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Autism assessment for deaf children and young people: adaptations and recommendations

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Abstract

Individuals with co-occurring deafness and autism represent a substantial yet underserved clinical population, and autism assessment in deaf children and young people (DCYP) remains a complex process. This scoping review mapped screening and assessment phase-specific and broader adaptations and recommendations for autism assessment of DCYP. Systematic database searches initially yielded 851 records, of which 17 primary studies published between 2010 and 2025 met inclusion criteria. Articles featured autistic and non-autistic children, parents/family units and professionals, across three countries (UK = 7, US = 9, Brazil = 1) and used quantitative (n = 13) and qualitative approaches (n = 4). Our findings are presented as three themes: (i) screening, (ii) assessment, and (iii) broader process-level adaptations or recommendations. Most studies focused on the assessment phase, particularly adaptations of gold-standard tools for autism assessment in hearing children. The review concludes with recommendations for future exploration, such as a review of post-autism diagnosis support for DCYP.

Autism is characterized by persistent differences in reciprocal social interaction and communication, alongside restricted interests and repetitive behaviors (American Psychiatric Association, 2013). Estimates of autism prevalence in the general population have increased over time, with recent data suggesting rates of up to one in 38 children aged 8–11 years (Maenner et al., 2023). The prevalence of autism among deaf children and young people (DCYP) is widely accepted to be higher than in the hearing population, ranging from 1%–2% (Gallaudet Research Institute, 2011; Szarkowski et al., 2014a), to 3.5% (Beers et al., 2014; Mandell et al., 2005) and as high as 9% (Do et al., 2017). Up to 40% of DCYP have an additional disability (Gallaudet Research Institute, 2011); those who are profoundly deaf more likely to have a co-occurring diagnosis of autism than those with milder levels of deafness (Szymanski et al., 2012). DCYP are at heightened risk of dual or multiple diagnoses due to increased rates of syndromes and broader neurological difficulties (Simonoff et al., 2008; Szymanski et al., 2012; Wright, 2008; Young et al., 2019) as well as underlying etiologies associated with deafness (Agrawal et al., 2018). These include factors such as prematurity (Stephens et al., 2012); in-utero developmental trajectories like congenital cytomegalovirus (Yamashita et al., 2003); and genetic syndromes including Fragile X (McLennan et al., 2011; Miller et al., 2010); CHARGE syndrome (Hartshorne et al., 2005); Trisomy 21 (Richards et al., 2015); and Usher syndrome (Dammeyer, 2012).

Individuals with co-occurring deafness and autism constitute a substantial clinical population yet autism assessment in DCYP has historically been challenging due to: (i) overlapping behavioral phenotypes complicating differential diagnosis (Hall et al., 2017; Shield, 2014); (ii) a lack of validated "gold-standard" autism measures for deaf populations (Szarkowski et al., 2014a), and (iii) a lack of clinical expertise in both deafness and autism (Mood and Shield, 2014; Szarkowski et al., 2014). This scoping review therefore aims to map existing evidence on autism assessment in DCYP.

(i) Overlapping behavioral phenotypes complicating differential diagnosis.

DCYP often experience reduced access to rich and consistent language learning opportunities in their critical years, resulting in language deprivation which can adversely impact executive functioning, empathy, self-regulation, conversational reciprocity, and social relationships (Allgar et al., 2021; Hall, 2017). Many of these features overlap with those seen in autism, as both deafness and autism are closely linked to language and social development, complicating the identification of autism in DCYP (Myck-Wayne et al., 2011; Rosen et al., 2018; Szymanski et al., 2012; Szymanski & Brice, 2008; Wiley & Innis, 2014). This behavioral overlap increases the risk of diagnostic overshadowing (VandenBos, 2007; Young et al., 2019), whereby behaviors explained by multiple factors are erroneously attributed to one diagnosis, resulting in misdiagnosis, missed diagnosis, or delayed

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diagnosis of autism in DCYP (Meinzen-Derr et al., 2014; Young et al., 2019). To reduce the likelihood of diagnostic overshadowing, professionals need to be familiar with behaviors commonly observed in children with sensory impairment and the interaction between co-occurring conditions (Ludwig et al., 2022). Misdiagnosis occurs when behaviors associated with deafness are attributed to autism; missed diagnosis arises when autism-related characteristics are attributed solely to deafness; and delayed diagnosis reflects later identification of autism relative to hearing peers (Mandell et al., 2005). Although parents are widely recognized as experts on their own children and some families recognize concerns earlier than professionals (Wiley & Innis, 2014), many hearing parents have limited understanding of typical development and the diversity of presentations in DCYP, which may contribute to delays in autism identification (Young et al., 2019). Such delays are reflected in findings by Szarkowski et al. (2014a) who reported that the average age at diagnosis of autism for DCYP was 6 years and 4 months, ~3 years later than their hearing counterparts. Importantly, meeting a DCYP and family's needs should be addressed as early as concerns arise and should not be delayed until a diagnosis is confirmed (Wiley & Innis, 2014).

(ii) A lack of validated "gold-standard" autism measures for deaf populations.

Best-practice in autism assessment involves a multi-method, multi-informant approach, incorporating caregiver interviews alongside standardized assessment measures (Aiello et al., 2017; Ludwig et al., 2022). When behavioral presentations overlap, clinicians typically rely on evidence-based, "gold-standard" instruments to support diagnostic decision-making. Prior to the work of Wright et al. (2020), who were the first to modify and validate an assessment measure for use with DCYP, research consistently highlighted a lack of assessment measures specifically designed or validated for identifying autism in DCYP. Thompson and Yoshinaga-Itano (2014) reported that no autism diagnostic instruments had been developed for use with deaf populations, with existing measures at the time heavily influenced by hearing norms and a reliance on verbal communication and auditory cues that limited their validity for DCYP (Hodkinson et al., 2023; Wright et al., 2022). Simply translating or interpreting these measures is insufficient to meet the needs of DCYP, as this approach fails to account for the linguistic, cultural, and developmental experiences of DCYP (Bouclaous et al., 2025).

(iii) A lack of clinical expertise in both deafness and autism.

The process of assessing autism in DCYP is further complicated by limited confidence and expertise amongst professionals, particularly when intersecting cultural and linguistic factors must be considered (Brenman et al., 2017). DCYP who use sign language have distinct social, communicative, and cultural experiences compared with their hearing peers. Szarkowski et al. (2014b) and Wiley and Innis (2014) emphasized the importance of consultation and collaboration across specialists with expertise in autism and deafness, as well as with individuals who serve the child, to support valid diagnostic decision-making. Young et al. (2019) further emphasized the importance of understanding typical and atypical development in DCYP, including ways in which development may differ for DCYP exposed to spoken and/or signed languages, given emerging evidence that autism may manifest differently in signing DCYP. For example, autistic DCYP may reverse the orientation of their palm while signing, resulting in signs that appear "backwards", a feature considered similar to the reversal of personal pronouns by hearing autistic children (Shield et al., 2022; Shield & Cardamone, 2026; Shield & Meier, 2012). Autism may also affect sign language development in other ways that mirror spoken language profiles, including echolalia in sign and pronoun avoidance (Shield et al., 2015; Shield et al., 2016).

In the absence of such expertise, many professionals do not pursue further assessment or onward referral with 60% of families reporting that an autism diagnosis was only achieved because parents themselves pursued additional testing and referrals (Szarkowski et al., 2014a). Beyond diagnostic knowledge, professionals require skills to communicate directly with DCYP and their families to facilitate a valid assessment (Mann et al., 2013; Wright, 2008; Wright et al., 2021).

Stages of the autism diagnostic process

The autism assessment process is best understood as comprising three interconnected stages: screening, assessment, and post-assessment. Screening typically involves brief, standardized screening tools or direct observational measures to determine the likelihood of autism and guide referrals for comprehensive, formal evaluation (Yu et al., 2024). The assessment phase generally includes a structured or semi-structured caregiver interview combined with behavioral observations and developmental assessments (Ozonoff et al., 2005). Autism diagnostic practices have increasingly shifted away from reliance on clinical judgment towards utilizing evidence-based, standardized assessment tools and a multidisciplinary assessment approach (Male et al., 2023; Yu et al., 2024) to better inform clinical decision making (Zwaigenbaum et al., 2021). The post-assessment stage ensures that the results of comprehensive assessment translate into meaningful, individualized intervention goals and management (Zwaigenbaum et al., 2021) informed by the needs of the autistic person (NICE, 2014). Support can assume many different forms including feedback to families, psychoeducation, targeted therapeutic interventions, and parent support groups or peer networks (Norris et al., 2025).

The intersection of deafness and autism is experienced differently by every family (Wiley & Innis, 2014; Young et al., 2019). For many families receiving a formal diagnosis of autism can be unexpected, and they require time to grieve and manage the high levels of stress associated with the dual diagnosis (Wiley et al., 2018; Wiley & Innis, 2014; Young et al., 2019). For other families it can feel like a natural conclusion to a process (Wiley & Innis, 2014; Young et al., 2019) with some parents reporting that it is useful to receive a "label" in order to secure appropriate support and services (Young et al., 2019).

A brief systematic review by Hansen and Scott (2018) highlighted limitations within the broader deaf autism literature and emphasized the need for modified assessment procedures for this group. At the time, no standardized approaches were available. More recently, Corr and Birch (2026) conducted a systematic review, synthesizing findings from six papers to determine what can be learned from empirical research exploring the assessment and identification of autistic DCYP, four of which overlap with this review. Their review included single case studies and focused on four overarching themes: deaf language and culture, professional involvement, assessment measures, and child characteristics leading to the identification of autism.

The objective of this scoping review is to identify, describe and synthesize recent literature exploring existing adaptations or broader recommendations across screening and assessment phases of the DAA process, and to identify common gaps in knowledge and clinical practice. This review makes a novel contribution by drawing on a larger and more diverse body of evidence, including studies evaluating and validating deaf-adapted autism assessment measures and other

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screening and assessment measures. It also extends beyond the diagnostic assessment phase to include screening processes, which have received limited attention previously. The outcomes of the review will be used to inform further research and future development of effective, accessible and culturally appropriate DAA processes for autistic DCYP. The key objectives of this review were:

(1) To map existing adaptations or recommendations across screening and assessment phases of DAA
(2) To identify broader process-level adaptations or recommendations for DAA
(3) To identify common gaps in DAA knowledge and clinical practice

Methods

A scoping review was selected as the most suitable approach for mapping the breadth and variety of existing research evidence on this topic. The present scoping review was approached systematically, so that relevant methodological concerns could be addressed in detail. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist was used to guide the scoping review (Tricco et al., 2018). The scoping review protocol was registered on OSF Registries (10.17605/OSF.IO/FY35K).

Eligibility criteria

Studies were eligible for inclusion if they met five predefined criteria. First, the study population included autistic DCYP aged 0–18 years, parents or caregivers of autistic DCYP, and/or professionals involved in DAA. Second, studies were required to have been published within a 15-year period between January 2010 and January 2025. This timeframe was selected to ensure that the evidence base remained recent and directly applicable to clinical practice, and to include all papers published after the introduction of the Diagnostic and Statistical Manual of Mental Disorders in 2013. Third, only primary research studies, such as case series, were included. Fourth, eligible studies were published in English or available in an English translation. Finally, studies were included if they examined adaptations or recommendations to the screening (e.g., screening measures) and assessment (e.g., diagnostic instruments) stages of the DAA process or broader process-level adaptations or recommendations (e.g., use of British Sign Language (BSL) interpreters).

Studies were excluded if they were published before January 2010; constituted secondary research (e.g., systematic reviews); reported single case studies; comprised grey literature; were unavailable in full text; were published in a language other than English without translation; or did not include the target population (e.g., autistic deaf adults or deaf blind individuals). Studies were also excluded if their outcomes did not relate to the DAA process.

Search strategy

An initial systematic and iterative search strategy was devised with the research team, following JBI guidance (Peters et al., 2020). A keyword search was first conducted using the search terms to obtain article titles and abstracts. All search terms (see Table 1) for each concept were run in one search combined with Boolean operators "OR", then all four search results combined with "AND". The search was initially piloted in one database before implementation to all databases. Electronic databases searches were conducted in: APA PsycInfo, CINAHL Ultimate, MEDLINE Complete, AMED, Embase, Global Health and Ovid Emcare. All database searches were conducted in January 2025 by the first author to locate academic articles related to the topic. Duplicates of identified papers were removed.

Table 1 Summary of search terms associated with DAA in children and young people (words in bold were truncated to include variations in spelling and plurals).

Keyword	Search terms used included
Autism Spectrum Disorder	Autism, ASD, ASC, autism spectrum disorder, autism spectrum condition, Asperger, autistic disorder
Deaf	Deaf, hard of hearing, D/HH, DHH, hearing impaired, hearing loss
Assessment	Assessment, diagnosis, screening, identification, evaluation
Children	Children, young people, paediatric, adolescent

Selection process

Results from each database search were imported into a Microsoft Excel spreadsheet. Following this, the first author independently screened the titles and abstracts to identify whether the papers met the eligibility criteria. A second independent reviewer (AH) screened 20% of the 2015–2025 titles and abstracts. Decisions to include/exclude articles were concordant for 97% of titles and abstracts. Discrepancies that arose in the screening process were resolved through discussion and consensus on inclusion was decided between the two reviewers. Only articles that met inclusion criteria were retrieved and included in full text review. Articles that were not relevant or duplicates were excluded.

The reference lists of all included articles were searched, and additional evidence identified was added. Full text screening was then carried out by the first author, and a second independent reviewer (HSC) conducted full text screening for 100% of the articles. Screening results were recorded, and articles categorized as "included", "excluded" or "unsure". Reviewers agreed for 84% of papers. Discrepancies were resolved through discussion and consensus on inclusion was decided between the two reviewers. Reasons for exclusion were recorded.

Data extraction

Each included paper was individually appraised by the first author, and a data extraction form was completed for each study in Microsoft Excel. The data items were agreed in advance by the research team. These included:

- General information (authors; title; year of publication; journal/-DOI; country of study)
- Aims of study
- Participant characteristics (CYP, parent/family unit or professional; age; gender; deaf or hearing; neurotype; co-occurring diagnoses; hearing levels; hearing device; language modality; ethnicity)

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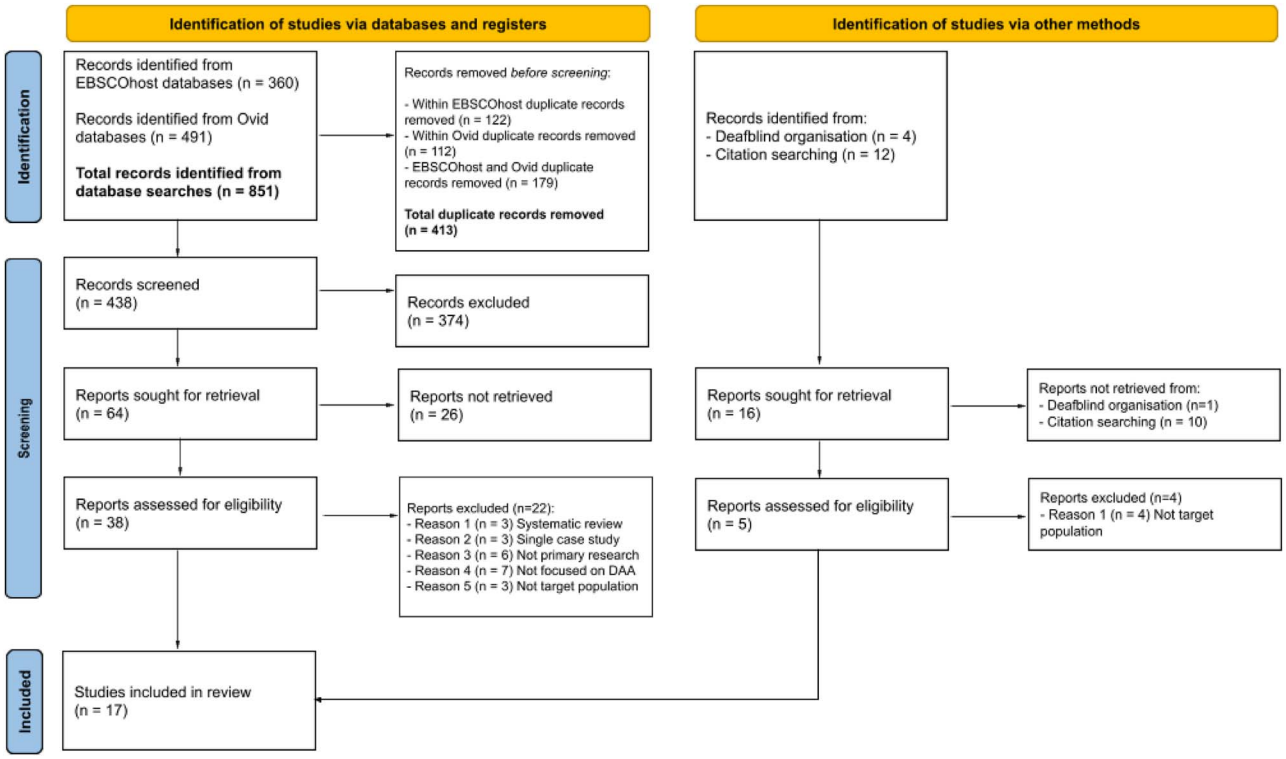


Figure 1 PRISMA flowchart.

- Methodology (experimental design; recruitment strategy; sample size; number of participants; data collection method; data analysis methods)
- Key study findings: that is, adaptations or recommendations for the DAA process

Synthesis

Studies were categorized according to the stage of the DAA process at which the adaptation or recommended modification was applied, including screening, assessment or broader process-level recommendations or adaptations (see table 2).

Results

Selection process

A total of 851 records were identified and included in the selection process. Following the removal of duplicates and title and abstract screening, 38 full-text articles were retrieved and assessed for eligibility, with 16 articles meeting the inclusion criteria. One further article was identified through citation and reference tracking, resulting in 17 studies included in the final review. See PRISMA flow diagram for details of selection process and reasons for exclusion (Fig. 1).

Study characteristics

The 17 included studies covered 15 years of research (January 2010–January 2025) across three countries (UK = 7, US = 9, Brazil = 1). Studies were conducted at National Deaf Child and Adolescent Mental Health Services (NDCAMHS) (n = 7), home (n = 5), specialist centers/clinics/hospitals (n = 4), schools (n = 2), online (n = 1), and generic services (n = 1). The 17 studies reported a total of 1,144 participants, including 16 professionals, eight parents (four individual parents and four two-parent family units), and 1,120 children. None of the studies included in the scoping review examined parents, professionals, or children jointly.

Across the included studies, 13 studies employed quantitative approaches and four used qualitative approaches. All quantitative studies reported descriptive statistical analysis and eight further reported inferential statistical analysis. Of these eight, all performed group comparisons; four examined agreement between measures; four reported sensitivity and specificity; one evaluated interrater reliability; and three used eDelphi methods. The qualitative studies drew on a range of data collection methods. One study combined observation, qualitative interviews and focus group discussions; one used interviews and data collection; one used surveys; and one used narrative data. In terms of analytic techniques, one study reported using qualitative thematic analysis and one used case descriptive analysis, while two other articles did not specify the qualitative analysis used.

Participant characteristics

Characteristics of professionals

Only one study (Brenman et al., 2017) included professionals, ranging from specialist deaf service staff to professionals from mainstream services. There was considerable heterogeneity in terms of discipline, such as psychologists, psychiatrists, specialist deaf outreach workers, and speech and language therapists. The study included 13 hearing and three deaf professionals.

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Table 2 Study characteristics.

Author	Year	Country	Context/ Setting	n	Participant Groups	Gender (M/F)	Age	Hearing level/type of deafness/bilateral or unilateral (if reported)	Device Use	Co-occurring diagnoses (type and no. where specified)	Language modality (no. using modality where specified)	Ethnicity	Study type	Phase-specific adaptation/BR
Allgar et al	2021	UK	NDCAMHS	116	Autistic DCYP 58 DCYP without autism 58	M 91 F 25	2–18 years 116 Autistic DCYP: Mean age 9.6 years DCYP without autism: Mean age 7.5 years	Moderate to profound (40 dB or more) 116 Bilateral 116	NR	Included in study Genetic 26 Developmental 62 Neurological/physical 44 Mental health 25	Spoken English SSE BSL Combination	White 96 Black 3 Asian 9 Mixed 7 Other 1	Quant	Ax BR
Brenman et al	2021	UK	NDCAMHS Generic services	16	Hearing professionals 13 Deaf professionals 3	NR	NR	NR	HAs 2 CIs 1	NR	Spoken English BSL	NR	Qual	BR
Cameron Kellogg et al	2014	US	Home	3	Autistic DCYP 3	M 3	4–9 months (age at first assessment) 3	Severe SN 2 Profound SN 1 Bilateral 3	NR	Included in study Apraxia of speech 1	Sign 1 Spoken language 1 TC 1	White 3	Quant	Pre-Ax
Carr et al	2014	US	Home	83	Autistic DCYP 83	NR	6–72 months 83 Average age 28.6 months Median age 26 months	Permanent unilateral 9 Bilateral high-frequency permanent 6 Bilateral auditory neuropathy syndrome disorder 5 Permanent bilateral mild 14 Permanent bilateral moderate 19 Permanent bilateral moderate to severe 9 Severe 9 Permanent bilateral severe to profound 21	NR	Included in study Global delays and previously diagnosed with other disabilities 5 Other communication disorders 2 Global developmental delay 2	NR	NR	Quant	Pre-Ax
Dale & Neild	2020	US	Online	4	Hearing parents 2 Deaf parents 2	NR	NR	NR	NR	NR	NR	NR	Qual	BR
Hodkinson et al	2023	UK	NDCAMHS	106	Autistic DCYP 65 Autistic hearing CYP 41	M 83 F 23	Autistic DCYP: 0–3 years 4 4–9 years 25 10+ years 36 Autistic hearing CYP: 0–3 years 0 4–9 years 20 10+ years 21	No higher than 40 dB 65	NR	Included in study	NR	White 87 Black 2 Asian 9 Mixed 7 Other 1	Quant	Ax BR

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Table 2 Continued.

Author	Year	Country	Context/ Setting	n	Participant Groups	Gender (M/F)	Age	Hearing level/type of deafness/bilateral or unilateral (if reported)	Device Use	Co-occurring diagnoses (type and no. where specified)	Language modality (no. using modality where specified)	Ethnicity	Study type	Phase-specific adaptation/BR
Machado et al	2014	Brazil	Specialist center (audiological diagnostic center)	39	DCYP at risk of autism 4 DCYP not at risk of autism 3 Hearing CYP 32	M 33 F 8	18 months or older 39 Mean age 2.8 years	Mild 1 Moderate 1 Severe 1 SN 6 Conductive 1 Mixed 0 Unilateral 2 Bilateral 5	NR	Excluded children with any genetic, neurological or metabolic diagnoses	NR Excluded as not conversational in Portuguese 1	NR	Quant	Pre-Ax BR
Meinzen-Derr et al	2014	US	Specialist center (Ear and Hearing Center)	24	Autistic DCYP 24	M 18 F 6	Median age of autism diagnosis 66.5 months (range 33–106)	Mild–moderate 4 Moderately severe 2 Severe-profound 16 Unilateral 2	CIs 14 No hearing device 3 NR 7	Included in study Syndromic aetiology 6	Speech/oral communicators 9 Sign and behavior 9 Behavior 6 AAC 8	NR	Quant	BR
Mood & Shield	2014	US	Home School	8	Autistic DCYP 8	M 6 F 2	5–12 years 8	Severe to profound 8 Bilateral 8	NR	NR	ASL 8	NR	Quant	Ax BR
Myck-Wayne et al	2011	US	Home	4	Family units 4	NR	NR	NR	NR	NR	Spoken English 3 Spoken Spanish 1	Caucasian 2 Latino 2	Qual	BR
Phillips et al	2022	UK	NDCAMHS	122	Autistic DCYP 63 DCYP without autism 59	M 95 F 27	Autistic DCYP: 0–3 years 4 4–9 years 25 10+ years 34 DCYP without autism: 0–3 years 9 4–9 years 34 10+ years 16	At least mild (40 dB) 122 Bilateral 122	NR	Included in study Genetic 26 Developmental 64 Neurological/physical 44 Mental health 25	Spoken English, SSE or BSL 122	White 101 Black 3 Asian 9 Mixed 7 Other 2	Quant	Ax BR
Shield & Meier	2012	US	Home School	17	Autistic signing DCYP 4 DCYP without autism 12 Autistic signing hearing CYP 1	M 10 F 7	Autistic signing DCYP and hearing CYP: 4;6–7;5 years 5 DCYP without autism: 3;7–6;9 years 12 Mean age 4;9	Severe to profound SN 1 Profound SN 3 NR 12 Bilateral 5	No hearing device 4 NR 12	Included in study Hypotonia affecting motor skills 1 ADHD 1	ASL 17	NR	Quant	Pre-Ax Ax BR
Spellun et al	2024	US	Specialist clinic	48	Autistic DCYP 16 DCYP without autism 16 Autistic hearing CYP 16	M 36 F 12	Autistic DCYP: Mean age 7;9 DCYP without autism: Mean age 7;8 Autistic hearing CYP: Mean age 7;6	Reduced hearing 32 Bilateral 26 Unilateral 6	CIs 7 HAs 18 CI and HA 1 BiCROS technology = 1 No hearing device 5	Included in study At least one neurodevelopmental or psychiatric diagnoses 39 At least one neurological diagnosis 8	English 40 Spanish 1 Other 1 Sign language 6 AAC 2	Hispanic/Latino or Spanish 4 Not Hispanic/Latino or Spanish 34 Other 4 Unknown 1 Declined to answer 5	Quant	Pre-Ax Ax

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Table 2 Continued.

Author	Year	Country	Context/ Setting	n	Participant Groups	Gender (M/F)	Age	Hearing level/type of deafness/bilateral or unilateral (if reported)	Device Use	Co-occurring diagnoses (type and no. where specified)	Language modality (no. using modality where specified)	Ethnicity	Study type	Phase-specific adaptation/BR
Szarkowski et al	2014a	US	Hospital (Boston Children's Hospital)	30	Autistic DCYP 30	M 21 F 9	Average age of formal autism diagnosis 6.35	Severe, severe–profound, profound 21 Mild–moderate, moderate 8 Variable 1 Bilateral 30	CIs 10 HAs 11 No hearing device 9	Included in study	ASL or gestural communication 11 Spoken language (English, Spanish, Portuguese, Greek) 10 Combination 9	NR	Quant	Ax BR
Wright et al	2020	UK	NDCAMHS	198	Autistic DCYP 76 DCYP without autism 122	M 154 F 44	Autistic DCYP: 0–3 years 5 4–9 years 29 10+ years 42 DCYP without autism: 0–3 years 15 4–9 years 59 10+ years 48	At least mild in both ears 198 Bilateral 198	NR	Included in study	Spoken English BSL	White 161 Black 7 Asian 16 Mixed 12 Other 2	Quant	Pre-Ax
Wright et al	2022	UK	NDCAMHS	204	Autistic DCYP 78 DCYP without autism 126	M 157 F 46	Autistic DCYP: 2–3 years 6 4–9 years 29 10+ years 43 DCYP without autism: 2–3 years 16 4–9 years 61 10+ years 48	Moderate to profoundly deaf, 40 dB or more 204 Bilateral 204	RE: CI 28 Digital HAs 65 Bilateral CIs10 Analogue HAs 2 Bone anchored HA 3 Never used 29 Not applicable 3 LE: CI 26 Digital HAs 65 Bilateral CIs 12 Analogue HAs 0 Bone anchored HA 2 Never used 30 Not applicable 5	Included in study Genetic 32 Developmental 123 Neurological/ physical 50 Mental health 34	BSL 113 Spoken English 119 SSE 59 Other spoken language 4 Other 19	White 166 Black 7 Asian 16 Mixed 12 Other 2	Quant	Ax BR

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Table 2 Continued.

Author	Year	Country	Context/ Setting	n	Participant Groups	Gender (M/F)	Age	Hearing level/type of deafness/bilateral or unilateral (if reported)	Device Use	Co-occurring diagnoses (type and no. where specified)	Language modality (no. using modality where specified)	Ethnicity	Study type	Phase-specific adaptation/BR
Wright et al	2021	UK	NDCAMHS	122	Autistic DCYP 63 DCYP without autism 59	M 95 F 27	Autistic DCYP: 0–3 years 4 4–9 years 25 10+ years 34 DCYP without autism: 0–3 years 9 4–9 years 34 10+ years 16	*Autistic DCYP: Profoundly deaf RE 56.4% Severely deaf RE 18% Moderately deaf RE 14.1% Profoundly deaf LE 56.4% Severely deaf LE 18% Moderately deaf LE 16.7% DCYP without autism: Profoundly deaf RE 64% Severely deaf RE 14.4% Moderately deaf RE 12.5% Profoundly deaf LE 60.8% Severely deaf LE 16.8% Moderately deaf LE 12.5% Bilateral 122	NR	NR	*Autistic DCYP: BSL 31 Spoken English 48 SSE 26 Other spoken language 1 Other 15 DCYP without autism: BSL 82 Spoken English 71 SSE 33 Other spoken language 3 Other 15	White 101 Black 3 Asian 9 Mixed 7 Other 2	Qual	Pre-Ax BR

Abbreviations: NDCAMHS = National Deaf Child and Adolescent Mental Health Service; DCYP = Deaf children and young people; NR = Not reported; BSL = British Sign Language; ASL= American Sign Language; SSE = Sign Supported English; TC = Total Communication; AAC = Augmentative and Alternative Communication; Ax = Assessment; BR = Broader recommendation; HA = Hearing aid; CI = Cochlear implant; SN = Sensorineural; RE = Right ear; LE = Left ear *Reported from larger study (DIADS—Diagnostic Instruments for Autism and Deaf children Study)

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Characteristics of parents/caregivers

Two studies (Dale and Neild, 2020; Myck-Wayne et al., 2011) each included four parents, represented either as individual parents or two-parent family units of autistic DCYP. Dale and Neild (2020) included two hearing and two deaf parents. Myck-Wayne et al. (2011) included parents of two Caucasian and two Latino families but did not report the hearing status of parents.

Characteristics of children

Fourteen studies reported data on children. Across 11 studies, a total of 575 autistic DCYP or DCYP at risk of autism according to screening measures were included. Seven studies reported on 455 DCYP who were not autistic or not at risk of autism according to screening measures. In addition, three studies included 58 autistic hearing children, and one study included 32 hearing children with autism status not specified.

The mean sample size of studies including children was 80, ranging from three to 204 participants across the 14 studies. Eight of these studies had fewer than 100 children, five included a sample size between 100 and 200 children, and one included 200 or more children.

The studies included child participants aged 0 to 18 years. Three studies reported the ages of each child, six included the mean ages of child participants, and five included numbers of children in each age group. Children in the 4–9 years (n = 342, 31%) and 10+ years (n = 338, 30%) groups were represented most in the research.

All studies included both male and female child participants. Gender was reported for 1,038 children. One study (Carr et al., 2014) did not report participant gender. Across all studies, male participants outnumbered female participants. Overall, 802 males (77%) and 236 females (23%) were represented, consistent with systemic underrepresentation of women within autism research (D'Mello et al., 2022). No studies reported the inclusion of non-binary participants or other gender identities.

Many of the studies made mention of children's co-occurring diagnoses or additional disabilities. Eleven studies included children with intellectual disability or other health or mental health co-morbidities. One study excluded children with any genetic, neurological, or metabolic diagnoses. Two studies did not identify whether children were excluded based on the presence of additional disabilities.

Studies varied in their description of hearing levels for DCYP. Four studies included participants with deafness of at least 40 dB. Classification systems differed with two studies classifying 40 dB as "mild" while two other studies classified 40 dB as "moderate" to "profound". One study included participants with a hearing range no higher than 40 dB. The remaining nine studies provided descriptors of hearing levels only (e.g., reduced hearing, moderate, severe, profound) with no dB level. Thirteen studies identified whether deafness was unilateral or bilateral. One study did not specify unilateral or bilateral deafness. Four studies reported type of deafness, with three identifying participants with sensorineural/permanent deafness and one identifying participants with either sensorineural or conductive deafness.

Five studies reported on child participants' listening device use. Hearing device use was reported for 105 children, with cochlear implants (n = 32, 30%) and hearing aids (n = 31, 30%) the most commonly used devices. It was reported that some children did not use hearing devices (n = 20, 19%). Nine studies did not report on listening device use.

Many of the studies made mention of child language modality in the inclusion or exclusion criteria. Five studies stated that no exclusions were made based on language but did not specify the languages used. One study stated that a participant was excluded as they were not conversational in Portuguese. In eight studies, the language modality or communication of participants was identified, with commonly used languages including spoken English (n = 287, 26%), other spoken languages (n = 20, 1.8%), BSL (n = 226, 20%), Sign Supported English (SSE) (n = 118, 11%) and American Sign Language (ASL) (n = 37, 3.3%).

Eight studies reported on child participants' ethnicity. Ethnicity was reported for 918 children. The most common ethnicities were white (n = 715, 78%) followed by Asian (n = 68, 7%), mixed (n = 52, 6%), not Hispanic/Latino or Spanish (n = 34, 4%), and black (n = 25, 3%). Six studies did not report on ethnicity.

Outcomes

Screening phase

Seven studies reported adaptations or recommendations relevant to the screening phase of DAA. Shield and Meier (2012) reported that signing autistic DCYP frequently produce palm-orientation reversal errors and suggested that autism screening instruments incorporate parent-report items capturing such sign-specific behaviors. Cameron Kellogg et al. (2014) suggested that, although not traditionally used as autism screening tools, both the MacArthur-Bates Communicative Development Inventories (Fenson et al., 2007) and Child Development Inventory (Ireton, 1992) may contribute valuable information to the larger picture of DCYP. They further stated that single timepoint screening is insufficient and recommended repeated screening at multiple ages to detect any loss of skills.

Carr et al. (2014) recommended a double screen approach combining the Language ENvironment Analysis Language and Autism Screen (Yoder et al., 2013) and Social Quotient from the Child Development Inventory (Ireton, 1992). Machado et al. (2014) recommended use of the Clinical Risk Indicators for Early Childhood Development questionnaire (Machado et al., 2014) and the Modified Checklist of Autism in Toddlers (Robins et al., 2001) measures, as well as screening children in hearing evaluation services to achieve more timely identification of DCYP at risk of autism. Wright et al. (2020) proposed use of the Social Responsiveness Scale-2 (SRS-2) Deaf adaptation (Wright, 2020) while Wright et al. (2021) recommended a communication profile based on observations of DCYP across multiple environments to better understand and match language modality and communication needs prior to formal assessment. Finally, Spellun et al. (2024) suggested incorporating the Behavior Assessment System for Children-Third Edition Parent Rating Scale (BASC-3 PRS) (Reynolds et al., 2015), a standardized parent, teacher and self-report measure of emotional, behavioral and adaptive skills. This measure can provide reliable and clinically meaningful information about caregivers' observations across multiple settings (Nordahl-Hansen et al., 2014).

Assessment phase

Eight papers reported adaptations or recommendations relevant to the assessment phase of DAA. Shield and Meier (2012) proposed that assessment instruments should be adapted for DCYP to detect palm-orientation reversal errors when signing, which they found to be a feature of autism in native signers. Spellun et al. (2024) put forward the BASC-3 PRS (Reynolds et al., 2015) as a tool that offers clinically meaningful information to support autism evaluations in DCYP. The

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authors suggested that this tool can detect autism-related behavioral patterns regardless of hearing status.

Szarkowski et al. (2014a) highlighted that diagnosis of autism in DCYP was largely based on clinical presentation as standard autism instruments had not yet been sufficiently adapted for use during assessment with DCYP. Professionals deemed the Autism Diagnostic Interview (ADI-R) and Autism Diagnostic Observation Schedule (ADOS) measures to be irrelevant or invalid for this patient group and felt that in light of communication challenges, autism diagnostic measures were unreliable. Hence, Szarkowski et al. (2014) recommended re-conceptualizing and standardizing assessment measures by professionals with expertise in both autism and deafness to ensure accurate diagnostic decision-making for autistic DCYP in addition to using other measures such as observation and parent reports.

Similarly, Mood and Shield (2014) suggested that the ADOS-2 (Lord et al., 2012), a semi-structured assessment that uses developmentally appropriate social and toy-based interactions, can provide clinically meaningful information for differential diagnosis when applied flexibly within clinical contexts rather than strictly according to standardized procedures. For example, although the manual specifies that module selection should be based on spoken language level and that signs are not equivalent to words (thus assigning all signing, non-speaking children to Module 1), clinicians may alternatively select modules based on a child's overall sign language ability. Mood and Shield (2014) recommended that, to ensure consistency across providers, modifications require standardization to support consistent administration and interpretation of results for DCYP.

Several studies recommended the use of deaf-adapted autism diagnostic tools. Hodkinson et al. (2023) and Wright et al. (2022) recommended use of the ADI-R Deaf adaptation (Wright et al., 2021), a semi-structured interview specifically modified for use with DCYP. A number of items in the standardized ADI-R are not suitable for assessing DCYP as the interview does not account for sign language development and hence the deaf-adapted version introduces revised scoring descriptors to ensure equivalence of signed and spoken languages. The ADI-R Deaf adaptation also incorporates peer-reviewed research, including sign reversal (Shield & Meier, 2012) and challenges using sign language prosody. Phillips et al. (2022) suggested use of the ADOS-2 Deaf adaptation (Phillips et al., 2022), a play and activity-based assessment. The deaf-adapted version modifies the original standardized ADOS-2 by adjusting the delivery and scoring of the assessment. For instance, in terms of delivery, the adapted protocol requires DCYP to communicate using their preferred language, so if a DCYP prefers to use sign language, a deaf signing clinician should lead the assessment. Scoring procedures are also adjusted with some items removed due to insufficient evidence such as how to accurately code the development of babbling in sign language. Allgar et al. (2021) recommended combined use of these measures.

Broader recommendations

Thirteen studies offered broader recommendations or adaptations for the DAA process. Assessment team composition was consistently highlighted as a key factor, with several studies (Brenman et al., 2017; Dale and Neild, 2020; Hodkinson et al., 2023; Meizen-Derr et al., 2014) emphasizing the importance of multidisciplinary team (MDT) collaboration that includes both deaf and hearing professionals and draws on a range of clinical perspectives, such as psychologists, psychiatrists, specialist deaf outreach workers, speech and language therapists, teachers of the deaf and sign language interpreters. Mood and Shield (2014) highlighted the need for multiple sources of information to feed into the assessment process and cautioned that standardized tools should never be used in isolation. Allgar et al. (2021) recommended that assessments undertaken by teams lacking specialist expertise, such as community child health centers, should be supported by specialist MDT comprised of deaf and hearing clinicians, such as NDCAMHS.

Training and expertise of clinicians was highlighted in nine studies (Dale and Neild, 2020; Hodkinson et al., 2023; Machado et al., 2014; Mood and Shield, 2014; Myck-Wayne et al., 2011; Phillips et al., 2022; Shield & Meier, 2012; Szarkowski et al., 2014a; Wright et al., 2022). Machado et al. (2014), Myck-Wayne et al. (2011), and Szarkowski et al. (2014a) emphasized the need for increased awareness of dual diagnosis and early screening, as well as additional training for professionals working across autism and deafness, including for audiologists and early intervention professionals. Shield and Meier (2012) suggested that clinicians and educators be aware and trained in identifying palm orientation reversal errors in signing DCYP and consider these as possible red flags warranting further autism assessment. Phillips et al. (2022) recommended that the lead clinician in DAA should have sufficient knowledge of the deaf lived experience while both Mood and Shield (2014) and Szarkowski et al. (2014) emphasized that DAA requires nuanced clinical judgment and training in both deafness and autism to maximize the usefulness of measures such as the ADOS-2. Wright et al. (2022) recommended improved training in the use of validated, deaf-adapted measures to enable more community services to deliver appropriately modified assessments.

Language use within assessments was frequently mentioned. Several studies, including Dale and Neild (2020), highlighted the need for greater understanding of DCYP and deaf parents' language backgrounds and communication preferences, and that assessments be conducted in the child or family's preferred language, rather than relying on interpreters wherever possible. Phillips et al. (2022) stated that for a DCYP whose first language is sign language, clinicians administering the ADOS-2 Deaf adaptation must be fluent signers. Similarly, Wright et al. (2022) recommended that when parents are deaf or use BSL, a deaf BSL-using clinician should administer the ADI-R Deaf adaptation. Wright et al. (2021) further recommended clear parameters for assessing abstract language comprehension within the DAA process, emphasizing that assessments must be conducted in the DCYP's first language and that their linguistic background requires careful consideration. When direct communication is not possible, Dale and Neild (2020) and Phillips et al. (2022) recommended the use of trained interpreters with specific DAA knowledge, while minimizing reliance on parents or family members for interpretation.

Finally, Brenman et al. (2017) recommended the use of an intersectionality framework to provide sensitive diagnoses, recognizing the interaction of mental health and deaf culture, and the diversity of deaf lived experiences.

Discussion

This scoping review highlights emerging but uneven evidence relating to adaptations and broader recommendations across the DAA screening and assessment phases. The existing literature between 2010–2025 is small (n = 17) and geographically limited, with a strong US (n = 9) and UK (n = 7) focus. The studies predominantly focus on children with very limited inclusion of parents and professionals despite their central role in the DAA process. None of the studies examined parents,

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professionals, or children jointly. The samples were largely comprised of white, male and school-aged children with these imbalances limiting the generalization of findings. Most studies focused on adaptations or recommendations within the assessment phase of DAA, particularly the modification and validation of diagnostic measures, and many studies provided broader process-level recommendations.

Studies examining the DAA screening phase is emerging; however, evidence regarding adaptations or recommendations for this phase remains limited. While several studies identified promising screening measures, only one measure (SRS-2 Deaf adaptation) has been adapted and validated for use with DCYP. The authors report that this measure can successfully distinguish between autistic and non-autistic DCYP and demonstrates good test–retest reliability. Commonly used autism screening measures developed for hearing populations, such as the M-CHAT and Social Communication Questionnaire (Rutter et al., 2003), have not been validated for use with DCYP and require further research to determine their appropriateness for this population. While structured autism measures can provide valuable information, Wiley and Innis (2014) argued that clinicians should engage families in open discussions during the screening process in order to facilitate deeper discussions and expand a family's understanding of concerns raised.

Beyond screening measures, several studies examined additional screening considerations, such as repeating screening at multiple ages and a communication profile to gather detailed information about communication preferences. Communication profiles are therefore a crucial component of the screening phase, ensuring DCYP are matched to a clinician with the same communication mode (e.g., DCYP who communicate through BSL are matched with a deaf BSL-using clinician). These findings highlight the need for a broader consensus on screening practices, as reliance on a single deaf-adapted screening measure (SRS-2 Deaf adaptation) is insufficient, and broader recommendations, such as repeated screening at multiple ages, currently stem from isolated studies and therefore require further evidence before they can meaningfully guide practice.

The assessment phase was the most extensively researched stage of the DAA process, with nearly half of the included studies addressing this phase. As recommended by Szarkowski et al. (2014a) and Mood and Shield (2014), multiple studies evaluated adaptations to established gold-standard diagnostic measures such as the ADI-R and ADOS-2, which historically lacked validation for DCYP and provided little or no guidance for assessing both signing or aural DCYP (Hodkinson et al., 2023; Phillips et al., 2022; Wright et al., 2022). For instance, the original ADOS-2 (Lord et al., 2012) administration manual provided no guidance on the use of sign language, and module selection was based on spoken language ability. As a result, signing DCYP were likely to be allocated to Module 1 (preverbal), regardless of their linguistic ability, leading to the administration of developmentally inappropriate tasks and misinterpretation of DCYP's abilities (Mood and Shield, 2014).

Recent developments address some of these limitations. Hodkinson et al. (2023) and Wright et al. (2022) reported on the validity and usefulness of the ADI-R Deaf adaptation with the measure performing well in terms of sensitivity and specificity for both signing and aural DCYP. The measure is at least as good as the original ADI-R used with hearing populations. Similarly, Phillips et al. (2022) suggested the ADOS-2 Deaf adaptation is a helpful addition to the assessment phase with sensitivity and specificity results good enough to recommend its use in clinical practice. Evidence from Allgar et al. (2021) further suggested that when these measures are combined, sensitivity and specificity are improved compared to their use separately. This indicates the value of multi-method assessment within the DAA process.

While these deaf-adapted measures represent significant progress in addressing longstanding gaps in DAA, some shortfalls remain, including the need to examine the use of deaf-adapted measures with larger samples of mild-moderately deaf children, children under 30 months, adolescents, and adults. Current measures have not been adapted to account for known differences in autistic females and there is currently no research investigating the use of these measures in countries with different signed and spoken languages or distinct cultural contexts outside of the UK and US (Allgar et al., 2021). Where validated diagnostic tools are not available, any modifications to the administration or interpretation should be carefully planned, with findings interpreted alongside behavioral observation and clinical expertise (Ludwig et al., 2022). Qualitative information can sometimes be more informative than quantitative tools, particularly when assessing children with sensory impairments (Ludwig et al., 2022).

Additionally, Spellun et al. (2024) identified the BASC-3 PRS as a potentially useful measure in differentiating autism from other developmental conditions, with applicability across screening, assessment and post-assessment phases. Despite the BASC-3 manual providing score profiles based on a small number of DCYP (Reynolds & Kamphaus, 2015) and the findings of Spellun et al. (2024), further validation is required to support its use in autism diagnosis and with signing DCYP.

Although not a specific aim of this paper, it was noteworthy that two studies extended their focus beyond the screening or assessment process and considered the post-assessment phase. Szarkowski et al. (2014) stated that a dual deaf autism diagnosis requires treatment approaches that are tailored and supported by the development of unique treatment protocols. The authors highlighted that autistic DCYP have unique needs arising from the intersection of being deaf and autistic and simply translating or interpreting mainstream post-assessment support is inadequate, as such approaches fail to account for the linguistic, cultural, and developmental experiences of DCYP. As such, existing treatment models are insufficient and optimal treatments for children with this dual diagnosis cannot be achieved by simply combining conventional supports associated with each condition. Additionally, Spellun et al. (2024) recommended the use of the BASC-3 PRS (Reynolds et al., 2015) to support post-diagnostic case conceptualization, and individualized intervention planning, stating that the measure may provide information about a child's profile and offers additional clinically relevant information about individual patterns of functioning that extends beyond simply supporting or refuting whether a DCYP meets diagnostic criteria. The post-assessment phase warrants further investigation.

Across the included studies, there was a consistent emphasis on the need for DAA processes that move beyond tool adaptation alone. A central finding concerned the composition of DAA teams with several studies recommending MDT models that include the expertise of both deaf and hearing professionals and draw on a range of clinical perspectives (Brenman et al., 2017; Dale and Neild, 2020; Hodkinson et al., 2023; Meinzen-Derr et al., 2014). Collaboration among the different professionals working with DCYP is also essential to understanding what may or may not be related to the child being deaf and to avoid attributing all delays solely to them being deaf (Mood and Shield, 2014).

The importance of collaboration is especially critical to DAA, to a greater extent than in autism assessment for children developing an additional spoken language. The recommendation to include deaf professionals within DAA teams recognizes that lived experience of deafness constitutes a form of expertise that cannot be fully attained

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by hearing clinicians through training alone (Mood and Shield, 2014). One study suggested that assessments conducted in mainstream settings would benefit from specialist deaf services support, such as NDCAMHS (Allgar et al., 2021). This suggests that accurate diagnosis may depend on team composition and professional expertise, rather than the use of deaf-adapted measures in isolation. Dependence on a small number of highly specialized services, however, raises questions about access, geographical equity, and sustainability of DAA provision, highlighting the need for more equitable models that balance specialist expertise with capacity-building in mainstream services.

Specialist expertise is required to identify the unique ways autism may present in DCYP. Research has identified differences in the recognition and production of facial expressions (Denmark et al., 2014; Denmark et al., 2019; Singleton et al., 2024) and difficulties matching facial expressions to actions (Szymanski et al., 2012). In addition, behaviors commonly associated with autism in hearing children, such as reduced eye contact, may present differently in autistic DCYP (Denmark et al., 2014). These findings highlight the importance of both assessment measures that account for sign language-specific features and professionals with expertise in deaf development and signed communication. Without such knowledge, false attributions can contribute to diagnostic delays or cause confusion and distress for families. This aligns with Ludwig et al. (2022) who emphasized that specialist expertise in assessing individuals with sensory impairment is an urgent public health priority.

Language use within DAA was another consistently reported theme. The repeated recommendation that assessments be conducted in the child or family's preferred language without use of an interpreter reflects recognition that language is integral to accurate autism diagnosis in DCYP (Dale and Neild, 2020; Phillips et al., 2022; Wright et al., 2022). This finding aligns with Ludwig et al. (2022) who noted that when evaluating DCYP who use ASL, direct communication and assessment by an individual fluent in ASL should be considered best practice. In contrast, for bilingual hearing CYP, assessment outcomes appear less consequential to the language of administration, as administering autism measures in either English or Spanish does not significantly impact autism severity scores (Tafolla et al., 2025). When direct communication with autistic DCYP is not possible and interpreters are required, there is a need for them to have specific DAA training and knowledge, such as understanding the standardized administration procedures (Dale and Neild, 2020; Phillips et al., 2022). Without this, interpreters may compromise the validity of assessments involving nuanced social and communicative behaviors. Insufficient attention given to language accommodations for both parents and DCYP throughout the DAA process can limit the utility and validity of diagnostic measures. Challenges securing appropriate interpreters are echoed in the wider autism literature for hearing bilingual CYP (Davis et al, 2024). Furthermore, using parents or family members as interpreters raises concerns about roles and potential miscommunication of clinical information, impacting diagnostic validity in DAA (Dale and Neild, 2020). Similar concerns have been raised in hearing autism services research, where family members frequently offer support as an interpreter in the absence of trained interpreters, potentially comprising the accuracy and completeness of information conveyed (Davis et al, 2024).

Only one study (Brenman et al., 2017) mentioned the use of a broader conceptual framework, such as intersectionality, to guide DAA practices. This recognizes the complex interaction of deafness and autism and the distinct cultural and linguistic experiences of DCYP, including sign language dialects among Black, Asian and other minoritized communities (Toliver-Smith & Gentry, 2017). Frameworks could support more nuanced clinical decision making, helping professionals provide sensitive diagnoses that acknowledge the diversity of deaf experiences.

Implications

The findings of this scoping review have important implications for clinical practice and future research. The review highlights the need for more equitable DAA. Currently, accurate diagnosis appears to be heavily reliant on the availability of MDTs that include deaf and hearing professionals with expertise in both deafness and autism, such as is found in NDCAMHS. Dependence on such specialist provision raises concerns about geographic inequity, variable diagnostic quality, and sustainability. These findings indicate an urgent need for national and international health systems to prioritize the development of equivalent specialist services as well as capacity building in mainstream services.

Another key implication relates to the emergence of validated deaf-adapted diagnostic tools, such as the SRS-2 Deaf adaptation, ADI-R Deaf adaptation, and ADOS-2 Deaf adaptation for use with BSL-using DCYP. The development of these tools addresses long-standing barriers for this group. Their availability strengthens the case for establishing standardized national or international DAA protocols and moving away from reliance on measures developed for hearing populations. Despite research findings making it clear that the availability of deaf-adapted tools is necessary (Allgar et al., 2021; Hodkinson et al., 2023; Phillips et al., 2022; Wright et al., 2022), they are insufficient on their own to ensure diagnostic accuracy. Across the studies, there was consistent emphasis on the need for a more holistic and process-oriented approach to DAA. In those cultural and linguistic contexts where there is an absence of validated screening and diagnostic measures for DCYP, clinicians are required to place greater reliance on clinical judgment when assessing autism in DCYP than would typically be the case for hearing populations, further reinforcing the need for specialist training and investment to develop appropriate tools.

Limitations and areas for future research

The evidence base for this review is small, with only 17 studies meeting the inclusion criteria, and heavily weighted toward US and UK contexts. This geographic concentration limits the generalizability of findings to other cultural, linguistic, or healthcare contexts. The participant samples were dominated by white, male and school-aged children, with only three studies including parents or professionals, and none including children, parents or professionals simultaneously. The gender, age, ethnicity, and group imbalance reduces applicability of the findings.

In addition, the review focused exclusively on primary research published between 2010 and 2025 and accessible in English. This decision may have excluded findings from secondary research, single case studies, grey literature or non-English studies, thereby potentially overlooking further important findings. Future reviews may benefit from an exploration of the real-world implementation of deaf-adapted measures identified in this paper.

Future reviews in this area could usefully focus on the development of post-autism diagnosis support for autistic DCYP and their families, accounting for the linguistic and cultural experiences of DCYP

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in order to bring standards of care in line with those available to hearing children. Another avenue for future research might consider the validation of emerging or existing measures across different sign languages to ensure their applicability to deaf populations outside the US and UK.

All authors identify as hearing and neurotypical, and the lead author brings clinical expertise in the field of deaf autism. Future research in this area would benefit from the involvement of deaf co-authors.

Conclusions

This scoping review systematically mapped screening and assessment phase-specific and broader recommendations and adaptations for autism assessment for DCYP. The findings reveal a limited but growing evidence base that is geographically narrow and focused predominantly on the assessment phase and broader recommendations. The emergence of deaf-adapted screening and diagnostic tools marks important progress, but findings recommend that such tools are not used in isolation. Instead, robust assessment relies on other factors such as deaf and hearing MDT, professional expertise, and direct communication in the DCYP's preferred language. To strengthen practice within the UK and internationally, future research must broaden the evidence base and evaluate deaf-adapted tools internationally.

Author contributions

Ros Herman (Conceptualization, Supervision, Writing—review & editing), Aine Hughes (Investigation), and Helen Spicer-Cain (Investigation, Methodology, Project administration, Supervision, Writing—review & editing)

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Conflicts of interest

None declared.

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