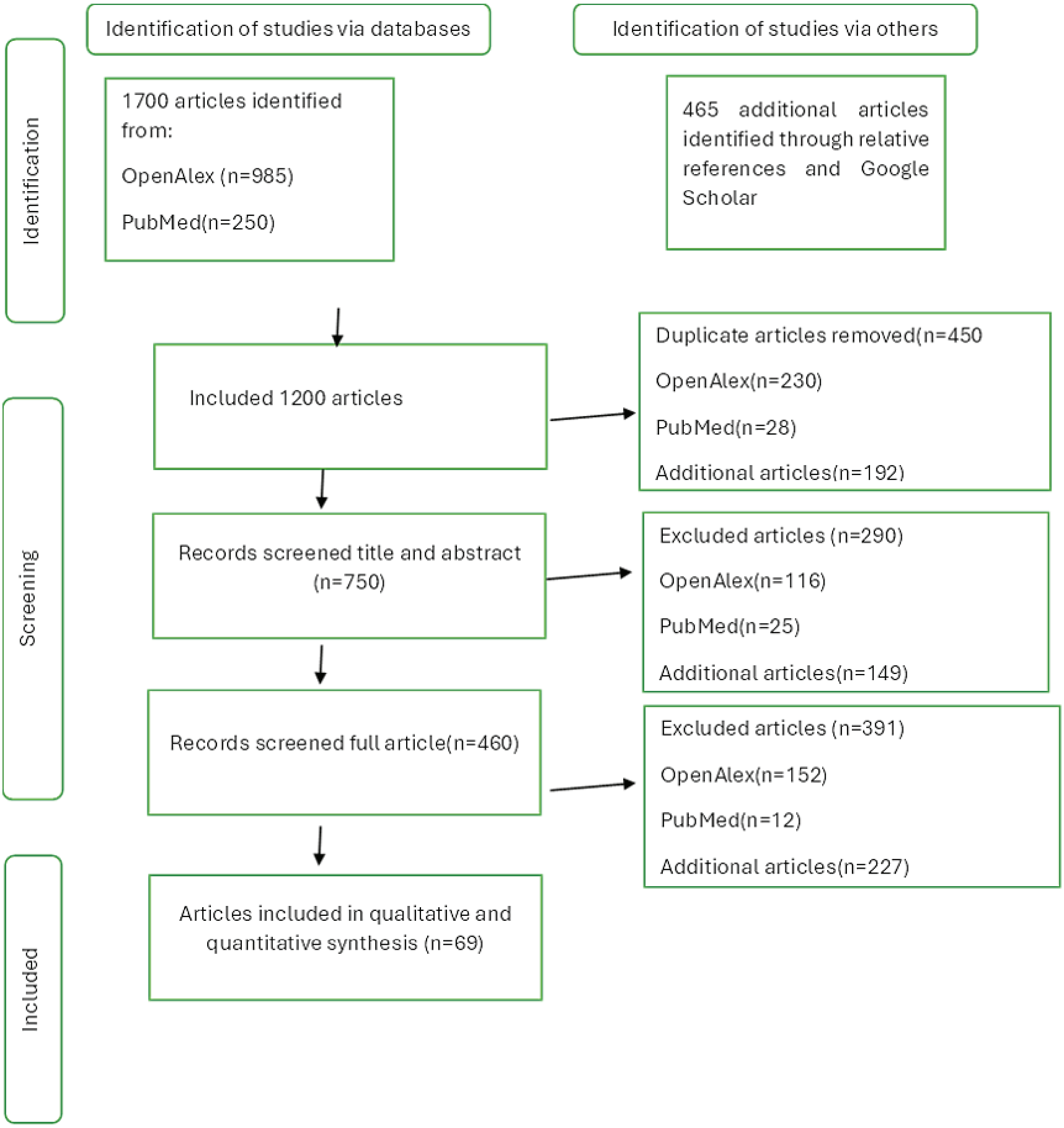

Fig. 2. *Flow diagram of systematic review and meta-analysis.* / **Рис. 2.** *Блок-схема систематического обзора и метаанализа.*

Table 1 / Таблица 1

Detailed visualization of studies and the cognitive domain assessed / Детальная визуализация исследований и оцениваемых когнитивных доменов

First author & year of publication / Первый автор и год публикации	Country / Страна	Journal / Журнал	Sample size / Размер выборки	Age / Возраст	Cognitive domain assessed / Оцениваемый когнитивный домен	Study aim / Цель исследования
Alsaedi et al., 2020	Saudi Arabia	Brain Sciences	149	6–12 years	Executive function	To determine the prevalence of executive dysfunction in children with ASD, as identified using the Behavior Rating Inventory of Executive Function, examine the executive functioning profiles of children with ASD relative to their typically developing (TD) peers. To investigate the age-related differences (if any) in the executive functioning performance of the children with ASD [Alsaedi et al., 2020]
Ayu, 2020	Indonesia	Research, Society and Development	111	3–8 years	Visual perception	This study aims to modify the Frostig test into a testing instrument that is appropriate to the culture of child development in Indonesia and to be a child-friendly instrument, especially for children [Natalia, Azwar, 2020]
Ben Itzhak et al., 2021	Belgium	Child Neuropsychology	630 M = 386 F = 244	6 years	Seven visuoperceptual dimensions; (1) visual discrimination and matching, (2) object or picture recognition, (3) visual spatial perception, (4) figure-ground perception, (5) motion perception, (6) visual short-term memory, and (7) scene perception	The aim was to develop a visuoperceptual profile schema reflecting visuoperceptual strengths and weaknesses, using neuropsychological tests [Ben Itzhak et al., 2021]
Braga et al., 2007	Brazil	Journal of Child Neurology	23	7–13 years	Visual recognition memory, Semantic verbal fluency, Reading	Studied the relationships between magnetic resonance imaging (MRI) findings and neuropsychological sequelae in children after severe traumatic brain injury [Braga et al., 2007]

Bornholt et al., 2004	Australia	Journal of Child Neurology	1164	4–11 years Mean = 7.9, SD = 2.2	Orientation, registration, attention, calculation, recall, language, repetition, commands, reading, writing and copying	To estimate theoretical starting points in typical cognitive profiles, that are critical in the early years [Bornholt et al., 2004]
Brunner et al., 2013	United States of America	Arthritis Care & Research	80	10 years	Attention, working memory, processing speed, and visuoconstructional ability	To evaluate the reproducibility and validity of the Pediatric Automated Neuropsychological Assessment Metrics (Ped-ANAM) when used in childhood-onset systemic lupus erythematosus (cSLE) [Brunner et al., 2013]
Butcher et al., 2012	The Nether-lands	Neuro-psychology	56 M = 30 F = 26	7–11 years	Visuospatial perception, Intelligence	This study investigated whether children born preterm show a specific deficit in visuospatial perception [Butcher et al., 2012]
Charvet et al., 2014	United States of America	Multiple Sclerosis Journal	62	8–17 years	Intelligence Quotient, Verbal Learning, learning and long-term delayed free recall	Changes in cognitive function over time were measured in the largest pediatric cohort to Date [Charvet et al., 2014]
Cheung et al., 2006	Hong Kong	Physical & Occupational Therapy In Pediatrics	58	6–7 years	Visual perception	The cultural relevance of the test (Developmental Test of Visual Perception second edition DTVP-2) by conducting expert panel review and item analysis. The second and third phase included collection of normative data in Hong Kong children and examination of age groups [Cheung et al., 2006]
Costa-López et al., 2023	Spain	Children	953 M = 512 F = 441	6–18 years Mean = 10.85; SD = 3.29	Executive function, social cognition	This study aimed to analyze the influence of emotional regulation on sleep habits in Spanish children and adolescents and the mediating role of anxiety in this relationship [Costa-López et al., 2023]
Davis et al., 2005	United States of America	Journal of Pediatric Health Care	92	4–5 years	Visual skills	This study was designed to identify specific visual-perceptual skills in very low birth weight (VLBW) children [Davis et al., 2005]
Davis et al., 2011	United Kingdom	British Journal of Psychology	248	4–11 years	Motor ability, short-term memory, visual processing (VP), long-term storage and retrieval, fluid reasoning	The aim of this study was to investigate the consistency of interrelation across cognitive and motor development as a function of age and sex in typically developing children [Davis et al., 2011]

Dörren-bächer et al., 2014	United Kingdom	Frontiers in Psychology	54	8.10–11.10 years (mean age = 9.63 years, SD = 0.81)	Inhibitory control and Working memory WM	The specific goals of the study are to investigate whether the type of the training and the training setting would affect (1) the training willingness indicating the intrinsic interest in the task; (2) the task performance (processing speed and accuracy) and the switching performance in the training task; and (3) the transfer of training benefits to an untrained switching task (near transfer) [Dörrenbächer et al., 2014]
Duma et al., 2021	Italy	Epilepsy and Behaviour (Elsevier)	53 M = 27 F = 26	5–13 years Mean = 8	Phonemic fluency	To investigate how behavioral performance is implicitly shaped by the manipulation of the stimulus occurrence probability over time [Duma et al., 2021]
Eiberg, 2024	Denmark	Journal of Child & Adolescent Trauma	153 (66% Female)	6–15 years	IQ and executive function	Maltreatment potentially contributes to a cumulative deficit in neurocognitive maturation and development [Eiberg, 2024]
Ellis et al., 2020a	United Kingdom	Journal of Autism and Developmental Disorders	86	0–2 years	Early Social Cognition	The development of a battery of tasks to explore the developmental sequence that TD infants acquire early social cognition skills. Proof of principle study to demonstrate how this battery can be applied to children with neurodevelopmental disorders, using a group of AUT children as an example [Ellis et al., 2020]
Feng et al., 2025	China	European Child & Adolescent Psychiatry	39	4–6 years	Attention	To monitor children’s activity synchrony (AcSyn) and activity volume (AcVo) using accelerometers in a school setting to examine the correlation between these daily-life markers and the symptoms related to attention deficit and hyperactivity disorder [Feng et al., 2025]
Flaugnacco et al., 2015	United Kingdom	Plos One	48	8–11 years	Rhythmic abilities, phonological awareness and reading skills	Music training, by improving temporal processing and rhythm abilities, improves phonological awareness and reading skills in children with dyslexia [Flaugnacco et al., 2015]
Furnes et al., 2009	Norway USA	Journal of Research in Reading	906	5–9 years	Phonological Awareness, Intelligence	The importance of cognitive and language skills on reading and spelling development [Furnes, Samuelsson, 2009]
Gran Ekstrand et al., 2021	Sweden	Frontiers in Education	8	9–10 years	Reading and decoding	The overall purpose of the study is to compare eye tracking predictions to neuropsychological assessments in order to better understand the validity of eye tracking based screening methods [Gran Ekstrand et al., 2021]
Guimarães et al., 2007	Brazil	Journal of Child Neurology	50	7–15 years	Visual and auditory ability	The aim of this study was to identify the neuropsychological deficits in children with temporal lobe epilepsy [Guimarães et al., 2007]

Hadi, 2021	Iraq	Psychology and Education	150	4.5–6.5 years	Visual Perception (visual discrimination, visual memory)	Indication of differences in skills (visual discrimination, visual memory, and the distinction between form and ground, and closure visual, spatial relationships) among children depending on two variables: 1. Age (4,5, 5, 6,5) years 2. Gender (male – female) [Hadi, 2021]
Hamdioui et al., 2022	France	Advances in Neuro-developmental Disorders	1	6 years and 3 months	Visuo-spatial (VSI) and possessing speed, High intellectual potential (HIP)	Aimed to better understand the significance of the IQ profile heterogeneous in HIP, with the hypothesis that some neurodevelopmental disorders could explain this [Hamdioui et al., 2022]
Haavisto et al., 2012	Finland	Nephrol Dial Transplant	50 M = 28 F = 22	6–16.5 years Mean = 11.1 years	Attention and Executive Functions, Language, Sensorimotor, Memory and Learning, Visuospatial Processing, Social Perception	Aimed to evaluate comprehensively the cognitive level and neuropsychological profile of Kidney transplant (KTx) children [Haavisto et al., 2012]
Heffelfinger et al., 2009	United Kingdom	The Clinical Neuro-psychologist	229	3 years	Executive function, recognition	To enable provision of standard neuropsychological services in the previously underserved preschool population, including differential diagnosis [Heffelfinger, Koop, 2009]
Heine et al., 2010	Germany	Infant and Child Development	66	6–9 years	Executive function	In the present study, we measured children's eye movements while they carried out a number line estimation task [Heine et al., 2010]]
Hou et al., 2020	United States of America	Developmental Medicine and Child Neurology	88 M = 50 F = 38	6–18 Mean = 12 years SD = 3 years 7 months	Academic achievement, attention, and executive functioning	To describe the cognitive development of children with neurofibromatosis type 1 (NF1) and plexiform neurofibromas, and identify predictors of cognitive development [Hou et al., 2020]
Ide-Okochi et al., 2022	Japan	Children	7	10–18 years	Audiovisual	To clarify the characteristics of gaze patterns and interoception of children with developmental disabilities DDs when disturbance stimuli occur in the VR classroom to obtain hints for understanding their difficulties in school [Ide-Okochi et al., 2022]
Iglesias-Vázquez et al., 2023	Spain	American Journal of Preventive Medicine	295	4 years	Working Memory Index, Processing Speed Index, and Vocabulary Acquisition Inde	The objective of this study was to assess whether prenatal iron supplementation adjusted to maternal needs improves children's cognitive functioning [Iglesias-Vázquez et al., 2023]

Johann et al., 2020	Germany	Develop-mental Science (Wiley)	153	6–10 years Mean age = 9.6 years, standard deviations = 0.8	Executive function, Working memory WM	The aim of this study was to compare the effects of game-based and standard training regimens targeting WM, inhibition or flexibility in children [Johann, Karbach, 2020]
Kotsopoulos et al., 2021	Canada	Early Child Development and Care	61 M = 34 F = 27	3–5 years Mean age = 57.3 months; SD = 7.9	Visual-spatial ability, no-nverbal visual-spatial ability	In order to answer the question on how educators and care-givers can best support the acquisition of young children's visual-spatial ability, the development of young children's visual-spatial ability first needs to be explored [Kotsopoulos et al., 2021]
Kreidler et al., 2023	United States of America	American Speech-Language-Hearing Association (JSLHR)	36	4.0–5.11 years	Structured Photographic Expressive Language, Vocabulary	The production of rhythmically grouped sequences drawn from a music task, with the hypothesis that children with DLD will show a sequential pattern learning deficit that crosses language and action domains [Kreidler et al., 2023]
Kuwabara et al., 2012	United States of America	Journal of Experimental Child Psychology	64 Equal numbers of Male and Female	1–4 years	Visual search, relational matching	Three experiments examined whether these differences characterize the cognition of preschool children in the two cultures [Kuwabara, Smith, 2012]
Lawrence et al., 2004	Australia	Journal of Attention Disorders	44	6–12 years Mean = 9 years	Executive function and processing speed	Our objectives were to (a) determine whether children with ADHD exhibit cognitive deficits (executive function and speed of processing) as measured by neuropsychological tests and real-world activities, and (b) examine the relationship between cognitive deficits observed during neuropsychological testing and real-world activities [Lawrence et al., 2004]
Lichtenstein et al., 2017	Canada	Child Neuro-psychology (Routledge Taylor & Francis group)	72 F = 28 (38.9%) M = 44 (61.1%)	6–15 years (M = 11.1, SD = 2.6)	General intellectual functioning, visual free -recall	The purpose of this study was to examine the signal detection proper-ties of a forced-choice recognition trial (FCR-C) for the California Verbal Learning Test – Children's Version [Lichtenstein et al., 2017]
Liguoro et al., 2025	Italy	Child's Nervous System	25	Mean age 10.9 ± 3.4 years	Language, memory, attention, executive functions, visual-constructional, and sensorimotor skill	This study was aimed at evaluating cognitive functioning in children with brain tumors before and after surgery and at the end of all adjunctive treatments [Liguoro et al., 2025]

Lindquist et al., 2008	Sweden	Acta Pædiatrica	36 M = 23 F = 13	8–13 years	Recognition skills, learning and memory, Longterm memory, executive function	To explore learning, memory and executive abilities in children with hydrocephalus without learning disabilities, and to find out whether children with an isolated hydrocephalus differed from those with hydrocephalus in combination with myelomeningocele (MMC) [Lindquist et al., 2008]
Loukusa et al., 2018	Finland	Journal of Communi-cation Disorders	16	5.1–10.7 years	Relevant use of language, recognition of feelings (Social cognition)	This study showed that by using contextually sensitive materials, such as the Pragma test, it is possible to detect the social-pragmatic inferencing difficulties of high-functioning children with ASD [Loukusa et al., 2018]
Luciana et al., 2002	United States of America	Developmental Neuro-psychology	235	4–11 years	Pattern Recognition, Motor Screening Test, Spatial Memory Span, Self-Ordered Search	Potential methodological limitations of using the CANTAB battery to assess cognitive functions in children and suggest avenues for further empirical study [Luciana, Nelson, 2002]
Magallón et al., 2016	Spain	Plos One	90	6–12 years	Learning, motor	The aim of the present research was to make a preliminary evaluation and description of repetition-based improvement of procedures in typically developing children (TDC) [Magallón et al., 2016]
Mahani et al., 2011	Iran	The Archives of Rehabili-tation (Rehabilitation Journal)	40	7–13 years	Visual perceptual skills, Visual Memory and Visual Sequential Memory	Comparing visual perceptual skills between boys and girls, age groups and students of different educational areas and finding the correlation among subtests with each other and subtests with total test [Mahani et al., 2011]
Malmberg et al., 2011	Kenya	Early Childhood Research Quarterly	321	Mean ages 4.3, 6.0, and 7.1 years	Verbal comprehension, visual-perceptual matching of spatial orientation	The aim of the study is to investigate the effects of the Madrasa Resource Center (MRC), a child-centered intervention program, on East-African (Kenya, Zanzibar, and Uganda) preschool children's cognitive development [Malmberg et al., 2011]
Martarelli et al., 2011	Switzer-land	British Journal of Develo-pmental Psychology	13	3–4 years	Recall	The purpose of this study is to examine the role of eye-movements during children's pictorial recall of seen objects, and compare it with the performance of adults [Martarelli, Mast, 2011]
Miatton et al., 2007	Belgium	Congenital heart disease A Develop-mental Neuro-psychological Assessment (CHD NEPSY)	83	4–7 years	Attention and Executive Functioning	The purpose of the present study is to characterize the neuropsychological outcome of school-aged children with a surgically corrected cyanotic or acyanotic congenital heart disease CHD and compare their performances with those of age- and sex-matched healthy controls [Miatton et al., 2007]

Morelli et al., 2022	Italy	Children	51 M = 25 F = 26	4 years	Motor, language, Verbal intelligence	Considering neuropsychological, basic visual, and ocular motor functions and development features together would draw a more comprehensive picture of Cerebral Visual Impairment (CVI) children's functional profiles, allowing for the tailoring of habilitation interventions for school and social inclusion [Morelli et al., 2022]
Neri et al., 2012	Brazil	Epilepsy and Behavior (Elsevier)	53	6–15 years	Executive function	The aims of this study were to identify changes in executive functions in children with Rolandic Epilepsy (RE) and to verify the influence of epilepsy and seizure variables [Neri et al., 2012]
Newberry, 2025	United States of America	AURA - Antioch University Repository and Archive	272	8–16 years	Attention	This study aims to show which assessment and ADHD-related areas clinicians should use to aid in assessing for any ADHD diagnosis, to help streamline the process of assessment [Newberry, 2025]
Operto et al., 2021	Italy	Brain Sciences	62	8–14 years	Intelligence	The aim of our study was to trace a specific neuropsychological profile, to investigate emotional-behavioral problems and parental stress in children with Autism Spectrum Disorder Level 1/High functioning (ASD-HF), Specific Learning Disorders (SLD) and Attention Deficit/Hyperactivity Disorder (ADHD) disorders and to highlight similarities and differences among the three groups [Operto et al., 2021]
Parrilla-Escobar et al., 2024	Spain	European Journal of Psychiatry	75	7–16 years Mean = 12 y	Movement (motor), social cognition	Neurodevelopmental and clinical problems in childhood often precede adult Schizophrenia Spectrum Disorders [Parrilla-Escobar et al., 2024]
Papini et al., 2020	United Kingdom	Scientific Reports (Nature Research)	127	6–16 years	Visual perception	The objectives were to explore: (1) the extent of impairment in visual perception, intellectual function and scholastic attainment, (2) the associations across these three domains and (3) the relationships with clinical and socio-demographic factors [Papini et al., 2020]
Pel et al., 2010	The Nether-lands	Journal of Neuroscience Method	103	2–9 years	Visual orientating	The aim of the study was to validate a data analysis method which did not require off-line correction of data gaps due to eye blinking or inadequate gaze tracking [Pel et al., 2010]
Portaccio et al., 2009	Italy	Multiple Sclerosis	61	10–17 years	Verbal learning and delayed recall, global cognitive functioning (IQ), sustained attention and concentration, abstract reasoning, Expressive language, Receptive language	To develop a Brief Neuropsychological Battery for Children (BNBC) with Multiple Sclerosis (MS) [Portaccio et al., 2009]

Prins et al., 2011	The Nether-lands	Cyber-psychology, Behavior, and Social networking	52 M = 42 F = 10	7–12 years	Working memory	This study examined the benefits of adding game elements to standard computerized working memory (WM) training. Specifically, it examined whether game elements would enhance motivation and training performance of children with ADHD, and whether it would improve training efficacy [Prins et al., 2011]
Rojas-Líbano et al., 2019	Chile	Scientific Data	50	10–11 years	Visuospatial WM	Explorations of the link between physiology and different estimates of cognition, as well as for exploratory hypothesis testing regarding this link [Rojas-Líbano et al., 2019]
Santos et al., 2005	Brazil	Perceptual and Motor Skills	127	7–10 years	Visual memory	The present objective was to investigate age, sex, and cultural differences on three visual memory tasks [Santos et al., 2005]
Schraegle et al., 2022	United States of America	Epilepsy & Behavior (Elsevier)	59	8–16 years	Reasoning, language, visuoperceptual, memory, and executive function	To examine the neuropsychological networks underlying three cognitive phenotypes using graph theory analysis [Schraegle, Babajani-Feremi, 2022]
Schneider et al., 2008	Switzer-land	Cognitive Development	66	6–8 years	Executive function, motor (eye movements)	Investigated to what extent eye movements recorded during task solution reflect children's use of the number line [Schneider et al., 2008]
Sepeta et al., 2017	United States of America	National Library of Medicine	70	5–17 years (16 years 11 months)	Executive functioning in memory, intelligence, visual and verbal episodic memory	Address a gap in the literature by examining the relationship between memory and executive functioning in a pediatric focal epilepsy population [Sepeta et al., 2017]
Shi et al., 2022	United States of America	British Journal of Anaesthesia	69 F = 33 M = 36	2.5–6 years	Processing speed and fine motor skills	Exposure to general anaesthesia in children may be related to deficits in certain areas of cognition [Shi et al., 2022]
Silver et al., 2007	United States of America	Develop-mental Neuro-psychology	45	9–13 years	Short term memory, visual memory, verbal memory	The purpose of this study was to compare verbal and visual short-term memory in two groups of children with learning disabilities: children with isolated arithmetic disabilities (Subtype A) and a comparison group of children with comorbid arithmetic and reading disabilities (Subtype AR) [Silver et al., 2007]
Tacke et al., 2016	Germany	European Journal of Paediatric Neurology	44	6–12 years	Long-term auditory verbal memory, recall, non-verbal intelligence	The purpose of the present evaluation was to analyze the effects of two different treatments on neuropsychological test results and behavior [Tacke et al., 2016]
Van der Zee et al., 2019	The Nether-lands	Develop-mental Neuro-psychology	122	4–13 years Mean = 9y 8m, SD = 2y 5m	Visual closure (visual ability)	The aim of the present study was to investigate the Kaufman Gestalt closure task in children with cerebral and ocular visual impairments [Van der Zee et al., 2019]

Van der Zee et al., 2021	The Nether-lands	Frontiers in Human Neuroscience	165	3–7 years 10 months	Visual motion perception	In this study, we examined (1) the presence of abnormally low scores (below 10th percentile) in various visual motion perception aspects in children with brain damage, while controlling for their cognitive developmental delay; (2) whether the risk is increased in comparison with the observation and expectation in a healthy control group and healthy population [Van der Zee et al., 2021]
Van't Noor-dende et al., 2016	The Nether-lands	Psychological Research	14 M = 2 F = 12	9–11 years Mean = 11.09, SD = 1.10 years	Learning	The goal is to assess whether children with MLD (mathematical learning difficulties) differ in strategy use from children without MLD and more specifically, whether children with MLD use less functional estimation strategies than children without MLD [Van't Noordende et al., 2016]
Van Zellem et al., 2015	The Nether-lands	Intensive Core Medicine (Springer Nature Link)	107	0–18 years	Intelligence (IQ), language, attention, memory, visual–spatial, and executive functioning	To assess long-term neuropsychological functioning in children and adolescents surviving cardiac arrest [Van Zellem et al., 2015]
Wells et al., 2008	United States of America	Brain and Cognition	48	5–18 years	Visual perception — VP	The present study examined the relationship between temporal lobe gray matter volumes and performance on two neuropsychological tests hypothesized to measure temporal lobe functioning [Wells et al., 2008]
Williams et al., 2014	United States of America	Journal of Psycho-educational Assessment	200	2–4 years	Language	Measures recently published or revised, nonverbal cognitive assessment tools, and issues specific to assessing bilingual or non-English-speaking children [Williams et al., 2014]
Zashchi-rinskaia, 2021	Russian Federation	Current Psychology	70	5–6 years	Perception (perception of visual images in preschool children)	The purpose of this study is to identify the perception of the images of fairy tale characters on packaging of dairy products by children of senior preschool age [Zashchirinskaia, 2021]
Zilli et al., 2015	Italy	Journal of Clinical and Experimental Neuro-psychology	23 M = 12 F = 11	7–15 years	Social perception, attention and executive functions and sensorimotor skills	The aim of this study was to investigate the neuropsychological profile and vulnerabilities of children with epilepsy without intellectual disability or borderline intellectual functioning [Zilli et al., 2015]

Discussion

It is interesting to note that there are several ways to conceptualize cognitive ability domains. These include classification by the general process involved, such as memory or attention, language, or executive functioning. Other strategies are based on regional brain functions, derived on the basis of lesion studies, which characterize functions as originating from the frontal lobe, temporal lobe, parietal lobe, hippocampus, or other structures [Harvey, 2019]. Studies have examined the developmental course of specific behavioral domains ranging from auditory processing to executive-control functions, such as attention and working memory, language and reasoning and, more recently, social cognition [Gur et al., 2012]. The results of these scales and tests show the major gains during development and aim at determining the child's specific level of development. The importance of these tools lies in the prevention and early detection of developmental and learning disabilities, carefully indicating the pace and quality of the process, allowing for a qualitative and quantitative "mapping" of brain areas and their interconnections (functional system), with the aim of early and accurate therapeutic interventions [Costa et al., 2004].

A number of barriers exist in our efforts to conduct effective, appropriate assessment of the affective domain. First, the affective domain is difficult to assess from the standpoint of achieving valid, reliable, and objective measurements. Measurement of affective behaviors is as difficult and complex as the development of instruments to measure them [Worrell et al., 2002]. In the verbal modality, difficulties to store information in long- term memory might be due to an ongoing poor use of cognitive memory strategies and inefficient allocation of cognitive resources which are both needed to develop a cognitive memory network [Bergemann et al., 2015]. We believe that providing researchers and teachers with information in a single point of reference on the theoretical development, measurement properties and feasibility of assessments [Shearer et al., 2021] of cognitive domains. This aim is evident in the findings of this study.

Executive Functions (EFs) are a set of top-down cognitive processes that underpin goal-directed behaviors [Scionti et al., 2020]. However, the notion that intelligence is a set of acquired information-processing skills and that any intellectual content can be taught early if the teaching is adapted to the child's cognitive level [Kohlberg, 1968]. In the same vein, Memory refers to the complex processes by which the individual encodes, stores, and retrieves information state, many common neurological and psychiatric conditions produce a decline in the efficiency of memory processes, so that memory assessment often becomes the central issue in a neuropsychological examination. In this context, although the accepted view of memory is of a multi-faceted construct [Diaz-Orueta et al., 2022]. Although Individual studies tend to be narrow in the scope of outcomes they examine, and theories regarding the classification of outcome types and relationships among outcomes are lacking [Fisher et al., 2022]. It is also reported that females develop more quickly in some areas and that, broadly speaking, males develop to perform better on motor tasks and females on some verbal and memory tasks. Further, the relative levels of cognitive performance generally increase with higher levels of education [Dahlstrom-Hakki et al., 2019]. Moreso, over the past decades, an increasing body of empirical results has demonstrated that the development of EFs during early childhood plays an important role in supporting school readiness and social-emotional development, and in predicting which cognitive abilities will be required for succeeding in school [Scionti et al., 2020]. These differing previous findings may at least partly be due to age differences it seems that some language differences tend to emerge in younger age groups rather than in older, at least when comparing children within one country [Johanna Rosenqvist et al., 2017]. However, more rigorous research is needed in some areas of cognitive psychological sciences especially social cognition.

Testing multiple cognitive domains is essential in clinical neuropsychiatric research because common disorders involve dysfunctions typically in more than one cognitive domain with common drug treatments affecting multiple domains [Womelsdorf et al., 2021]. For almost 50 years now, hemispheric differences in episodic memory have been proposed, with verbal memory, whatever the mode of stimulus presentation, considered to be mediated by the left hemisphere and nonverbal memory (typically nonverbal visual) considered to be mediated by the right [Diaz-Orueta et al., 2022]. It is important to note that the development of neuropsychological assessments began primarily in Western countries, and as a result, assessment tools are often founded on a mono-cultural concept. When these tools are applied overseas or to non-Western populations, they do not always function as designed. Few studies have explored the interactions between language, culture, and cognitive processes related to neuropsychological assessments [[Gkintoni, Nikolaou, 2024].

Several shortcomings of most cognitive measures used in studies to date limit their applicability in establishing further links between brain function and behavioral domains [Gur et al., 2012]. For instance, individual studies addressing longitudinal change in cognitive ability tend to focus either on the developmental years [Clark et al., 2006]. Additionally, some studies demonstrated that children at risk (i.e., children from low-income families, with psychopathology traits, born preterm) may benefit particularly from EF programs, since improvement in EFs may lead to better academic performance [Scionti et al., 2020].

Conclusion

The neuropsychological domain is fundamental to understanding children's cognitive, emotional, and behavioral functioning, as it reflects the relationship between brain development and everyday performance. **Neuropsychological assessment provides a systematic and scientifically grounded method for evaluating key domains such as attention, memory, language, executive functioning, visuospatial skills, motor abilities, and socio-emotional regulation [Lezak et al., 2012].** Childhood is characterized by rapid brain development, during which cognitive abilities emerge in a dynamic and interrelated manner. Neuropsychological assessment seeks to understand how brain functioning influences cognition, behavior, and learning across development [Baron, 2004]. Unlike adult assessments, pediatric neuropsychological evaluations must account for developmental variability, neural plasticity, and environmental influences such as education and family context [Anderson et al., 2011]. Given that childhood is marked by rapid neurological maturation, assessing these domains is crucial for identifying both typical and atypical developmental patterns. This study aims to reveal the importance of neurocognitive assessments in children and adult populations. Based on the findings of the study, there is an obvious increase in neurocognitive research in developed or high-income countries. In the same vein, executive function is the cognitive domain with the highest research flow when compared with other domains.

Attention and executive functions are higher-order cognitive processes that support goal-directed behavior, self-regulation, and adaptive functioning. Executive functions include inhibitory control, cognitive flexibility, planning, and working memory [Diamond, 2013]. Deficits in these areas are commonly observed in conditions such as attention-deficit/hyperactivity disorder (ADHD), traumatic brain injury, and autism spectrum disorder [Anderson et al., 2008]. Assessment typically combines performance-based measures and behavior rating scales to capture both cognitive capacity and real-world functioning [Gioia et al., 2015]. It is important to note that assessing children's motor proficiency is essential for (a) establishing a baseline for clinical or educational intervention, (b) specifying the extent of motor deficits and how those deficits impact children's function in different contexts, (c) complementing the diagnosis of disabilities and identifying motor difficulties or impairments, (d) defining children's levels of motor proficiency to plan and implement interventions, providing children with adequate opportunities to nurture development, optimize function, prevent undesired outcomes, and strengthen individual potential, (e) evaluating the effectiveness of the intervention in promoting the acquisition of motor skills and decreasing impairments, and (f) supporting families and teachers in caring for a child at home or school [García-Hermoso, 2024]. Motor functioning also influences academic tasks such as writing and drawing, making this domain particularly relevant in school-aged children.

Human spatial memory research has significantly progressed since the development of computerized tasks, with many studies examining sex-related performances [Castillo et al., 2021]. **Memory assessment** examines a child's ability to encode, store, and retrieve information. Pediatric neuropsychological evaluations distinguish between verbal and visual memory, as well as short-term, working, and long-term memory processes [Lezak et al., 2012]. Therefore, the rapid development of these competencies is supported by infant-specific biological and experiential constraints, including blurry vision and "self-curation" of object viewpoints that best support learning. We also discuss how the neural mechanisms that support object-recognition abilities in infancy seem to differ from those in adulthood, with less engagement of the ventral visual pathway. We conclude that children's specific developmental niche shapes early object-recognition abilities and their neural underpinnings [Ayzenberg, Behrmann, 2023]. In the same vein**, language** is a core domain in child neuropsychology, encompassing receptive language, expressive language, phonological processing, and pragmatic skills. Language abilities are strongly linked to academic achievement and social functioning [Bishop, 2014]. Assessment is particularly important in children with learning disorders, developmental language disorder, and autism spectrum disorder. Neuropsychological evaluation helps differentiate language-based difficulties from broader cognitive or attentional problems [Semel et al., 2013].

Visuospatial abilities involve perception, spatial reasoning, and the integration of visual information, while visuoconstructional skills require motor output to reproduce or construct visual designs. These skills are associated with parietal and occipital brain regions and are important for mathematics, handwriting, and daily functioning [Lezak et al., 2012].

Social cognition involves the ability to perceive, interpret, and respond to social information, including emotion recognition and theory of mind. Emotional and behavioral functioning is also assessed to understand how psychological factors interact with cognitive performance [Yeates et al., 2007]. These domains are particularly relevant in autism spectrum disorder, mood disorders, and the psychosocial adjustment to neurological illness. The importance of neuropsychological assessment in children lies in its ability to support early identification and accurate diagnosis of neurodevelopmental, learning, and psychological disorders. Research indicates that many childhood conditions such as attention-deficit/hyperactivity disorder, learning disabilities, autism spectrum disorder, and pediatric neurological injuries present with overlapping behavioral symptoms but distinct neurocognitive profiles [Baron, 2004; Fletcher et al., 2018]. Thus, integrating classic behavioral approaches from developmental psychology with the modern tools of cognitive and computational neuroscience will reveal a deeper understanding of the developmental mechanisms [Ayzenberg, Behrmann, 2023]. These findings are crucial to scientists and also applicable in clinical settings.

Finally, neuropsychological assessment in children is a process used to measure cognitive, behavioral, emotional, and academic functioning in relation to brain development. It also plays an important role in identifying neurodevelopmental disorders, helping with intervention and educational planning. This article reviews the major cognitive domains assessed in child neuropsychology, the commonly used assessment tools, and main developmental considerations relevant to clinical practice. Additionally, the assessment of neuropsychological domains in children is an important aspect of child evaluation through its approach of matching brain function to behavior. Neuropsychological assessment is necessary in improving long-term outcomes and quality of life for children with developmental and psychological challenges.

References

Alsaedi, R. H., Carrington, S., & Watters, J. J. (2020). Behavioral and neuropsychological evaluation of executive functions in children with autism spectrum disorder in the gulf region. Brain Sciences, 10(2). https://doi.org/10.3390/brainsci10020120

Anderson, V., Jacobs, R., & Anderson, P. J. (2011). Executive functions and the frontal lobes: A lifespan perspective. Psychology Press.

Anderson, V., Anderson, P., Northam, E., Jacobs, R., & Catroppa, C. (2008). Development of executive functions through late childhood and adolescence in an Australian sample. Developmental Neuropsychology, 33(6), 764–780.

Ayzenberg, V., & Behrmann, M. (2023). Development of visual object recognition. Nature Reviews Psychology, 3(2), 73–90. https://doi.org/10.1038/s44159-023-00266-w

Baron, I. S. (2004). Neuropsychological evaluation of the child. Oxford University Press.

Ben Itzhak, N., Vancleef, K., Franki, I., Laenen, A., Wagemans, J., & Ortibus, E. (2021). Quantifying visuoperceptual profiles of children with cerebral visual impairment. Child Neuropsychology, 27(8), 995–1023. https://doi.org/10.1080/09297049.2021.1915265

Bergemann, A., Hansen, J. H., Rotermann, I., Voges, I., Scheewe, J., Ottomorris, C., Geiger, F., & Kramer, H. H. (2015). Neuropsychological performance of school-aged children after staged surgical palliation of hypoplastic left heart syndrome. European Journal of Cardio-Thoracic Surgery, 47(5), 803–811. https://doi.org/10.1093/ejcts/ezu299

Bishop, D. V. M. (2014). Ten questions about terminology for children with unexplained language problems. International Journal of Language & Communication Disorders, 49(4), 381–415.

Bornholt, L. J., Spencer, F. H., Fisher, I. H., & Ouvrier, R. A. (2004). Cognitive screening for young children: Development and diversity in learning contexts. Journal of Child Neurology, 19(5), 313–317. https://doi.org/10.1177/088307380401900501

Braga, L. W., Souza, L. N., Najjar, Y. J., & Dellatolas, G. (2007). Magnetic resonance imaging (MRI) findings and neuropsychological sequelae in children after severe traumatic brain injury: The role of cerebellar lesion. Journal of Child Neurology, 22(9), 1084–1089. https://doi.org/10.1177/0883073807306246

Brunner, H. I., Klein-Gitelman, M. S., Zelko, F., Thomas, E. C., Hummel, J., Nelson, S. M., Huggins, J., Curran, M. L., Roebuck-Spencer, T., Beebe, D. W., & Ying, J. (2013). Validation of the pediatric automated neuropsychological assessment metrics in childhood-onset systemic lupus erythematosus. Arthritis Care & Research, 65(3), 372–381. https://doi.org/10.1002/acr.21835

Butcher, P. R., Bouma, A., Stremmelaar, E. F., Bos, A. F., Smithson, M., & Van Braeckel, K. N. J. A. (2012). Visuospatial perception in children born preterm with no major neurological disorders. Neuropsychology, 26(6), 723–734. https://doi.org/10.1037/a0029298

Castillo, J., Carmona, I., Commins, S., Fernández, S., Ortells, J. J., & Cimadevilla, J. M. (2021). Spatial recognition memory: Differential brain strategic activation according to sex. Frontiers in Behavioral Neuroscience, 15, 736778. https://doi.org/10.3389/fnbeh.2021.736778

Charvet, L. E., O'Donnell, E. H., Belman, A. L., Chitnis, T., Ness, J. M., Parrish, J., Patterson, M., Rodriguez, M., Waubant, E., Weinstock-Guttman, B., & Krupp, L. B. (2014). Longitudinal evaluation of cognitive functioning in pediatric multiple sclerosis: Report from the US Pediatric Multiple Sclerosis Network. Multiple Sclerosis Journal, 20(11), 1502–1510. https://doi.org/10.1177/1352458514527862

Cheung, P., Poon, M., Leung, M., & Wong, R. (2006). The developmental test of visual perception-2 normative study on the visual-perceptual function for children in Hong Kong. Physical & Occupational Therapy In Pediatrics, 25(4), 29–43. https://doi.org/10.1080/j006v25n04_03

Clark, C. R., Paul, R. H., Williams, L. M., Arns, M., Fallahpour, K., Handmer, C., & Gordon, E. (2006). Standardized assessment of cognitive functioning during development and aging using an automated touchscreen battery. Archives of Clinical Neuropsychology, 21(5), 449–467. https://doi.org/10.1016/j.acn.2006.06.005

Costa, D. I., Azambuja, L. S., Portuguez, M. W., & Costa, J. C. (2004). Neuropsychological assessment in children. Jornal de Pediatria, 80(2), 111–116.

Costa-López, B., Lavigne-Cerván, R., Collado-Valero, J. A., Juárez-Ruiz de Mier, R., & Navarro-Soria, I. (2023). The influence of emotional regulation and cognitive flexibility on sleep habits in Spanish children and adolescents through the lens of parents. Children, 10(8). https://doi.org/10.3390/children10081390

Dahlstrom-Hakki, I., Asbell-Clarke, J., & Rowe, E. (2019). Showing is knowing: The potential and challenges of using neurocognitive measures of implicit learning in the classroom. Mind, Brain, and Education, 13(1), 30–40. https://doi.org/10.1111/mbe.12177

Davis, D. W., Burns, B. M., Wilkerson, S. A., & Steichen, J. J. (2005). Visual perceptual skills in children born with very low birth weights. Journal of Pediatric Health Care, 19(6), 363–368. https://doi.org/10.1016/j.pedhc.2005.06.005

Davis, E. E., Pitchford, N. J., & Limback, E. (2011). The interrelation between cognitive and motor development in typically developing children aged 4-11 years is underpinned by visual processing and fine manual control. British Journal of Psychology, 102(3), 569–584. https://doi.org/10.1111/j.2044-8295.2011.02018.x

Diamond, A. (2013). Executive functions. Annual Review of Psychology, 64, 135–168.

Diaz-Orueta, U., Rogers, B. M., Blanco-Campal, A., & Burke, T. (2022). The challenge of neuropsychological assessment of visual/visuo-spatial memory: A critical, historical review, and lessons for the present and future. Frontiers in Psychology, 13. https://doi.org/10.3389/fpsyg.2022.962025

Dörrenbächer, S., Müller, P. M., Tröger, J., & Kray, J. (2014). Dissociable effects of game elements on motivation and cognition in a task-switching training in middle childhood. Frontiers in Psychology, 5. https://doi.org/10.3389/fpsyg.2014.01275

Duma, G. M., Danieli, A., Morao, V., Da Rold, M., Baggio, M., Toffoli, L., Zanatta, A., Vettorel, A., Bonanni, P., & Mento, G. (2021). Implicit cognitive flexibility in self-limited focal epilepsy of childhood: An HD-EEG study. Epilepsy and Behavior, 116. https://doi.org/10.1016/j.yebeh.2020.107747

Eiberg, M. (2024). Cognitive functioning of children in out-of-home care. Journal of Child and Adolescent Trauma, 17(2), 217–230. https://doi.org/10.1007/s40653-023-00580-8

Ellis, K., Lewington, P., Powis, L., Oliver, C., Waite, J., Heald, M., Apperly, I., Sandhu, P., & Crawford, H. (2020). Scaling of early social cognitive skills in typically developing infants and children with autism spectrum disorder. Journal of Autism and Developmental Disorders, 50(11), 3988–4000. https://doi.org/10.1007/s10803-020-04449-9

Feng, X., Li, R., & Wang, P. (2025). Behavior as a window to the mind — objective daily life assessment of attention and hyperactivity/impulsivity. European Child and Adolescent Psychiatry, 34, 2453–2462. https://doi.org/10.1007/s00787-025-02653-5

Fisher, E. L., Zimak, E., Sherwood, A. R., & Elias, J. (2022). Outcomes of pediatric neuropsychological services: A systematic review. Clinical Neuropsychologist, 36(6), 1265–1289. https://doi.org/10.1080/13854046.2020.1853812

Flaugnacco, E., Lopez, L., Terribili, C., Montico, M., Zoia, S., & Schön, D. (2015). Music training increases phonological awareness and reading skills in developmental dyslexia: A randomized control trial. PLoS ONE, 10(9). https://doi.org/10.1371/journal.pone.0138715

Fletcher, J. M., Lyon, G. R., Fuchs, L. S., & Barnes, M. A. (2018). Learning disabilities: From identification to intervention (2nd ed.). Guilford Press.

Franzen, L., Stark, Z., & Johnson, A. P. (2021). Individuals with dyslexia use a different visual sampling strategy to read text. Scientific Reports, 11(1). https://doi.org/10.1038/s41598-021-84945-9

Furnes, B., & Samuelsson, S. (2009). Preschool cognitive and language skills predicting kindergarten and grade 1 reading and spelling: A cross-linguistic comparison. Journal of Research in Reading, 32(3), 275–292. https://doi.org/10.1111/j.1467-9817.2009.01393.x

García-Hermoso, A. (Ed.). (2024). Promotion of Physical Activity and Health in the School Setting. Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-65595-1

Gioia, G. A., Isquith, P. K., Guy, S. C., & Kenworthy, L. (2015). BRIEF-2: Behavior Rating Inventory of Executive Function. PAR.

Gkintoni, E., & Nikolaou, G. (2024). The cross-cultural validation of neuropsychological assessments and their clinical applications in cognitive behavioral therapy: A scoping analysis. International Journal of Environmental Research and Public Health, 21(8). https://doi.org/10.3390/ijerph21081110

Gran Ekstrand, A. C., Nilsson Benfatto, M., & Öqvist Seimyr, G. (2021). Screening for reading difficulties: Comparing eye tracking outcomes to neuropsychological assessments. Frontiers in Education, 6. https://doi.org/10.3389/feduc.2021.643232

Guimarães, C. A., Li, L. M., Rzezak, P., Fuentes, D., Franzon, R. C., Augusta Montenegro, M., Cendes, F., Thomé-Souza, S., Valente, K., & Guerreiro, M. M. (2007). Temporal lobe epilepsy in childhood: Comprehensive neuropsychological assessment. Journal of Child Neurology, 22(7), 836–840. https://doi.org/10.1177/0883073807304701

Gur, R. C., Richard, J., Calkins, M. E., Chiavacci, R., Hansen, J. A., Bilker, W. B., Loughead, J., Connolly, J. J., Qiu, H., Mentch, F. D., Abou-Sleiman, P. M., Hakonarson, H., & Gur, R. E. (2012). Age group and sex differences in performance on a computerized neurocognitive battery in children age 8-21. Neuropsychology, 26(2), 251–265. https://doi.org/10.1037/a0026712

Haavisto, A., Korkman, M., Holmberg, C., Jalanko, H., & Qvist, E. (2012). Neuropsychological profile of children with kidney transplants. Nephrology Dialysis Transplantation, 27(6), 2594–2601. https://doi.org/10.1093/ndt/gfr650

Hadi, G. A. (2021). Development of Visual Perception Skills in Children. Psychology and Education Journal, 58(3), 1546–1576. www.psychologyandeducation.net

Hamdioui, S., Robert, M. P., Rateaux, M., Clouard, C., & Vaivre-Douret, L. (2022). Neurodevelopmental disorder in a child with high intellectual potential: Contribution of an integrative neuropsychomotor standardized assessment, neuropsychological, and eye-tracking in a single-case study. Advances in Neurodevelopmental Disorders, 6(1), 84–99. https://doi.org/10.1007/s41252-022-00236-y

Harvey, P. D. (2019). Domains of cognition and their assessment. Dialogues in Clinical Neuroscience, 21(3), 227–237. https://doi.org/10.31887/DCNS.2019.21.3/pharvey

Heffelfinger, A. K., & Koop, J. I. (2009). A description of preschool neuropsychological assessment in the P.I.N.T. clinic after the first 5 years. Clinical Neuropsychologist, 23(1), 51–76. https://doi.org/10.1080/13854040801945052

Heine, A., Thaler, V., Tamm, S., Hawelka, S., Schneider, M., Torbeyns, J., de Smedt, B., Verschaffel, L., Stern, E., & Jacobs, A. M. (2010). What the eyes already "know": Using eye movement measurement to tap into children's implicit numerical magnitude representations. Infant and Child Development, 19(2), 175–186. https://doi.org/10.1002/icd.640

Hou, Y., Allen, T., Wolters, P. L., Toledo-Tamula, M. A., Martin, S., Baldwin, A., Reda, S., Gillespie, A., Goodwin, A., & Widemann, B. C. (2020). Predictors of cognitive development in children with neurofibromatosis type 1 and plexiform neurofibromas. Developmental Medicine and Child Neurology, 62(8), 977–984. https://doi.org/10.1111/dmcn.14489

Ide-Okochi, A., Matsunaga, N., & Sato, H. (2022). A preliminary study of assessing gaze, interoception and school performance among children with neurodevelopmental disorders: The feasibility of VR classroom. Children, 9(2). https://doi.org/10.3390/children9020250

Iglesias-Vázquez, L., Voltas, N., Hernández-Martínez, C., Canals, J., Coronel, P., Gimeno, M., Basora, J., & Arija, V. (2023). Importance of maternal iron status on the improvement of cognitive function in children after prenatal iron supplementation. American Journal of Preventive Medicine, 65(3), 395–405. https://doi.org/10.1016/j.amepre.2023.02.006

Johann, V. E., & Karbach, J. (2020). Effects of game-based and standard executive control training on cognitive and academic abilities in elementary school children. Developmental Science, 23(4). https://doi.org/10.1111/desc.12866

Kohlberg, L. (1968). Early education: A cognitive-developmental view. Child Development, 39(4). http://www.jstor.org/stable/1127272

Kotsopoulos, D., Makosz, S., Zambrzycka, J., & Dickson, B. A. (2021). Individual differences in young children's visual-spatial abilities. Early Child Development and Care, 191(14), 2246–2259. https://doi.org/10.1080/03004430.2019.1699918

Kreidler, K., Vuolo, J., & Goffman, L. (2023). Children with developmental language disorder show deficits in the production of musical rhythmic groupings. Journal of Speech, Language, and Hearing Research, 66(11), 4481–4496. https://doi.org/10.1044/2023_JSLHR-23-00197

Kuwabara, M., & Smith, L. B. (2012). Cross-cultural differences in cognitive development: Attention to relations and objects. Journal of Experimental Child Psychology, 113(1), 20–35. https://doi.org/10.1016/j.jecp.2012.04.009

Lawrence, V., Houghton, S., Douglas, G., Durkin, K., Whiting, K., & Tannock, R. (2004). Executive function and ADHD: A comparison of children's performance during neuropsychological testing and real-world activities. Journal of Attention Disorders, 7(3), 137–149. https://doi.org/10.1177/108705470400700302

Lezak, M. D., Howieson, D. B., Bigler, E. D., & Tranel, D. (2012). Neuropsychological assessment (5th ed.). Oxford University Press.

Lichtenstein, J. D., Erdodi, L. A., & Linnea, K. S. (2017). Introducing a forced-choice recognition task to the California Verbal Learning Test–Children's Version. Child Neuropsychology, 23(3), 284–299. https://doi.org/10.1080/09297049.2015.1135422

Liguoro, I., Pilotto, C., Tuniz, F., Toniutti, M., Cogo, P., & Zilli, T. (2025). Prospective analysis on possible changes of cognitive functions in children on follow-up for brain tumor. Child's Nervous System, 41(1). https://doi.org/10.1007/s00381-025-06751-2

Lindquist, B., Persson, E. K., Uvebrant, P., &

Carlsson, G. (2008). Learning, memory and executive functions in children with hydrocephalus. Acta Paediatrica, International Journal of Paediatrics, 97(5), 596–601. https://doi.org/10.1111/j.1651-2227.2008.00747.x

Loukusa, S., Mäkinen, L., Kuusikko-Gauffin, S., Ebeling, H., & Leinonen, E. (2018). Assessing social-pragmatic inferencing skills in children with autism spectrum disorder. Journal of Communication Disorders, 73, 91–105. https://doi.org/10.1016/j.jcomdis.2018.01.006

Luciana, M., & Nelson, C. A. (2002). Assessment of neuropsychological function through use of the Cambridge Neuropsychological Testing Automated Battery: Performance in 4- to 12-year-old children. Developmental Neuropsychology, 22(3), 595–624. https://doi.org/10.1207/S15326942DN2203_3

Magallón, S., Narbona, J., & Crespo-Eguílaz, N. (2016). Acquisition of motor and cognitive skills through repetition in typically developing children. PLoS ONE, 11(7). https://doi.org/10.1371/journal.pone.0158684

Mahani, K. M., & Shahrbabak, M. B. (2011). Visual perceptual skills in normal children aged 7 to 13 years in Tehran City. Rehabilitation, 11(4), 8–14.

Malmberg, L. E., Mwaura, P., & Sylva, K. (2011). Effects of a preschool intervention on cognitive development among East-African preschool children: A flexibly time-coded growth model. Early Childhood Research Quarterly, 26(1), 124–133. https://doi.org/10.1016/j.ecresq.2010.04.003

Martarelli, C. S., & Mast, F. W. (2011). Preschool children's eye-movements during pictorial recall. British Journal of Developmental Psychology, 29(3), 425–436. https://doi.org/10.1348/026151010X495844

Miatton, M., De Wolf, D., François, K., Thiery, E., & Vingerhoets, G. (2007). Neuropsychological performance in school-aged children with surgically corrected congenital heart disease. Journal of Pediatrics, 151(1). https://doi.org/10.1016/j.jpeds.2007.02.020

Morelli, F., Aprile, G., Martolini, C., Ballante, E., Olivier, L., Ercolino, E., Perotto, E., & Signorini, S. (2022). Visual function and neuropsychological profile in children with cerebral visual impairment. Children, 9(6). https://doi.org/10.3390/children9060921

Natalia, M. Y. A., & Azwar, S. (2020). Development of visual perception test for children aged 3-8 years. Research, Society and Development, 9(10), e3689108849. https://doi.org/10.33448/rsd-v9i10.8849

Neri, M. L., Guimarães, C. A., Oliveira, E. P., Duran, M. H., Medeiros, L. L., Montenegro, M. A., Boscariol, M., & Guerreiro, M. M. (2012). Neuropsychological assessment of children with rolandic epilepsy: Executive functions. Epilepsy and Behavior, 24(4), 403–407. https://doi.org/10.1016/j.yebeh.2012.04.131

Newberry, K. E. (2025). Pay attention! A comparative analysis of psychological assessments and neurological mechanisms for ADHD within a pediatric population [Dissertation, Antioch University Seattle]. AURA. https://aura.antioch.edu/etds/1127

Operto, F. F., Smirni, D., Scuoppo, C., Padovano, C., Vivenzio, V., Quatrosi, G., Carotenuto, M., Precenzano, F., & Pastorino, G. M. G. (2021). Neuropsychological profile, emotional/behavioral problems, and parental stress in children with neurodevelopmental disorders. Brain Sciences, 11(5). https://doi.org/10.3390/brainsci11050584

Papini, C., Dineen, R. A., Walker, D. A., Thomas, S., & Pitchford, N. J. (2020). Neuropsychological outcomes of children with Optic Pathway Glioma. Scientific Reports, 10(1). https://doi.org/10.1038/s41598-020-59896-2

Parrilla-Escobar, M., Quintana-Velasco, J. L., Maniega-Rubio, A., Imaz-Roncero, C., Geijo-Uribe, S., & Molina, V. (2024). Cognitive and motor alterations in children attending a psychiatric clinic in relation to schizophrenia spectrum family antecedents and thought problems. The Europian Journal of Psychiatry, 38(3). https://doi.org/10.22541/au.170663717.78709953/v1

Pel, J. J. M., Manders, J. C. W., & van der Steen, J. (2010). Assessment of visual orienting behaviour in young children using remote eye tracking: Methodology and reliability. Journal of Neuroscience Methods, 189(2), 252–256. https://doi.org/10.1016/j.jneumeth.2010.04.005

Plourde, V., Hrabok, M., Sherman, E. M. S., & Brooks, B. L. (2018). Validity of a computerized cognitive battery in children and adolescents with neurological diagnoses. Archives of Clinical Neuropsychology, 33(2), 247–253. https://doi.org/10.1093/arclin/acx067

Portaccio, E., Goretti, B., Lori, S., Zipoli, V., Centorrino, S., Ghezzi, A., Patti, F., Bianchi, V., Comi, G., Trojano, M., Amato, M. P., Falcini, M., Moiola, L., Falautano, M., De Caro, M. F., Lopez, M., Vecchio, R., Grossi, P., Bertootto, A., … Gallo, P. (2009). The brief neuropsychological battery for children: A screening tool for cognitive impairment in childhood and juvenile multiple sclerosis. Multiple Sclerosis, 15(5), 620–626. https://doi.org/10.1177/1352458508101950

Prins, P. J. M., Dovis, S., Ponsioen, A., ten Brink, E., & van der Oord, S. (2011). Does computerized working memory training with game elements enhance motivation and training efficacy in children with ADHD? Cyberpsychology, Behavior and Social Networking, 14(3), 115–122. https://doi.org/10.1089/cyber.2009.0206

Rojas-Líbano, D., Wainstein, G., Carrasco, X., Aboitiz, F., Crossley, N., & Ossandón, T. (2019). A pupil size, eye-tracking and neuropsychological dataset from ADHD children during a cognitive task. Scientific Data, 6(1). https://doi.org/10.1038/s41597-019-0037-2

Rosenqvist, J., Lahti-Nuuttila, P., Urgesi, C., Holdnack, J., Kemp, S. L., & Laasonen, M. (2017). Neurocognitive-functions-in-3-to-15-year-old-children-an-international-comparison. Journal Of the International Neuropsychological Society, 23, 367–380. https://doi.org/doi:10.1017/S1355617716001193

Santos, F. H., Mello, C. B., Bueno, F. A., & Dellatolas, G. (2005). Crosscultural differences for three visual memory tasks in Brazilian children. Perceptual and Motor Skills, 101(2), 421–433. https://doi.org/10.2466/pms.101.2.421-433

Schneider, M., Heine, A., Thaler, V., Torbeyns, J., De Smedt, B., Verschaffel, L., Jacobs, A. M., & Stern, E. (2008). A validation of eye movements as a measure of elementary school children's developing number sense. Cognitive Development, 23(3), 409–422. https://doi.org/10.1016/j.cogdev.2008.07.002

Schraegle, W. A., & Babajani-Feremi, A. (2022). Global network alterations of the cognitive phenotypes in pediatric temporal lobe epilepsy. Epilepsy and Behavior, 135. https://doi.org/10.1016/j.yebeh.2022.108891

Scionti, N., Cavallero, M., Zogmaister, C., & Marzocchi, G. M. (2020). Is cognitive training effective for improving executive functions in preschoolers? A systematic review and meta-analysis. Frontiers in Psychology, 10. https://doi.org/10.3389/fpsyg.2019.02812

Semel, E., Wiig, E. H., & Secord, W. A. (2013). Clinical Evaluation of Language Fundamentals (5th ed.). Pearson.

Sepeta, L. N., Casaletto, K. B., Terwilliger, V., Facella-Ervolini, J., Sady, M., Mayo, J., Gaillard, W. D., & Berl, M. M. (2017). The role of executive functioning in memory performance in pediatric focal epilepsy. Epilepsia, 58(2), 300–310. https://doi.org/10.1111/epi.13637

Shearer, C., Goss, H. R., Boddy, L. M., Knowles, Z. R., Durden-Myers, E. J., & Foweather, L. (2021). Assessments related to the physical, affective and cognitive domains of physical literacy amongst children aged 7–11.9 years: A systematic review. Sports Medicine – Open, 7, 37. https://doi.org/10.1186/s40798-021-00324-8

Shi, Y., Hanson, A. C., Schroeder, D. R., Haines, K. M., Kirsch, A. C., Macoun, S., Zaccariello, M. J., & Warner, D. O. (2022). Longitudinal assessment of cognitive function in young children undergoing general anaesthesia. British Journal of Anaesthesia, 128(2), 294–300. https://doi.org/10.1016/j.bja.2021.11.019

Silver, C. H., Ring, J., Pennett, H. D., & Black, J. L. (2007). Verbal and visual short-term memory in children with arithmetic disabilities. Developmental Neuropsychology, 32(3), 847–860. https://doi.org/10.1080/87565640701539717

Tacke, M., Gerstl, L., Heinen, F., Heukaeufer, I., Bonfert, M., Bast, T., Cornell, S., Neubauer, B. A., Borggraefe, I., Baumeister, F. A. M., Baethmann, M., Schreiber-Gollwitzer, B., Bentele, K., Blank, C., Held, J., Blank, H. M., Liebrich, K., Bode, H., Braun, J., … Navratil, C. (2016). Effect of anticonvulsive treatment on neuropsychological performance in children with BECTS. European Journal of Paediatric Neurology, 20(6), 874–879. https://doi.org/10.1016/j.ejpn.2016.07.015

Träff, U. (2013). The contribution of general cognitive abilities and number abilities to different aspects of mathematics in children. Journal of Experimental Child Psychology, 116(2), 139–156. https://doi.org/10.1016/j.jecp.2013.04.007

van der Zee, Y. J., Kooiker, M. J. G., Talamante Ojeda, M., & Pel, J. J. M. (2019). Gestalt perception in children with visual impairments: Item-specific performance and looking behavior. Developmental Neuropsychology, 44(3), 296–309. https://doi.org/10.1080/87565641.2019.1590836

van der Zee, Y. J., Stiers, P. L. J., Lagae, L., & Evenhuis, H. M. (2021). Clinical Assessment of Visual Motion Perception in Children With Brain Damage: A Comparison With Base Rates and Control Sample. Frontiers in Human Neuroscience, 15. https://doi.org/10.3389/fnhum.2021.733054

van't Noordende, J. E., van Hoogmoed, A. H., Schot, W. D., & Kroesbergen, E. H. (2016). Number line estimation strategies in children with mathematical learning difficulties measured by eye tracking. Psychological Research, 80(3), 368–378. https://doi.org/10.1007/s00426-015-0736-z

van Zellem, L., Buysse, C., Madderom, M., Legerstee, J. S., Aarsen, F., Tibboel, D., & Utens, E. M. (2015). Long-term neuropsychological outcomes in children and adolescents after cardiac arrest. Intensive Care Medicine, 41(6), 1057–1066. https://doi.org/10.1007/s00134-015-3789-y

Wells, C. T., Mahone, E. M., Matson, M. A., Kates, W. R., Hay, T., & Horska, A. (2008). Relationship of temporal lobe volumes to neuropsychological test performance in healthy children. Brain and Cognition, 68(2), 171–179. https://doi.org/10.1016/j.bandc.2008.04.004

Williams, M. E., Sando, L., & Soles, T. G. (2014). Cognitive tests in early childhood: Psychometric and cultural considerations. Journal of Psychoeducational Assessment, 32(5), 455–476. https://doi.org/10.1177/0734282913517526

Womelsdorf, T., Thomas, C., Neumann, A., Watson, M. R., Banaie Boroujeni, K., Hassani, S. A., Parker, J., & Hoffman, K. L. (2021). A kiosk station for the assessment of multiple cognitive domains and cognitive enrichment of monkeys. Frontiers in Behavioral Neuroscience, 15. https://doi.org/10.3389/fnbeh.2021.721069

Worrell, V., Evans-Fletcher, C., & Kovar, S. (2002). Assessing the cognitive and affective progress of children. Journal of Physical Education, Recreation & Dance, 73(7), 29–34. https://doi.org/10.1080/07303084.2002.10607844

Xiao, N., Huang, X., Yang, D., Zang, W., Kiselev, S., Bolkov, M. A., Shinwari, K., Tuzankina, I., & Chereshnev, V. (2024). Health-related quality of life in patients with inborn errors of immunity: A systematic review and meta-analysis. Preventive Medicine, 186, 108079. https://doi.org/10.1016/j.ypmed.2024.108079

Yeates, K. O., Bigler, E. D., Dennis, M., et al. (2007). Social outcomes in childhood brain disorder: A heuristic integration of social neuroscience and developmental psychology. Psychological Bulletin, 133(3), 535–556.

Zashchirinskaia, O. V. (2021). Nonverbal patterns of preschooler's perception of visual images with the help of eye-tracker method usage. Current Psychology, 40(1), 442–453. https://doi.org/10.1007/s12144-018-9960-1

Zilli, T., Zanini, S., Conte, S., Borgatti, R., & Urgesi, C. (2015). Neuropsychological assessment of children with epilepsy and average intelligence using NEPSY II. Journal of

Clinical and Experimental Neuropsychology, 37(10), 1036–1051. https://doi.org/10.1080/13803395.2015.1076380

Information about authors

✉ *Winifred Mirikwe Zinachiamaka*. Postgraduate student of Laboratory of Brain Development and Neurocognitive Functions, Department of Psychology, Ural Federal University, Ekaterinburg, Russia.
E-mail: mirikwewinifred@gmail.com

Kiselev Sergey Yurievich. Head of Laboratory of Brain Development and Neurocognitive Functions, Associate Professor of Department of Psychology, Ural Federal University, Ekaterinburg, Russia.
E-mail: s.j.kiselev@urfu.ru

Conflict of Interest

The authors declare no conflict of interest.

Author Contributions

Winifred Mirikwe: Conceptualization, Methodology, Investigation, Writing, Review & Editing. Sergey Kiselev: Conceptualization, Methodology.

Сведения об авторах

✉ *Винифред Мирикве Зиначаимака*. Аспирант лаборатории развития мозга и нейрокогнитивных функций, кафедра психологии, Уральский федеральный университет им. первого президента России Б.Н.Ельцина, Екатеринбург, Россия.
E-mail: mirikwewinifred@gmail.com

Киселев Сергей Юрьевич. Заведующий лабораторией развития мозга и нейрокогнитивных функций, доцент кафедры психологии, Уральский федеральный университет им. первого президента России Б.Н.Ельцина, Екатеринбург, Россия.
E-mail: s.j.kiselev@urfu.ru

Конфликт интересов

Авторы заявляют об отсутствии конфликта интересов.

Вклад авторов

Винифред М.З.: разработка идеи исследования, формулировка целей и задач, выбор методов исследования, проведение сбора данных, подготовка чернового варианта статьи, редактирование и правка текста. Киселев С.Ю.: разработка идеи исследования, формулировка целей и задач, выбор методов исследования.