



# Initial Evaluation Practices to Identify Young Children with Delays and Disabilities

Rachel Stein<sup>1</sup> · Elizabeth Steed<sup>1</sup>

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## Abstract

The value of early intervention is well demonstrated; however, less is known about the processes that initial evaluation teams use to evaluate and determine young children's eligibility for early intervention (EI) and preschool special education. The present study surveyed multidisciplinary early childhood providers ( $N = 1445$ ) who conduct initial evaluations for young children. Quantitative survey data were analyzed using descriptive analyses to describe the location of initial evaluations, tools used, team membership, and approaches to eligibility determination for children with possible delays and disabilities. Evaluation practices varied greatly, but evaluation teams most often included early childhood special educators and speech and language pathologists, school psychologists or other specialists were less frequently involved. Eligibility approaches were also wide-ranging with percentage delay and standard deviation below the mean most often used; several challenges when determining eligibility were also described. Evaluations for EI and preschool special education were compared to look at variations. Statistically significant differences were found when comparing evaluations focused on eligibility for EI or preschool special education. Implications and future directions are explored.

**Keywords** Initial evaluation practices · Young children · Early intervention · Preschool special education

An estimated 12–16% of young children meet the criteria for developmental delays or disabilities that necessitate intervention (Boyle et al., 2011). Children with developmental delays or disabilities are eligible for a variety of supports and services to support their development. In the USA, approximately 3.3% of young children 0 to 3 years of age participate in early intervention (EI) services and 6.4% of children 3 to 5 years of age participate in preschool special education (U.S. Department of Education, 2018). Eligibility for EI and preschool special education services includes children who have diagnosed conditions (e.g., Down syndrome) or those children with developmental delays that meet the guidelines that are defined by each state (Individuals with Disabilities Education Improvement Act of 2004). Identifying and supporting young children with developmental delays and disabilities is a federal mandate. Specifically, the Child Find provision in the Individuals with Disabilities Education Act (IDEA), 20 U.S.C. § 300.111 requires that

US states promote the early identification and evaluation of young children with delays and disabilities through public awareness efforts and eligibility determination processes for EI and early childhood special education. Further, identifying young children with delays and disabilities is important because early intervention is demonstrated as having a positive impact for children with a variety of needs or risk factors (Sandler, 2019).

## Recommended Assessment Practices During the Initial Evaluation

The initial evaluation is a critical step in the eligibility determination process for identifying young children for EI or preschool special education in the USA. The initial evaluation involves the use of a variety of tools and strategies to understand the child's development in comparison to other children their age and determine if they meet federal and state definitions of a child with a disability (Pretti-Frontczak & Brown, 2023). There are three key recommended components to an effective initial evaluation for EI or preschool special education, including (a) the use of a variety of tools

✉ Rachel Stein  
Rachel.m.stein@ucdenver.edu

<sup>1</sup> University of Colorado Denver, Denver, CO, USA

and measures, (b) completing the initial evaluation in a natural setting, and (c) the use of a transdisciplinary team approach.

### Variety of Tools and Measures

The 2015 amendment of IDEA includes sections on evaluation procedures, §§ 300.304 through 300.306, stating that a comprehensive initial evaluation must utilize a variety of assessment tools and strategies and include parent or caregiver reports. The IDEA 2015 amendments closely mirror the Division for Early Childhood (Division for Early Childhood 2014) recommended assessment practices that promote gathering a variety of information, including collecting information from families, and considering individual needs when selecting appropriate assessment materials and strategies. Triangulation, or looking at a body of evidence from multiple sources of information, is often recommended to avoid the overreliance on a single source of information (El-Ghoroury & Krackow, 2012). Research to date reveals some variability in the number of assessment tools used during initial evaluations for EI and preschool special education, making it unclear whether multiple tools are frequently used as part of assessments. In a 2021 study of early childhood professionals in one state, (Steed & Stein, 2021) reported that most initial evaluations used more than one measure; however, a 2009 study by Williams et al., (2009) found that some professionals used only one assessment tool during initial evaluations of toddlers and preschoolers for potential autism eligibility.

In addition to the singular norm-referenced tools required in many states as part of the eligibility determination process (Macy et al., 2015), other types of assessment measures are also recommended as part of a body of assessment evidence. Specifically, initial evaluations should include observations, caregiver/parent report, and a combination of standardized, curriculum-based, and family-based assessments (de Sam Lazaro, 2017). Authentic assessment tools, which typically incorporate play, familiar activities, and families, may provide more accurate information about young children's development, especially when delays or disabilities are present (Squires, 2015). Recent research examining early childhood professionals' use of assessment tools during initial evaluations suggests a tendency to utilize authentic assessment tools, such as play-based assessments, family interviews, and family questionnaires; missing from frequent tool use were observations in children's classroom settings, teacher reports, and the use of standardized assessments, especially for social-emotional delays and disabilities (Steed & Stein, 2021). This finding suggests that initial evaluation teams are often utilizing a few key assessment tools, perhaps as recommended by their state. While these tools may meet the eligibility determination needs for many children, they

may miss contextual information or provide an incomplete understanding of the child's needs.

### Natural Settings

Best practices indicate that early childhood assessments, including the initial evaluation, should take place in natural settings (National Dissemination Center for Children with Disabilities, 2012; IDEA 34 C.F.R. §300.114, 2011). Natural settings are defined as the places where a young children might typically be found, including homes, childcare settings, libraries, playgrounds, and other environments that young children both with and without disabilities typically frequent. As part of assessing young children, natural settings are advantageous because they provide a clearer picture of a child's functioning within a typical environment, therefore demonstrating their functional skill level (de Sam Lazaro, 2017).

There is a paucity of research and no federal data collected on where initial evaluations take place as part of states' eligibility determination processes. One study in the state of Pennsylvania found that many young children were assessed in a private testing room, rather than a natural setting (Mattern, 2015). Stein & Steed (2022) reported that many early childhood professionals used clinic settings for initial evaluations during the COVID-19 pandemic. For some of these professionals, the clinic setting was a temporary adjustment due to health and safety concerns; however, some early childhood professionals indicated the use of clinic settings for EI and preschool special education initial evaluations in another study conducted prior to the pandemic (Steed & Stein, 2021). There appears to be variability in the location of initial evaluations, with some occurring in natural settings, such as homes and children's childcare or preschool setting, and others being conducted in clinics and central district buildings. Research is currently lacking regarding the percentage of initial evaluations that are conducted in natural settings or the contextual factors influencing the use of natural settings for early intervention and preschool special education initial evaluations.

### Transdisciplinary Team

Federal legal mandates and DEC Recommended Practices (2014) suggest that multiple adults participate in the initial evaluation process for young children. The child's family should be integral to the eligibility determination process, alongside an appropriate array of professionals to assess the child's areas of referral or concern. For EI and preschool special education initial evaluations, a transdisciplinary team is recommended. Transdisciplinary teams must include family members and promote communication and collaboration by encouraging professionals to cross discipline boundaries

and engage in the evaluation together (King et al., 2009). Each professional's expertise is used to assess the child's skills, engage with the family to gather their input about the child's skills and behaviors at home, and make needed adjustments to the evaluation approach based on their collective clinical expertise, such as when the child uses a feeding tube. When professionals work together to administer the initial evaluation, it allows the professionals to use each other's knowledge to problem solve more effectively, reduces the number of questions the family must answer across different professionals, and results in a collaborative evaluation report that is less likely to include conflicting recommendations (Grisham et al., 2023).

Research suggests that EI and preschool special education teams are meeting federal requirements to have team involvement during the initial evaluation from at least two disciplines. For example, Authors (2021) did a state-wide survey of initial evaluation teams, revealing that most EI and preschool special education initial evaluation teams used both early childhood special educators (ECSEs) and speech-language pathologists (SLPs). Participants noted that other specialists (e.g., school psychologists, occupational therapists, psychologists) were called in for particular initial evaluations; however, at times these specialists were hard to find or schedule and were thus not included on the team even though their expertise was desired. Additional research is needed to understand team composition on EI and preschool special education initial evaluation teams at the national level and whether or not team composition may be linked to challenges in eligibility determination.

### Eligibility Determination for EI and Preschool Special Education

Following the administration of the initial evaluation assessment, the team of early childhood professionals and the family must utilize the state's eligibility criteria to make a decision about whether or not the child meets their state's requirements of a child with a disability for EI or preschool special education. Eligibility criteria for young children who may have a developmental delay or disability are different for IDEA Part C (EI) and Part B 619 (preschool special education) and vary by state, given the latitude states have in interpreting the federal eligibility guidelines. At the federal level, children age birth to 3 years, who are assessed for EI, must have a diagnosed condition that is known to have the potential to lead to a delay, or demonstrate a developmental delay in one or more of the areas of cognitive, physical, communication, social-emotional, and/or adaptive development (U.S.C. § 1432(5)(a)). Children who are ages 3 to 5 years of age are determined to have a disability if they experience educational impact due to one or more of the 13 federally defined

eligibility categories, including Autism Spectrum Disorder, Visual Impairment, Hearing Impairment, Emotional Disability, Intellectual Disability, Multiple Disabilities, Orthopedic Impairment, Other Health Impairment, Specific Learning Disability, Speech or Language Impairment, and Traumatic Brain Injury. States may also elect to use a developmental delay category for children 3 through age 9 and set their upper age limit at or before a child is 9 years old (Early Childhood Technical Assistance Center, 2020).

There is very little research on how early professionals make eligibility determination decisions for early intervention or special education. In one study, Sullivan and colleagues (2019) found that many school psychologists made eligibility decisions that were not supported by the evaluation data. In Stein & Steed (2022) study, most early childhood professionals involved in determining eligibility for social emotional delays and disabilities in early intervention and preschool special education used their state's eligibility criteria; however, some expressed decision-making rules that conflicted with the state's eligibility guidelines. Further, when Barton et al., (2016) surveyed early childhood practitioners, they found large disparities across the state and school districts in the procedures, tools, and practices they used to identify young children with autism spectrum disorder. Variations in how professionals are approaching the initial evaluation and using eligibility criteria can lead to missed, inaccurate, or delayed identification. More research is needed to understand how professionals nationally are using initial evaluation information to make decisions about early intervention and preschool special education eligibility, especially given current racial and linguistic disparities in prompt access to services (Delgado & Scott, 2006; Durán et al., 2022; Hurley et al., 2014).

### Current Study

While some research is available regarding early childhood professionals' use of recommended practices during initial evaluations, there is still much to uncover. The current literature base is limited in scope, with some studies occurring in a specific state or with a limited sample size. The current study sought to survey a large number of early childhood personnel across various US states to provide additional descriptive information about recommended practices used during initial evaluations for EI and preschool special education, including (a) the use of a variety of tools, (b) the utilization of natural settings, and (c) team membership. Additional survey items explored how professionals made eligibility decisions and reported challenges in determining eligibility. The current study also compared evaluation practices for EI versus preschool special education. Due to variations in best practices and state guidance for the assessment of young children of different ages as well, as different

state and federal eligibility criteria, the study aimed to learn about similarities and differences for these two different systems for determining young children's needs and related service provision.

Research questions related to initial evaluations included:

1. What tools do initial evaluation professionals use during EI and preschool special education initial evaluations?
2. Where do professionals conduct EI and preschool special education initial evaluations?
3. What do initial evaluation professionals report regarding team membership for evaluations?
4. How do initial evaluation professionals determine eligibility for EI and preschool special education?
5. What challenges do initial evaluation professionals report regarding determining eligibility for EI and preschool special education?

## Methods

### Survey Design and Validation

The present study analyzed participant responses to select items from a larger survey project that was designed to learn about early childhood professionals' initial evaluation practices. The entire survey covered six areas: (a) processes and tools for all delays and disabilities, (b) processes and tools for social-emotional delays and disabilities, (c) family involvement in the initial evaluation, (d) culturally and linguistically responsive evaluation practices, and (e) practices utilized during the COVID-19 pandemic. The 9 items that were a focus for this study pertained to the first area of processes and tools for all delays and disabilities and related to the use of initial evaluation practices used during non-pandemic constraints.

The 40-item survey used for the larger project was created in 2020 using multiple methods, including examining surveys of early childhood professionals that used both closed and open-ended questions (e.g., Pizur-Barnekow et al., 2010) and drawing from a pilot survey project (Steed & Stein, 2021) administered in 2019 to learn about initial evaluation practices in one state. After developing initial items, relying on the pilot survey and the researchers' content expertise, a survey draft was sent to five professionals who conducted initial evaluations for either EI or preschool special education. The professionals who reviewed the survey worked in three different states and had different professional backgrounds (developmental specialist, speech-language pathologist, and early childhood mental health specialist). They provided input and potential edits via email, such as suggesting that particular items allow for multiple response options and recommending additional response options. For instance,

one reviewer noted that we had not included an assessment option that was commonly used in their state, so we edited the survey to include the additional response option. Other similar edits to the survey draft were made based on the reviewers' input prior to national dissemination.

### Participants

To recruit survey participants across US states, snowball sampling was utilized in the spring of 2021, using a publicly available email list to contact state Part C and Part B 619 coordinators and ask them to share the survey with personnel who conducted initial evaluations for EI or preschool special education in their state. In states where the initial email elicited no response, local contacts were used, such as initial evaluation coordinators, district personnel, or university researchers who worked in EI or preschool special education; these individuals were asked to share the survey with professionals they knew who conducted initial evaluations for EI or preschool special education. Data collection took place over the course of April 2021. A total of 1445 respondents from 42 of the 50 states and one US commonwealth and one US territory completed the survey. Some states and territories had higher response rates than others, likely due to state organization, infrastructure, and the way in which the survey was shared among professionals in that state. No incentive was provided for responding to the survey and university IRB approval was obtained prior to dissemination.

Of the 1445 survey respondents, 98% were female and 88% identified as White. Survey respondents could select more than one community in which they worked; most respondents reported that they worked in suburban communities ( $n = 736$ , 51%), closely followed by rural communities ( $n = 693$ , 48%). Fewer respondents described their community as urban ( $n = 303$ , 21%) or "other" ( $n = 35$ , 2.4%). Participants varied in their professional roles, with the largest number of respondents identifying as early childhood special educators ( $n = 468$ , 32%), speech-language pathologists ( $n = 391$ , 27%), and early childhood educators ( $n = 259$ , 18%). Relatedly, participants who held a certification were most likely to report that they were certified as early childhood special educators ( $n = 402$ , 28%) or held a certificate of clinical competence in speech-language pathology ( $n = 347$ , 24%). Forty-four percent ( $n = 631$ ) of respondents reported having a master's degree, 9% ( $n = 133$ ) reported having a doctorate, 7% ( $n = 99$ ) reported having an educational specialist degree, and 20% ( $n = 285$ ) reported having some other type of educational background or degree. Participants had worked on an initial evaluation team for EI or preschool special education for an average of 12.98 years (range 0–47). Participants were asked about their involvement with EI and preschool special education in their current role.

Thirty-four percent ( $n=490$ ) of respondents participated in EI evaluations and decisions, 36% ( $n=521$ ) participated in preschool special education evaluations and decisions, and 30% ( $n=434$ ) of respondents reported engaging in evaluations and decision-making for both EI and preschool special education.

## Data Analysis

The current study analyzed participants' responses to eight demographic questions and 8 closed-ended questions. Prior to beginning the analyses, data were cleaned and screened, beginning by removing blank responses. Variables were then renamed and explored, and items not included in this project were removed to be analyzed later. Descriptive statistics were run, specifically to determine a total number and percentage of responses. The response total was often higher than the 1445 participants as some questions allowed for multiple response options. Chi-square analyses were used to look at differences between groups, specifically to compare early intervention and preschool special education practices. Professionals who engage in both types of evaluations were excluded from the chi-square analyses. A Bonferroni correction was used to reduce the chance of type I errors (Newton & Rudestam, 1999). When chi-square comparisons were significant, standardized residuals were examined.

## Results

### RQ #1: Where Do Professionals Report to Conduct EI and Preschool Special Education Initial Evaluations?

For natural settings, about half of the respondents noted that they conducted initial evaluations in a child's home ( $n=704$ , 49%). A slightly smaller percentage of respondents conducted evaluations in a child's classroom or daycare ( $n=498$ , 35%). On the other hand, many participants routinely conducted initial evaluations outside of natural settings, in clinic settings, including a therapy or clinic room in a school building ( $n=585$ , 41%), and less frequently in a therapy clinic room in a district or county office ( $n=199$ , 14%). There were significant differences in where assessments were conducted when examining evaluations for early intervention versus preschool special education, with early intervention evaluations significantly more likely to use natural settings, such as a child's home or classroom. Specifically, EI evaluations were most likely to take place in a child's home  $\chi^2(2)=580$ ,  $p<0.001$ , whereas preschool special education evaluations were most likely not to take

place in natural settings, but rather in a therapy or clinical room at a school  $\chi^2(2)=605.06$ ,  $p<0.001$  (see Table 1).

### RQ #2: What Tools Do Initial Evaluation Professionals Report to Use During EI and Preschool Special Education Initial Evaluations?

Participants reported using various instruments as their primary evaluation tool during initial evaluations for EI and preschool special education. The Battelle Developmental Inventory ( $n=512$ , 35%) and DAYC ( $n=430$ , 30%) were the most utilized, followed by the HAWAII Early Learning Profile ( $n=193$ , 13%), Transdisciplinary Play-Based Assessment ( $n=167$ , 12%), Bayley Developmental Assessment ( $n=157$ , 11%), Assessment, Evaluation, Programming System ( $n=150$ , 10%), and Mullen Scales of Early Learning ( $n=28$ , 2%). Three hundred and ninety-three (27%) of respondents selected "other" for their primary evaluation tool. The most common "other" tools used were the Developmental Profile ( $n=72$ ), Brigance ( $n=49$ ), Infant-Toddler Developmental Assessment ( $n=47$ ), Early Learning Accomplishment Profile ( $n=42$ ), Preschool Language Scales ( $n=30$ ), and the Peabody Developmental Motor Scales ( $n=23$ ). A variety of other tools were used by smaller numbers of respondents. There were significant differences in the types of assessments used when comparing evaluations for EI versus preschool special education. EI evaluations were more likely to use the Assessment, Evaluation, Programming System  $\chi^2(1)=6.77$ ,  $p<0.001$  and HAWAII Early Learning Profile  $\chi^2(1)=17.88$ ,  $p<0.001$  whereas the Transdisciplinary Play-Based Assessment  $\chi^2(1)=66.34$ ,  $p<0.001$ , was more often used as part of preschool special education evaluations (see Table 1).

Participants reported using various adaptations to their primary tool, including selected subtests or domains ( $n=444$ , 31%), different materials or manipulatives than came with the assessment kit ( $n=281$ , 19%), not involving the family ( $n=129$ , 9%), and modifying test items ( $n=123$ , 9%). Respondents who selected "other" were most likely to note that they did not make any adaptations, made temporary adaptations due to the COVID-19 pandemic (e.g., moved to a virtual format), or involved parents or families in additional ways. When comparing EI and preschool special education evaluations, EI evaluations were more likely to include using different assessment materials  $\chi^2(1)=24.26$ ,  $p<0.001$ , and special education evaluations more likely to only administer selected subtests  $\chi^2(1)=33.73$ ,  $p<0.001$  from assessments and to complete assessments when the family was not present or not involved  $\chi^2(1)=44.42$ ,  $p<0.001$ .

Participants rated their primary evaluation tool on several dimensions, from one "strongly agree" to five "strongly disagree". Participants were most likely to rate



**Table 1** Frequencies and chi-square results by evaluation type ( $N=1445$ )

	Total		Early inter- vention		Preschool special education		$\chi^2$
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
<b>Primary assessment tool</b>							
AEPS	93	6.71	56	4.04	37	2.67	6.77*
Batelle	348	25.13	171	12.35	177	12.78	0.65
Bayley	62	4.48	29	2.09	33	2.38	0.01
DAYC	258	18.63	127	9.17	131	9.46	0.46
HAWAII	110	7.94	73	5.27	37	2.67	17.88*
Mullen	14	1.01	4	0.29	10	0.72	2.02
TPBA	97	7.00	8	0.58	89	6.43	66.34*
Other	268	19.35	129	9.31	139	10.04	0.08
<b>Secondary tools</b>							
Communication tool	429	30.97	131	9.46	298	21.52	88.15*
Motor tool	330	23.83	110	7.94	220	15.88	39.85*
Sensory tool	305	22.02	88	6.35	217	15.67	61.58*
Social-emotional tool	289	20.87	67	4.84	222	16.03	97.09*
Observation in a childcare or preschool	471	34.00	129	9.31	342	24.69	147.81*
Teacher-completed form or checklist	277	20.00	34	2.45	243	17.55	192.31*
Observation of the child during a home visit	394	28.45	241	17.40	153	11.05	50.50*
Family-completed form or checklist	427	30.83	125	9.03	302	21.81	100.98*
Other	140	10.11	79	5.70	61	4.40	5.34
<b>Adaptations</b>							
Use selected subtests/domains	278	20.07	91	6.57	187	13.50	33.73*
Modify test items	79	5.07	45	3.25	34	2.45	3.15
Use different materials or manipulatives	191	13.79	121	8.74	70	5.05	24.26*
Family not present or not involved	85	6.14	11	0.80	74	5.34	44.42*
Other	83	5.99	41	2.96	42	3.03	0.14
<b>Evaluation setting</b>							
A therapy or clinic room in a school building	369	26.64	40	2.89	329	23.75	605.06*
A therapy or clinical room in a district or county administrative office	128	9.24	74	5.34	54	3.90	69.95*
The child's current classroom or daycare setting	309	22.31	114	8.23	195	14.08	197.82*
The child's home	452	32.64	338	24.40	114	8.23	580*
Other	89	6.43	49	3.54	40	2.90	44.45*
<b>Eligibility approach</b>							
Percentage delay	469	33.86	240	17.33	229	16.53	16.61*
Clinical judgment	415	30.0	244	17.62	171	12.35	61.33*
MTSS/RTI	44	3.18	7	0.51	37	2.67	15.39*
Standard deviation below the mean	376	27.15	131	9.46	245	17.69	24.41*
Discrepancy	69	4.98	33	2.38	36	2.60	0.314
Other	68	4.91	34	2.45	34	2.45	0.87

\* $p < 0.001$ 

their instrument as useful in collecting information across developmental domains ( $M = 1.81$ ,  $SD = 0.61$ ), being child-centered ( $M = 1.91$ ,  $SD = 0.72$ ), and easy to administer ( $M = 1.95$ ,  $SD = 0.76$ ) and score ( $M = 1.92$ ,  $SD = 0.76$ ). Fewer respondents thought that their instrument took too long to administer ( $M = 3.26$ ,  $SD = 1.10$ ), included images

and materials that represented culturally and linguistically diverse (CLD) families ( $M = 2.90$ ,  $SD = 1.01$ ), worked well for families and children who speak English as a second language ( $M = 2.94$ ,  $SD = 1.10$ ). Respondents had mixed perceptions about whether their assessment instrument encouraged family involvement ( $M = 2.07$ ,  $SD = 0.90$ ),

accurately captured a child's development ( $M = 2.10$ ,  $SD = 0.71$ ), or worked well for children with significant or multiple disabilities ( $M = 2.71$ ,  $SD = 1.11$ ).

Respondents were asked about any secondary or supplemental evaluation tools they use. Participants noted using various tools, including communication assessments ( $n = 701$ , 49%), motor assessments ( $n = 541$ , 37%), sensory assessments ( $n = 505$ , 35%), social-emotional tools ( $n = 495$ , 34%), childcare/preschool observations ( $n = 756$ , 52%), teacher completed forms or checklists ( $n = 466$ , 32%), home visit observations ( $n = 643$ , 45%), and family-completed forms ( $n = 686$ , 48%). One hundred and eighty-four respondents selected "other" for additional assessment practices. Other responses included the use of multiple supplementary tools ( $n = 39$ ), various supplementary tools depending on the child or referral concerns ( $n = 9$ ), routines-based interviews ( $n = 17$ ), specialty assessment tools (e.g., ADOS,  $n = 10$ ), screening tools (M-Chat,  $n = 7$ , ASQ,  $n = 6$ ), or medical records ( $n = 7$ ).

Comparing secondary and supplementary evaluation tools that were used for EI versus preschool special education evaluations suggested a few differences. Preschool special education evaluations were more likely to include communication  $\chi^2(1) = 88.15$ ,  $p < 0.001$ , motor  $\chi^2(1) = 39.85$ ,  $p < 0.001$ , sensory  $\chi^2(1) = 61.58$ ,  $p < 0.001$ , and social emotional  $\chi^2(1) = 97.09$ ,  $p < 0.001$  tools. Evaluations for preschool special education also were more likely to include a childcare or preschool observation  $\chi^2(1) = 147.81$ ,  $p < 0.001$  and the inclusion of a teacher-completed form or checklist  $\chi^2(1) = 192.31$ ,  $p < 0.001$ , as well as family-completed forms  $\chi^2(1) = 100.98$ ,  $p < 0.001$ . EI evaluations were more likely to include a home visit observation as part of the assessment  $\chi^2(1) = 50.50$ ,  $p < 0.001$ .

### **RQ#3: What Do Initial Evaluation Professionals Report Regarding Team Membership for Evaluations?**

Survey respondents reported a variety of professionals who were more or less likely to participate in the initial evaluation. Responses used a scale of 1 to 5, with 1 being more often involved and 5 being least often involved. Speech-language pathologists ( $M = 1.55$ ,  $SD = 0.62$ ) and early childhood special educators ( $M = 1.83$ ,  $SD = 1.13$ ) were most likely to be involved in initial evaluations. Clinical psychologists ( $M = 3.78$ ,  $SD = 0.53$ ), behavior analysts ( $M = 3.63$ ,  $SD = 0.65$ ), early childhood mental health consultants ( $M = 3.61$ ,  $SD = 0.75$ ), and physicians/pediatricians ( $M = 3.71$ ,  $SD = 0.63$ ) were least often involved in initial evaluations. General education teachers were always involved 21% of the time ( $n = 306$ ), sometimes involved 30% of the time ( $n = 429$ ), rarely involved 18% of the time

( $n = 256$ ), and never involved 6% of the time ( $n = 89$ ). There was a statistically significant difference in general educator involvement when comparing EI and preschool special education evaluations, with general educators more often involved for preschool special education evaluations  $\chi^2(4) = 174.928$ ,  $p < 0.001$ .

### **RQ#4: How Do Initial Evaluation Professionals Determine Eligibility for EI and Preschool Special Education?**

Respondents reported a wide variety of ways that their team determined a young child's eligibility for EI or preschool special education. The most reported form of eligibility determination was to use a percentage delay ( $n = 688$ , 48%), followed by a standard deviation below the mean ( $n = 634$ , 44%) and clinical judgment ( $n = 649$ , 45%). Less frequently used methods for eligibility determination were Multi-Tiered Systems of Support/Response to Intervention ( $n = 95$ , 7%) and a discrepancy between achievement and standardized assessment scores ( $n = 117$ , 8%). One hundred and one respondents answered "other" when asked about eligibility determination. "Other" responses ranged from describing very specific eligibility criteria, such as "At or below the seventh percentile in two or more areas or two standard deviations below the mean in one area" to general references to a type of score (e.g., Z-scores, age equivalents) used to determine eligibility. Many of the "other" responses also mentioned eligibility for EI due to medical diagnosis or automatic eligibility areas. Some participants described very specific state procedures related to eligibility, such as not having a developmental delay category or differences between EI and preschool special education eligibility:

We have a two-tiered system in Michigan; Early On Part C only eligibility criteria that considers percent delay as one factor as well as established conditions as another qualifier. We also determine eligibility based upon Michigan Special Education rules and regulations and consider categories based on criteria set forth by the state laws.

There were statistically significant differences in approaches to determining eligibility for EI or preschool special education (Table 1). Eligibility decisions for EI were more likely to rely on a percentage delay in one or more areas  $\chi^2(1) = 16.613$ ,  $p < 0.001$ , or clinical judgment  $\chi^2(1) = 61.326$ ,  $p < 0.001$  than preschool special education decisions. Decisions to determine eligibility for preschool special education were more likely to use a standard deviation below the mean in one or more area  $\chi^2(1) = 24.406$ ,  $p < 0.001$ , Multi-Tiered Systems of Support or Response to Intervention  $\chi^2(1) = 15.390$ ,  $p < 0.001$ .

## RQ#5: What Challenges Do Initial Evaluation Professionals Report Regarding Determining Eligibility for EI and Preschool Special Education?

Respondents reported that the two most often encountered challenges when making eligibility determinations were as follows: (1) limitations due to the setting where the evaluation took place, such as not being able to see the child with peers ( $n = 541$ , 37.4%) and (2) differentiating between a delay and differences due to language or culture ( $n = 409$ , 28.3%). Less frequently, but sometimes noted challenges to eligibility determinations were not seeing the reported areas of concern during the evaluation ( $n = 321$ , 22.2%); not identifying social or emotional delays ( $n = 256$ , 17.7%); not having all of the information from team members, teachers, or outside providers ( $n = 222$ , 15.4%); not having enough time for a comprehensive evaluation ( $n = 143$ , 9.9%); not being allowed to use clinical judgment ( $n = 133$ , 9.2%); or not having the appropriate tools to detect a child's specific strengths and needs ( $n = 109$ , 7.5%). Fourteen percent ( $n = 202$ ) of respondents indicated that they did not encounter any specific challenges when making eligibility determinations.

Seventy-three (5.1%) respondents selected "other" and listed other challenges they face when making eligibility determinations. Many "other" responses focused on the difficulty of certain types of decisions, such as "whether it is a delay or lack of exposure" or "differentiating between a delay and mental health need." Some responses expressed concerns related to limited information from the setting where evaluations took place or struggling to get information from medical records or other providers. A number of responses also described challenges related to agency or state directives, such as one respondent who stated "our state requires a percentage delay but also mandates the use of an eval tool that does not provide this information, which can make determining eligibility more subjective" or another who said "We can only use clinical judgment for birth-3, there are some 3+ evaluations where clinical judgment would be helpful." Some responses mentioned challenges or limitations due to team-related decisions. Lastly, limitations related to the tools that were available or that teams were directed to use were noted in a number of responses. For instance, one participant shared that a challenge was:

Always having to use the BDI for our main assessment. The state requires us to use it, but is not always the appropriate test to use to gain the knowledge we need to determine eligibility. We have the option to supplement the evaluation with other test, but the BDI is time consuming in itself so completing multiple assessments at an initial evaluation with a toddler is typically not feasible.

## Discussion

Despite the importance of initial evaluations for EI and preschool special education, there is a dearth of empirical research looking at professionals' reported use of recommended evaluation practices. Therefore, the present study aimed to learn more about the tools, settings, team membership, and eligibility determination processes that are used during the initial evaluation for EI and preschool special education. Findings suggested that there were some patterns in the use of particular tools, settings, and team membership as well as variation across participants, especially between those conducting evaluations for EI versus preschool special education. Participants raised various challenges related to determining eligibility, including being limited by an unnatural setting and finding it difficult to discern if a child's delay was developmental or due to cultural or linguistic factors. Findings are explored in the context of existing literature and with links to implications for practice and further research.

### Use of Recommended Evaluation Practices

Many of the initial evaluation practices described by early childhood personnel aligned with recommended approaches, such as conducting evaluations in natural settings like children's homes and preschool, using a variety of tools, and including professionals from at least two disciplines (Division for Early Childhood, 2014). Most participants described administering the initial evaluation in a natural setting; however, a considerable number (57%) used a clinic or therapy setting. Those conducting preschool evaluations were less likely to use a natural setting. This finding is consistent with the prior, although considerably limited research, documenting that many professionals conduct preschool special education initial evaluations in a clinic setting or, if they are in a school, use a separate room to administer the assessment (Mattern, 2015).

Most respondents appeared to use evidence-based standardized (e.g., Battelle Developmental Inventory) and curriculum-based (e.g., Assessment and Evaluation Programming System) assessment tools when conducting initial evaluations for children for developmental delays or disabilities. Generally, the present findings regarding the use of a variety of standardized, authentic, and play-based developmental assessment tools are aligned with the prior literature which recommends using a mix of standardized and authentic assessment approaches with young children suspected of delays or disabilities (Macy et al., 2015). There were variations in the types of assessment tools used for EI versus early childhood special education evaluations, which is not surprising given the age ranges for different assessment tools. Participants suggested that their state's guidance



regarding approved assessment tools influenced their choice of assessments to use during the initial evaluation. Recent findings revealed that there are 19 suggested or approved assessments in 39 US states (Dempsey et al., 2020). Interestingly, respondents in the present study reported the use of a wider range of tools than in prior research, which might be due to the present study including evaluations for both EI and preschool special education. Early childhood professionals rated the assessment tools they used during the initial evaluation highly in terms of their usefulness, with notable exceptions regarding the tools' representation of culturally diverse images and materials and their effectiveness for children and families who spoke English as a second language.

Regarding teaming, study participants indicated that ECSEs and SLPs were the most common members of initial evaluation teams for EI and preschool special education eligibility determination, mirroring Authors' (2021) findings in one state. Initial evaluation teams, at times, involved other discipline-specific professionals, like school psychologists and occupational therapists. When young children attend childcare or preschool, it is recommended that teams involve the general education teachers in the information-gathering process and as part of the eligibility determination team; participants suggested that general education teachers were rarely involved. General education teachers were more likely to be involved for initial evaluations for preschool special education. It makes sense that general education teachers would be involved more for preschool-aged children going through the initial evaluation process, given the low percentage (8%) of children with disabilities from birth to three who receive services in community-based childcare settings (Dasy Center, 2019).

Respondents indicated less than optimal initial evaluation practices, many of which were due to factors beyond the assessor's control, such as state or district guidelines that limited the time available for each initial evaluation. Respondents described additional logistical challenges that prevented them from gathering complete information about children, such as being limited in where they could gather information and an overall inflexibility regarding adaptations to the assessment tools or process. Flexible and multimodal assessment practices are appropriate for young children and are often necessary to lead to accurate information, particularly for CLD families or children with social-emotional needs (El-Ghoroury & Krackow, 2012). Less complete and less accurate assessment information then sets up initial evaluation teams to struggle to make a decision regarding eligibility for EI or preschool special education.

### Determining Eligibility

Early childhood personnel conducting initial evaluations use state-level eligibility guidelines to find children eligible or

ineligible for EI and preschool special education. Evidence suggests that current identification efforts for young children are insufficient, and many children are missed (e.g., Cooper et al., 2009). Prior research has also found that the range of children eligible for services is vastly different depending on the state where a child is living (Dunst and Bruder 2006; Rosenberg et al., 2013). There are a variety of reasons why children are not identified and supported with prompt connection to EI or preschool special education services. It is important to examine professionals' use of and interpretation of eligibility criteria as part of the overall initial evaluation process, given the critical nature of the eligibility decision in children receiving or not receiving services.

The present findings suggest that a percentage delay and standard deviation below the mean were the most frequently used methods to determine eligibility. Our study findings showed that automatic eligibility categories were also often endorsed as the reason a child was eligible for support and services. It is important that early childhood professionals utilize automatic eligibility categories, when possible, as these are the most efficient ways of qualifying children for services. Participating professionals utilized clinical judgment but less frequently than expected, given its prominence in recommended practices. Clinical judgment is important to utilize in eligibility determination for EI and preschool special education because of the difficulty of relying on standardized assessments alone to pick up on all aspects of a young child's developmental delays or disabilities (Bagnato et al., 2008). Research indicates that when early childhood professionals are encouraged to use clinical judgment, they are more efficient and effective at picking up on delays and disabilities in young children (Sheldrick et al., 2019). A likely reason that early childhood professionals continue to not consistently or widely use clinical judgment is that some states do not allow it and in those that do, neither states nor the federal government have created an operational definition or guidelines for professionals to use clinical judgment in eligibility decisions.

The least common methods for determining eligibility were MTSS/RTI and a discrepancy model. EI eligibility was more likely to use a percentage delay and clinical judgment, aligning with prior research that has also found that percent delay was commonly used for determining EI eligibility (Dempsey et al., 2020). Although federal IDEA (2004) policies are meant to be interpreted and further defined at the state-level, the present results suggest that location in a particular state still holds a large influence on whether a child is eligible for EI or preschool special education. The present results suggest further consideration related to geographic inequities given our findings regarding variation in team-to-team and state-to-state eligibility practices.

## Implications for Practice

The present study offers several implications for practice and policy. First, state leaders and agencies that oversee evaluation systems and regulations for early childhood initial evaluations must recognize the need for flexible and adaptable assessments. It is possible that the prescribed approach that some teams are tasked with taking when evaluating young children is contributing to missing and delayed identification of some delays and disabilities (Finkelhor et al., 2021). Second, initial evaluations must not only involve two disciplines but need to carefully consider how those professionals are sharing roles and responsibilities during the evaluation, ideally with a transdisciplinary approach. Data suggests that school psychologists are included in some early childhood evaluation teams and the present findings suggest that additional involvement is sometimes warranted; those coordinating initial evaluation teams should consider which professionals should be involved in which cases. For instance, the infrequent use of mental health professionals as part of evaluation teams or only including mental health professionals when there is a social-emotionally focused referral is problematic. Initial evaluation teams for early intervention and preschool special education should more frequently be including school psychologists, counselors, behavior therapists, social workers, and other appropriately trained mental health professionals if they want to identify young children's social-emotional delays and disabilities. Lastly, the present research has implications for federal and state statutes for eligibility. Specifically, policy should consider how more or less restrictive eligibility criteria impacts the receipt of services for young children over time, given the potential for delays and disabilities to go unmitigated or become increasingly problematic in jurisdictions that rely on narrower criteria. Federal and state eligibility statutes should also have more guidance for the use of diagnoses for efficient eligibility and examples for how and when to utilize clinical judgment.

## Limitations and Future Directions

As with all research, the present study is not without its limitations. Given that there are no existing surveys looking at initial evaluation processes and practices, the study authors developed a new survey for this study to provide descriptive findings regarding where initial evaluations take place, tools used, and approaches to determining eligibility for all evaluations and those where a child presents with social-emotional concerns. Although a number of steps were taken to ensure the integrity of the survey, the lack of a previously utilized and validated survey instrument is a limitation. The completed survey was disseminated to providers involved in initial evaluations across the country by reaching out to

state-level IDEA Part C and Part B coordinators. In instances when states did not respond or were unable to forward the solicitation for participation, the study authors took a more local approach emailing regional coordinators. However, the response rate to the survey varied widely from state to state. Given that state requirements related to both assessment and eligibility vary (e.g., specific eligibility criteria, approved assessments), this is a limitation. Because states vary in their processes and procedures for initial evaluations and are not all equally represented in the present study, results may not generalize across all locations. Finally, given the time period when the data used in the present study was collected (Spring 2021), it is possible that results were influenced by the Covid-19 pandemic, since jurisdictions were at various points in lifting restrictions, which may have influenced evaluation team practices.

Future research should focus on better understanding state-to-state and team composition variation and its impact on young children's experiences with initial evaluation practices. For instance, future research should help identify what factors (e.g., state criteria, specialized providers, systemic barriers) are most important in determining whether best practices in assessment are followed and how they impact the percentage and characteristics of children who are found eligible for services. Given the variations in state-level eligibility criteria, it is important to understand variations in assessment practices by state and the potential long-term implications for young children. For instance, how do rates of receipt of early intervention and preschool special education relate to state policies and participation in special education in K-12 settings? Additionally, there were some potential patterns that were not possible to explore in the current research that may be important to examine in future research. For example, how do evaluation contexts (e.g., urban versus rural) compare in their assessment practices (e.g., tools used, settings available, degree of family involvement, etc.)? In sum, future research should further focus on which elements of initial evaluation practices are most important in evaluating and identifying young children with delays and disabilities and connecting them promptly to educational services and supports.

## Conclusion

Little research has examined the ways in which initial evaluation personnel across the USA approach conducting the initial evaluation for EI and preschool special education. The present research suggests that children and families seeking an EI or preschool special education initial evaluation may have varying experiences depending on the state or district in which they live in terms of the setting of the initial evaluation, the tools used, whether the evaluation is for EI or

preschool special education, team members present, and eligibility criteria utilized. Challenges that initial evaluation teams face, such as access to natural settings, appropriate tools, and specialized professionals, likely impact the initial evaluation experience for children and their families and whether or not they are found eligible for services. This study provides initial information that may serve as a foundation for further exploration into how variations in initial evaluation procedures impact the evaluation process, eligibility, and later EI and preschool special education services.

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**Data Availability** The data that support the findings of this study are not publicly available. The data may, however, be available from the study authors upon reasonable request.

## Declarations

**Ethics Approval and Consent to Participate** University-based IRB was obtained and followed throughout the duration of this study, including informed consent and consent to publish.

**Conflict of Interest** The authors declare no competing interests.

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**Rachel Stein, PhD** is a clinical assistant professor in the School Psychology PsyD program at the University of Colorado Denver. Prior to entering her current position, she was a Harris Fellow in infant and early childhood mental health. She is a Licensed Psychologist, credentialed school psychologist and nationally certified school psychologist. Her scholarly work focuses on prevention and early intervention to support mental health, identifying mental health needs in early childhood, and early childhood workforce development.

**Elizabeth A. Steed, PhD** is an Associate Professor in the Early Childhood Education program at the University of Colorado Denver where she teaches in the early childhood graduate, licensure, and doctoral programs. She has experience working with young children with disabilities and their families in classroom and home-based settings. Dr. Steed has been the principal investigator on grants promoting the early identification and use of supports for young children with disabilities and social emotional difficulties. She has published articles and presented at national and international conferences about evidence-based and culturally relevant practices to support all young children.