Early Childhood Personnel Center

COACHING INTERVENTIONS FOR PRACTITIONERS WHO WORK WITH YOUNG CHILDREN WITH DISABILITIES

OVERVIEW OF SYSTEMATIC REVIEWS

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Background

There is a growing body of literature dedicated to identifying key components of effective adult learning practices, which highlight the importance of coaching in fostering professional growth among educators and caregivers. Notably, coaching improves the use of intervention strategies by practitioners, leading to better child outcomes (e.g., Rush & Shelden, 2011). Artman-Meeker et al. (2015), Dunst et al. (2015), and Snyder et al. (2012) emphasize the role of coaching in facilitating reflective practice, providing sustained feedback, and ensuring the practical application of evidence-based practices (EBPs). Sheridan et al. (2009), Barton et al. (2013, 2018), and Hemmeter et al. (2011) have all shown that coaching helps in the effective implementation of recommended practices, curricular components, and behavioral interventions in early childhood settings.

A metasynthesis conducted by Dunst et al. (2015) identified several critical components of effective professional development, including coaching. These include active and authentic practitioner learning experiences, opportunities for reflection, and ongoing supports and feedback delivered with sufficient duration and intensity. Such findings underscore the necessity of moving beyond exposure and possible rudementary skill acquisition to focusing on fostering sustained, durable changes in professional practices. Doing this helps ensure that practitioners are equipped with the necessary skills and consistently implement these skills to facilitate positive outcomes for children (Dunst et al., 2010). Research by Pianta et al. (2008) supports the idea that professional development programs that incorporate these elements lead to improved instructional practices and child outcomes.

Coaching within early childhood special education often involves a collaborative process (e.g., Snyder et al., 2022) where coaches work closely with educators (e.g., Dinnebeil & McInerney, 2019; Fox et al., 2011; Rush & Shelden, 2019; Snyder et al., 2015) and caregivers (e.g., Shelden & Rush, 2021), offering tailored support and feedback aimed at enhancing their professional competencies. This stands in contrast to traditional professional development approaches, which often rely on one-time workshops or seminars that may lack ongoing support and fail to address individual practitioner needs (cf. Diamond et al., 2013; Snyder et al., 2012). Additionally, professional development for coaches themselves is essential to ensure they possess the skills and knowledge necessary to guide and support educators effectively (Knight, 2007).

Research on coaching in early childhood special education highlights its effectiveness in enhancing educators' skills and improving outcomes for all children. Coaching, as an individualized professional development approach, involves providing ongoing support, feedback, and collaboration to teachers or caregivers. A significant body of research indicates that coaching is most effective when it is sustained over time, tailored to the specific needs of the educators and children, and integrated into the daily routines of the classroom (e.g., Zaslow et al., 2010). Successful coaching models often include elements such as goal setting, observation, and reflective feedback. Coaches can help educators to collaboratively set achievable goals; observe their interactions with children; provide constructive feedback to refine their teaching strategies; allow time for the educator to reflect, contemplate, and refine their practice; and then observe the educator’s refined practice, starting the cycle anew. This

iterative process enhances the educators' competencies and creates a positive and responsive learning environment for children (Powell et al., 2010).

In this overview of reviews we aim to elucidate the efficacy of coaching strategies employed within early childhood special education settings. We systematically review and analyze the breadth and depth of available literature as synthesized in current extant reviews of the coaching literature and provide insights into the nuanced dynamics of coaching interventions. This includes examining the impact of early childhood coaching on practitioner practices and the consequent implications for child outcomes. We identify the conditions under which coaching is thought to be most effective and to highlight practices that can be adopted to enhance the quality of early childhood intervention practices. Our findings are expected to inform policy, practice, and future research, providing a robust foundation for the continued development of coaching as a vital tool for professional development.

Method

Overview of Reviews Methodology

We conducted an overview of reviews of coaching interventions for practitioners working with young children with or at risk for delays or disabilities. This overview was conducted using contemporary guidelines for overview of reviews (e.g., Gates et al., 2020; Lunny et al., 2018; Pollock et al., 2023) and is reported consistent with contemporary standards set forth in the Preferred Reporting Items for Overview of Reviews (Gates et al., 2022). We registered, a priori, a review protocol with the International Prospective Register of Systematic Reviews (PROSPERO; CRD42024535409).

Selection (Inclusion) Criteria

We included systematic reviews that reviewed primary studies examining practitioner coaching interventions (including performance-based feedback) for individuals who were working with young children primarily under the age of 5 years old with or at risk of disabilities. We applied the definitions and conceptualization of coaching of Snyder et al. (2012) and Artman-Meeker et al. (2015) when determining if an intervention met this criterion. To be considered, reviews must have contained primary studies in which at least one participant (practitioner) worked in an early childhood setting in a classroom which included at least one child under the age of five years old who had or was at significant risk of a developmental disability or delay. For this overview, we included systematic reviews that synthesized primary studies that were all conducted using group comparative designs (i.e., randomized controlled trials, quasi-experimental group comparative design studies) or single-case experimental designs. Reviews also must have been published in English in a peer-reviewed journal to be included in this overview.

Selection Methods

We searched Medline, APA PsycINFO, Education Resource Information Center (ERIC), and Cumulative Index of Nursing and Allied Health Libraries (CINAHL) on April 3, 2024, using the search strategies shown in Appendixes A-D. We exported the records from the electronic database searches into Covidence (Veritas Health Innovation, 2020) for screening and review selection. Two reviewers independently screened records by title and abstract based on eligibility criteria, with disagreements resolved through consensus. The remaining records were then screened at the full-text stage, in which the same two screeners independently screened

the full text of each record against the eligibility criteria. We also used "snowball methods" as recommended by Greenhalgh and Peacock (2005) by searching titles from the reference lists of included reviews and using Google Scholar to search for articles that had cited the included reviews. For this overview of reviews, we chose to include systematic reviews of primary studies and did not include reviews that were overview of reviews. During our screening we located two overview of reviews of coaching interventions in early childhood (i.e., Dunst et al., 2015; Walsh et al., 2022). We chose to screen the included reviews of the two extant overviews to search for relevant reviews as part of our snowball supplemental search methods.

Data Extraction

We extracted data for this overview with studies (indicated in this manuscript and tables with the symbol "*u*") as the unit of analysis. Consistent with methodological standards for overview of reviews (e.g., Pollock et al., 2023), data were extracted primarily from the data reported in the published systematic reviews; when necessary, we examined the primary sources (i.e., primary publications and studies) to confirm or extract specific or missing data for some variables. For all data extraction, two reviewers extracted the data independently, with disagreements resolved through discussion and consensus. We extracted data on review characteristics (e.g., search date, search methods, number of primary studies, primary study research design), participant characteristics (e.g., number of coaches, number of practitioners, age, experience), intervention characteristics (e.g., coaching components, coaching schedule and density, format, setting), and outcomes and results. We used the definitions of coaching components and strategies outlined by Artman-Meeker and colleagues (2015) to evaluate characteristics and components of the coaching intervention, with one additional component

seen across the other five reviews included in this overview (i.e., observation). Additional data items were coded based on standard research definitions as reported in the reviews.

To assess the risks of bias or rigor of the included reviews, we used a modified version of the Johanna Briggs Institute's (JBI) Critical Appraisal Checklist for Systematic Reviews and Research Syntheses (Aromataris et al., 2015). The JBI Checklist contains 11 items that assesses the methodological rigor of a review and the extent to which the review has potentially addressed possible risks of bias. For this overview of systematic reviews without meta-analytic syntheses, we chose to eliminate two items from the JBI Checklist that pertain specifically to meta-analytic synthesis – item 8, which assesses methods for combining studies, and item 9, which assesses the likelihood of publication bias. To complete the modified JBI Checklist, two reviewers independently evaluated the other nine items for each review with disagreements resolved through discussion and reaching consensus. Data were analyzed descriptively by creating a summary figure across reviews for each of the nine items we used from the modified JBI Checklist.

Data Analyses and Syntheses

We conducted descriptive and narrative syntheses of the outcomes reported in the six included reviews. We summarized the data we extracted on the research characteristics, participant characteristics, and intervention characteristics descriptively in summary tables, with key findings summarized in the text below. To synthesize the findings of the reviews regarding the effects of coaching on practitioner and child outcomes, we examined the findings of each review and then aggregated across reviews to examine trends and formulate conclusions. We used the corrected covered area (CCA; Pieper et al., 2014) to quantify the

degree of study overlap across included reviews. To calculate CCA, current recommendations are to use "primary publications" (i.e., articles; Pieper et al., p. 370) as the unit of analysis/calculation. The CCA was calculated as $CCA = \frac{N-u}{uc-u}$, where *N* was the number of included primary publications (including double counting), *u* was the number of primary publications (excluding duplicated reports), and *c* was the number of systematic reviews. We used Pieper and colleagues' guidelines for quantifying the level of CCA for slight (0 – 5%), moderate (5 – 10%), high (10 – 15%), or very high (> 15%) levels of overlap. We also used graphical methods (e.g., Bougioukas et al., 2021; Bracchiglione et al., 2022) to supplement CCA alone and to explore overlap further given the pairwise comparisons that are shown by in the graphics.

Results

Review Selection and Characteristics

The electronic database search yielded 2,183 records; 1,877 remained after removing 306 duplicate records. After screening out irrelevant records through title/abstract screening, 81 records remained. We screened the full text of these 81 articles, of which six met our inclusion criteria (Artman-Meeker et al., 2015; Casey & McWilliam, 2011; Elek & Page, 2019; McLeod et al., 2021; McLeod et al., 2024; Yang et al., 2022). Our snowball selection process involved screening the titles of 930 articles; examination of these titles yielded 10 additional records for full-text screening, with no additional articles meeting inclusion criteria. Thus, the total number of included reviews in this overview is six. A review selection flow diagram (adapted from the PRISMA flow diagram detailed by Page et al., 2021) is shown in Figure 1.

Review Characteristics

Characteristics of the six included reviews are shown in Table 1. All six reviews were systematic reviews without a meta-analysis. The reviews included a mixture of group design studies and single case design studies. One review (Casey & McWilliam 2011) included only single case experimental design studies, one review (Yang et al., 2022) included only group design studies, three reviews (Artman-Meeker et al., 2015; McLeod et al., 2021; McLeod et al., 2024) included both single case experimental design studies and group design studies, and one review (Elek & Page, 2019) did not report the designes of the included primary studies. The three reviews (Artman-Meeker et al., 2015; McLeod et al., 2021; McLeod et al., 2024) evaluated the methodological rigor of the primary studies did so using What Works Clearinghouse standards. The reviews utilized the What Works Clearinghouse (WWC) standards that had been published (e.g., WWC Versions 3.0 and 4.0, WWC, 2013; WWC, 2017, respectively) or in development (WWC Single Case Research Design Standards; Kratochwill et al., 2010; 2013) at the time the review was conducted and depending on the type of study being reviewed.

Primary Study Overlap Across Reviews

Across the six reviews, the cumulative number of included primary publications (primary studies) summed to 184. This number represents a gross count of primary studies that includes a count of primary studies that were in included in more than one review. Across reviews, the total number of unique (unduplicated) primary publications (index publications) was 122 (*u* = 122); 74 primary publications were included in one review and 48 primary publications were included in two or three reviews; 34 publications were included in two reviews and 14 publications (Artman-Meeker & Hemmeter, 2013; Domitrovich et al., 2009; Hall et al., 2010;

Hemmeter et al., 2011; Jackson et al., 2006; Landry et al., 2009; Neuman & Cunningham, 2009; Neuman & Wright, 2010; Pianta et al., 2008; Raver et al., 2008; Ruble et al., 2013; Strain & Bovey, 2011; Wasik & Hindman, 2011) were included in 3 reviews.

The overlap of primary publications estimated by the CCA was 10.16%, indicating a high level of overlap. We used the GROOVE tool (Bracchiglione et al., 2022) to create a summary citation matrix showing the percentage of pairwise overlap between reviews, which is shown in Figure 2. Examination of Figure 2 shows that of the 15 nodes (pairwise comparisons of the overlap between reviews), 10 of 15 (67%) had slight overlap of less than 5%. One pairwise comparison (McLeod et al., 2024 and Elek & Page, 2018) had moderate overlap (CCA = 6.8%) and two pairwise comparisons had high overlap (Artman-Meeker et al. and Yang et al., 2022 – CCA = 13.9% and McLeod et al., 2021 and McLeod et al., 2024 – CCA = 10.3%). The reviews with the highest levels of overlap, categorized as very high overlap using CCA, included Yang et al. (2022) and Elek and Page (2018), in which CCA = 22.9% and Artman-Meeker et al. (215) and Elek and Page (2018), in which CCA = 45.7%.

Rigor Appraisal of Included Reviews

Across reviews, the modified JBI Appraisal Checklist generally showed few methodological concerns for the included reviews. Four of six reviews (Artman-Meeker et al., 2015; Casey and McWilliam, 2011; McLeod et al., 2021; McLeod et al., 2024) showed clear evidence for nearly 80% (7 of 9, 78%) criteria. All six reviews met the JBI criteria for three checklist items – clarity of review questions, recommendations for policy and practice, and identification of specific areas for future research. The areas of greatest concern across reviews were the appropriateness of the search strategy and the appropriateness of study appraisal

methods, where 50% of reviews were rated as meeting the JBI criteria with two studies (33%) rated as not meeting the criteria and one study (13%) rated as unclear. The other areas of greatest concern, adequacy of sources for searching, and error minimization in study appraisal and error minimization in data extraction, were rated as not meeting the checklist criteria or as unclear shown in two of six reviews (33%) for three checklist items. A summary graph of the modified JBI Checklist item ratings across reviews is shown in Figure 3.

Participant Characteristics

Practitioner (Coachee) Characteristics

Of the participant categories, the characteristics of the practitioners who were being coached (i.e., coachees) was reported most frequently and fully. Table 2 shows the characteristics of the coachees of the primary studies across the included reviews. All reviews reported the number of coachees, which ranged from 16 to 3,779; 3 reviews reported inclusion of greater than 3,000 practitioners across reviews and 3 reviews reported the number of practitioners was fewer than 200. Additional details of the practitioners were provided in 4 of the 6 reviews (Artman-Meeker et al., 2015; Casey & McWilliam, 2011; McLeod et al., 2021, and McLeod et al., 2024). The experience of the practitioners was reported in four reviews, with a range of 0 to 34 years across reviews; two reviews, McLeod et al. (2021) and McLeod et al. (2024), reported means of 8.5 and 8.0 years, respectively, for practitioner experience. The other characteristic that was consistently reported across reviews was the number of years of education practitioners had at the time of their inclusion in the research. Across reviews, all practitioners were reported to have had a high school degree or equivalent, with many practitioners reported to have earned either a bachelor's or graduate degree.

The setting in which the practitioners served children with disabilities was reported in five reviews (Artman-Meeker et al., 2015; Casey & McWilliam, 2011; McLeod et al., 2021; McLeod et al., 2024; Yang et al., 2022). Across these reviews, classroom was the most frequently reported setting for practice, with more than 50% of primary studies in four of five reviews indicating classrooms as the primary setting; the home setting was the most common setting in the McLeod et al. (2021) review with its focus on the coaching home visitors.

Coach Characteristics

Table 2 shows the characteristics of the coaches of the primary studies across the included reviews. The number of coaches included across studies was indicated in four reviews, with a range of 12 to 252 coaches. Four of six reviews reported the relation of coaches to the research team, with coaches being predominantly staff or graduate students associated with the research team (77 of 98 coaches, 79%); coworkers were the second most common coach role, with 16 (16%) indicated as such across reviews. Beyond the sample size of coaches and role of the coach in relation to the research team, coach characteristics were only reported in two reviews (Artman-Meeker et al., 2015, McLeod et al., 2021). Coaches' experience in a coaching role was reported in two reviews, with one review (Artman-Meeker et al., 2015) indicating 7 of 49 primary studies included coaches with prior experience as a coach and one review (McLeod et al., 2021) reporting an average of 6.7 years of coaching experiences in three primary studies. The Artman-Meeker et al. (2015) and McLeod et al. (2021) reviews also reported the educational attainment of coaches, with both reviews indicating 100% of coaches had at least a bachelor's degree and over 60% of studies indicating at least one coach had a graduate degree.

Child Characteristics

The characteristics of the children with whom the practitioners engaged was reported more infrequently and inconsistently across the six included reviews, with four reviews reporting data on the number of studies including children with disabilities, three reviews reporting the sample size of child participants, and two reviews providing details on the age of the children beyond an indication of the children being "early childhood." The most commonly reported child characteristic related to the number of studies that included children with disabilities, which was reported in three reviews. The percentage of studies reporting data on children with disabilities within a review ranged from 25% (13 of 52 studies; Elek & Page, 2018) to 86% (6 of 7 sutdies; McLeod et al., 2021), with Artman-Meeker et al. (2015) reporting 18 of 43 studies (42%) included children with identified disabilities (with four additional studies reporting inclusion of students at risk of developing disabilities). One review (Casey & McWilliam, 2011) stated that "most classrooms included children who had a diagnosed disability," (p. 71). Other characteristics of children were only reported in two reviews. Artman-Meeker et al. (2015) reported 35 studies reported including 16,141 children with a range of ages from birth to seven years old (reported in 26 studies). McLeod et al. (2021) included child characteristics from six studies, with the total sample being 14 children with a mean age of 2.3 years (range 1.5 to 2.8 years).

Intervention Characteristics

Coaching Components

Components of the coaching interventions, using the modified framework of Artman-Meeker and colleagues (2015), are shown across reviews in Table 3. As seen in Table 3, only

two of 12 components (performance feedback and goal setting/action plans) were reported across primary studies in all six reviews. Among these two components, performance feedback was used in almost all primary studies (M = 96%, range 86% to 100%), with goal setting and use of action plans being reported in fewer than half of the included primary studies (M = 42%, range 11% to 71%). Self-reflection and modeling (inclusive of video and in vivo modeling) were two components that were reported in five of six reviews, with reported use in primary studies of 34% and 33%, respectively. Three of the five most reported components were reported in three or four reviews, thus the sample is smaller and might not be as reliable. Observation was reported in four reviews, with an average use across primary studies of 84% (range 59 to 100%). Planning for practice between sessions was reported in four reviews, with an average reported use of 44% (range 7 to 71%). Of the 12 coaching components extracted from the reviews, role playing and intentional focus on relationship building were the least reported components, with use in an average of 9% and 16% of the primary studies, respectively. These two components were amongst the least reported across reviews however, included in two and three reviews, respectively.

Additional Intervention characteristics

Additional coaching characteristics, including format and dose, are shown in Table 4. As shown in Table 4, a majority of the primary studies included in the reviews involved coaching that was delivered in person where the coach and coachee met face-to-face. The McLeod et al. (2024) review of distance coaching strategies is an exception, although in person activities were included in many of the studies included in their review even with the studies being identified as distance coaching. Three reviews reported data on the format of feedback provided by the

coach to the coachee, with written feedback (including email and text messaging) and verbal feedback being the most frequently used feedback modality.

Some aspect of the density of the coaching was provided in all six reviews. Three reviews provided data on the frequency with which coaching occurred, with most studies providing coaching at least one time per week, reported in 100%, 80%, and 91% of the studies in Casey and McWilliam (2011), McLeod et al. (2021), and McLeod et al. (2024), respectively. A total or range of the number of coaching sessions was provided in three reviews, with Elek and Page (2019) reporting a median of 10 and McLeod et al. (2021) reporting a mean of 6.1 (ranges varied from 1 session to up to 70 sessions). The duration of coaching sessions was reported in two reviews with a median of 60 reported by Elek and Page (2019; range 3 to 300 minutes); Artman-Meeker et al. (2015) reported a similar range of 2 to 300 minutes. Finally, the total weeks of the coaching intervention was reported in four reviews, with Artman-Meeker et al. (2015) and Yang et al. (2022) reporting means of 18 weeks and 49 weeks, respectively, and Elek and Page (2019) reporting a median of 24 weeks. The range of intervention durations was reported to be 1 to 156 weeks across the ranges reported in the four reviews.

A final additional intervention characteristic, the training and preparation of individuals to serve as coaches, was reported in four reviews. Artman-Meeker et al. (2015) provided the most extensive details on the training and preparation for coaches, reporting that only 27 of 49 studies (55%) reported information on this key variable. When reported, they indicated that studies reported including initial training and a coaching protocol most frequently (each used in 14 of 49 studies; 29%). McLeod et al. (2021) also included information on coach training and preparation, reporting that the most common methods, similar to Artman-Meeker et al., were

workshops (e.g., initial training) and written materials (e.g., coaching protocol). McLeod et al. (2021) also indicated that one study reported providing the initial coach training online. McLeod et al. (2024) indicated that the training of coaches was reported less frequently than in the previously mentioned reviews, with it only being mentioned in two (7%) of the primary studies included in their review. Finally, Yang et al. (2022) reported workshops were included in 10 of 33 (30%) of the primary studies included in their review, with an additional four studies (12%) reporting the inclusion of training activities and three studies (9%) reporting the coaching intervention being an element of college coursework.

Outcomes and Review Findings

Table 5 shows a summary of the findings across reviews. While all reviews provided some type of narrative synthesis across reviews, the way in which each review and synthesized reported outcomes was variable. Three reviews (Artman-Meeker et al., 2015; McLeod et al., 2021; McLeod et al., 2024) examined outcomes of primary studies through the evaluation of the WWC Standards. All three reviews found strong support for coaching interventions in methodologically rigorous studies. Artman-Meeker and colleagues found 13 of 32 group design studies met modified WWC Standards, with 7 studies showing positive effects on practitioners' use of teaching strategies to promote child's language and literacy skills, and 12 of 17 single case design studies met the proposed WWC Single Case Design Research Standards, with four studies that met without reservations demonstrating strong effects on improving teachers' behaviors and 8 studies that met the standards with reservations demonstrating moderate effects on improving teachers' behaviors. McLeod and colleagues (2021) found that the one group design study included in their review did not meet the modified WWC Standards,

however, of the six single case research design studies included in their review, four met the single case research design standards (one without reservations and three with reservations), with three of four studies demonstrating strong effects on improving home visitors' use of instructional practices on caregivers. Finally, McLeod et al. (2024) found three of four group design studies met modified WWC Standards and 22 of the 23 single case research design studies met WWC Standards (6 without reservations and 16 with reservations) with 12 strong demonstrations of effect and 6 moderate demonstrations of effects on improving coachees' use of effective instructional practices on children.

The other three reviews used unique methods for examining the effects of practitioner coaching. Casey and McWilliam (2011) provided a narrative synthesis of the consistency of effects for the 19 single case research design studies included in their review when examined using visual analysis. Yang and colleagues (2022) provided the most detailed description of outcomes by providing specific practitioner and child outcomes by study with associated effect sizes for outcomes that were statistically significant. Finally, Elek and Page (2019) provided a synthesis of critical elements of coaching identified from their coding of the included studies. For this analysis, they identified 9 named coaching features or elements (individualization, dose, in situ, practical, collaborative, reflection, modeling, coach expertise, assistance) and indicated the number of studies identifying each feature as critical. In their analysis, individualization was the only feature identified as critical in more than 50% of the included studies (identified as critical in 28 of 51 studies; 55%). The authors noted that many of the elements identified in the research related to coaching structure, including dosage (21 of 51;

41%) and provision of coaching in situ (20 of 51; 39%) were the two next most identified critical features.

Discussion

All six reviews concluded that there was empirical evidence showing that coaching practitioners who work with young children, including children with or at risk of developmental disabilities and delays, leads to increases in recommended adult behaviors and corollary positive findings for child learning and developmental outcomes. This overview included data from 122 unique primary publications (studies) with over 250 coaches, 3,000 practitioners, and 15,000 children. All reviews reported at least one primary study included a child with or at risk of developing a disability or developmental dealy, with reviews reporting the inclusion of at least 25% of studies were inclusive of young children with disabilities. Importantly, noteworthy findings were identified across a variety of adult and child outcomes, suggesting the effectiveness of coaching interventions across a variety of skills. Collectively, this overview provides substantial empirical support for the use of coaching to improve practitioner's instructional practices in early childhood settings.

Some coaching models emphasize components that were less common (e.g., intentional focus on coach/coachee relationships, help with instructional materials, use/provision of manuals). It is possible that more studies than reported across reviews included these components given differences in definitions used across primary studies and research groups. Regardless, to maximize the effectiveness of coaching resources, experimental examination of these components should be undertaken to ensure their use enhances outcomes for practitioners or children.

Areas of Future Research

Although this overview shows significant support for coaching early childhood practitioners, many questions remain for future research. Although most of the included reviews used similar conceptualizations to quantify different intervention components, there remains a need to confirm and better establish the most critical components of coaching interventions statistically. While Yang and colleagues (2022) descriptively explored the potential impact of several key characteristics on outcomes, the number of studies in which direct comparisons could be made were small, thus limiting their ability to formulate conclusions. Components or aspects of coaching that might be examined include matching coaching components to preferences, coachee characteristics, and content, and examination of the impact of the coach/coachee relationship and working partnership. Similarly, research should be conducted to evaluate if there are differential effects of different coaching delivery formats (e.g., distance methods, use of technology). Very little is known about the distal effects of coaching on both practitioner and child outcomes. Given the strong proximal outcomes shown in this review, establishing expectations for distal outcomes is an important next step in establishing the evidence base of coaching in early childhood intervention. Coach characteristics including their specific role, training, and experience were rarely reported or discussed across these reviews. Even when following a specific coaching protocol, coach characteristics might impact coaching and should be explored in future research. Finally, across reviews, coaching intensity (dosage), when reported, had large variability across primary studies, making this another area in need of future investigation.

Limitations

The purpose of this review was to examine extant reviews of practitioner coaching interventions that included young children with disabilities, with that being the primary target audience of the review. Due to the inclusive nature of many placements for children with disabilities in early childhood settings, conducting a review in which the scope was limited to include only reviews with 100% of primary studies having children with disabilities was deemed too narrow and not in line with contemporary and best practice. Thus, one-half of the reviews in this overview included primary studies in which both children with and without disabilities participated. Although this might limit the specificity of some findings, we feel the coaching practices used across all studies were similar and should be applicable to all practitioners working with young children with and without disabilities in inclusive and segregated settings. It is noteworthy that of the 14 primary publications that were included in three reviews, 9 (64%) included children with disabilities or children with significant risk of developmental disabilities who were in inclusive settings.

Second, the scope of this review may be considered narrow in scope in that it did not include studies in which primary caregivers (e.g., parents) received coaching interventions (e.g., Kemp & Turnbull, 2014; Tomeny et al., 2020) or reviews that included practitioner coaching in addition to other types of professional development (e.g., Snyder et al., 2012). The decision to limit the current overview to studies involving practitioners (and exclude caregivers) was made in order to better evaluate the empirical evidence of practitioner coaching. However, given the increase in interest and research in caregiver coaching the findings of this overview should be taken into consideration with those of broader coaching reviews when drawing broader

concussions about the effects of coaching on practitioners and families of young children with or at risk of developmental disabilities or delays. Third, the most recent primary study was published in 2020, and thus was likely conducted over five years ago. While this is time delay is inevitable when conducting overview of reviews, it still must be considered when interpreting the findings of this overview. It might be more significant in this instance because of the global pandemic, which interrupted and transformed educational services. Newer reviews that consider the effects, both positive and disruptive, of the pandemic will be needed to provide a more up-to-date assessment of the state of the science with respect to coaching in early childhood intervention. Finally, the overlap of studies within an overview of reviews has been identified as concern when using the overlap of review methodology (e.g., Hennessy & Johnson, 2020). The overlap of primary publications for this overview, as estimated by the CCA, was 10.16%, which is in the range of high overlap (10% to <15%; Pieper et al., 2014). Consensus guidelines on how to address issues of overlap beyond detection and graphical representation, which were both used in this review, have not yet been established, and may impact future interpretations of our findings (e.g., Gates et al., 2020; Hennesey & Johnson, 2020; Lunny et al., 2021; Pollock et al., 2023).

Conclusions

All six reviews concluded that there was substantial empirical evidence supporting the use of coaching interventions with early childhood professionals. These reviews demonstrate that coaching practitioners who work with young children, including children with or at risk of developmental disabilities and delays, leads to increased positive adult behaviors and corollary positive findings for child learning and developmental outcomes. Significant outcomes were

identified across a variety of adult and child outcomes, indicating the effectiveness of these intervention components across a variety of skills. Common features of the coaching interventions that were identified in multiple studies across reviews included delivery of performance-based feedback, collaborative goal setting and use of action plans, observation, supporting practitioners to engage in self-reflection, and in vivo and video modeling of practices. Collectively, this overview provides strong support for the use of coaching to improve practitioner practice in early childhood settings and for practitioners who work with young children with disabilities.

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Table 1. Methodological Review Characteristics

Review ID	Search date (publication year limit)	Number of primary studies and research design	Range of publication years of primary studies	Rigor assessment method
Casey (2011)	not reported	*u* = 19[a] SCD: *u* = 19	1970 - 2008	not assessed
Artman-Meeker (2015)	March 2014	*u* = 49 SCD: *u* = 17 GDS: *u* = 32	1989 - 2013	SCD: WWC Single Case Design standards (Kratochwill et al., 2013) GDS: WWC 3.0 (2012)
Elek (2018)	June 2016	*u* = 53 designs not specified	1989 - 2016	not assessed
McLeod (2021)	August 2019 (1999 – 2019)	*u* = 7 SCD: *u* = 6 GDS: *u* = 1	2005 - 2020	SCD: WWC 4.0 (Kratochwill et al., 2017) GDS: WWC 4.0 (2017)
Yang (2022)	July 2018	*u* = 33 GDS: *u* = 33	2006 - 2017	not assessed
McLeod (2024)	July 2020 (2000 – 2020)	*u* = 27[b] SCD: *u* = 23 GDS: *u* = 4	2008 - 2020	SCD: WWC 4.0 (Kratochwill et al., 2017) GDS: WWC 4.0 (2017)

Note. *u* = number of studies; SCD = single case design; GDS = group design study; WWC = What Works Clearinghouse

[a] – 19 studies from 17 articles.

[b] – 27 studies from 25 articles.

Table 2. Characteristics of Participants in Primary Studies

Review ID	Coach Sample size	Coach experience	Coach Educational Attainment	Coach role	Practitioner (Coachee) Sample size	Practitioner Experience	Practitioner Educational Attainment
Casey (2011) *u* = 19	not reported	not reported	not reported	RS: *u* = 17 CW: *u* = 2 SV: *u* = 1	*n* = 86	Range: 1 to 29 years	High school or equivalent: *n* = 2 Some college: *n* = 4 Bachelor's or master's degree: *n* = 13
Artman-Meeker (2015) *u* = 49	*n* = 252 (*u* = 26)	7 of 49 (14%) studies included coaches with prior experience	Bachelor's degree: 100% (*u* = 21) Graduate degree: 13 of 21 studies	RS: *u* = 32 CW: *u* = 4 SV: *u* = 2	*n* = 3,383	Range: 0 to 25 years (*u* = 37)	High school degree through master's degree (*u* = 43)
Elek (2018) *u* = 53	not reported	not reported	not reported	not reported	*n* = 3,779	not reported	not reported
McLeod (2021) *u* = 7	*n* = 12	Mean: 6.7 years Range: 3 to 10 years (*u* = 3)	Some college: Bachelor's degree: Graduate degree: 9 of 12 coaches (*u* = 4)	RS: *u* = 5 CW: *u* = 2	*n* = 16	Mean: 8.5 years Range: 0 to 27 years (*u* = 6)	Bachelor degree: 4 of 16 Graduate degree: 7 of 16 (*u* = 4)
Yang (2022) *u* = 33	not reported	not reported	not reported	RS: *u* = 23 CW: *u* = 8 n/s: *u* = 2	*n* = 3,534 *u* = 32	not reported	not reported
McLeod (2024) *u* = 27	*n* = 32	not reported	not reported	not reported	*n* = 179	Mean: 8.0 years Range: 0 to 34 years (*u* = 20)	Bachelor degree: 24 of 45 (53%; *u* = 18)

Note. *u* = number of studies; RS = researcher/research staff; CW = co-worker; SV = supervisor; *n* = number of individuals; n/s = not specified

Table 3. Number of Primary Studies with Specific Coaching Characteristics Across Reviews

Coaching Component	Number of reviews	Mean	Casey (2011)	Artman-Meeker (2015)	Elek (2018)	McLeod (2021)	Yang (2022)	McLeod (2024)
Performance feedback	6	96%	*u* = 19; 100%	*u* = 42; 86%	*u* = 51; 96%	*u* = 7; 100%	*u* = 29; 94%	*u* = 27; 100%
Goal setting / action plans	6	42%	*u* = 2; 11%	*u* = 16; 33%	*u* = 36; 68%	*u* = 5; 71%	*u* = 8; 26%	*u* = 11; 41%
Self-reflection	5	34%		*u* = 7; 14%	*u* = 29; 55%	*u* = 5; 71%	*u* = 3; 10%	*u* = 6; 22%
Modeling (live or video)	5	33%		*u* = 23; 48%	*u* = 21; 48%	*u* = 1; 14%	*u* = 8; 26%	*u* = 8; 30%
Observation	4	84%			*u* = 48; 91%	*u* = 7; 100%	*u* = 26; 84%	*u* = 16; 59%
Help with materials	4	27%		*u* = 10; 20%	*u* = 33; 62%		*u* = 3; 10%	*u* = 4; 15%
Between session practice	3	44%		*u* = 27; 55%		*u* = 5; 71%		*u* = 2; 7%
Use of manual	3	26%		*u* = 26; 53%		*u* = 1; 14%		*u* = 3; 11%
Within session practice	3	24%		*u* = 15; 31%	*u* = 15; 28%		*u* = 4; 13%	
Focus on relationship	3	16%		*u* = 6; 12%	*u* = 11; 21%			*u* = 4; 15%
Progress monitoring	2	21%		*u* = 19; 39%			*u* = 1; 3%	
Role-playing	2	9%		*u* = 2; 4%		*u* = 1; 14%		

Note. *u* = number of studies. Coaching component categories adapted from Artman-Meeker et al., 2015.

Table 4. Additional Coaching Characteristics

Review ID	Coaching format	Coaching feedback type	Coaching feedback delay	Coaching frequency	Number of coaching Sessions	Coaching session duration (in min)	Total duration of coaching (in weeks)
Casey (2011) *u* = 19	not reported	Written: *u* = 8 Verbal: *u* = 16 Graphic: *u* = 9	not reported	Daily: *u* = 6 Weekly: *u* = 12	not reported	not reported	not reported
Artman-Meeker (2015) *u* = 49	In person: *u* = 39 Distance: *u* = 4 Combined: *u* = 6	not reported	Immediate: *u* = 20 Same day: *u* = 13 Delayed: *u* = 14 Other: *u* = 4	not reported	Range: 3 to 32	Range: 2 to 300	Mean: ~18; Range: 2 to 96
Elek (2018) *u* = 53	not reported	Written: *u* = 13 Verbal: *u* = 40 Bug-in-ear: *u* = 3	not reported	not reported	Median = 10; Range: 1 to 70	Median = 60; Range: 3 to 300	Median: 24; Range: 1 to 156
McLeod (2021) *u* = 7	In person: *u* = 2 Distance: *u* = 3 Combined: *u* = 2	not reported	Same day: *u* = 1 Delayed: *u* = 4 Other: *u* = 2	Weekly: *u* = 4 Biweekly: *u* = 1	Mean = 6.1; Range: 1 to 13	not reported	not reported
Yang (2022) *u* = 33	In person: *u* = 24 Distance: *u* = 8	not reported	not reported	not reported	not reported	not reported	Mean: 49; Range: 7 to 104
McLeod (2024) *u* = 27	Distance: *u* = 27[a]	Written: *u* = 20[b] Verbal: *u* = 3 Bug-in-ear: *u* = 5 Video: *u* = 11	not reported	2+/week: *u* = 15 Weekly: *u* = 6 Biweekly: *u* = 2	not reported	not reported	Range: 1 to 52+

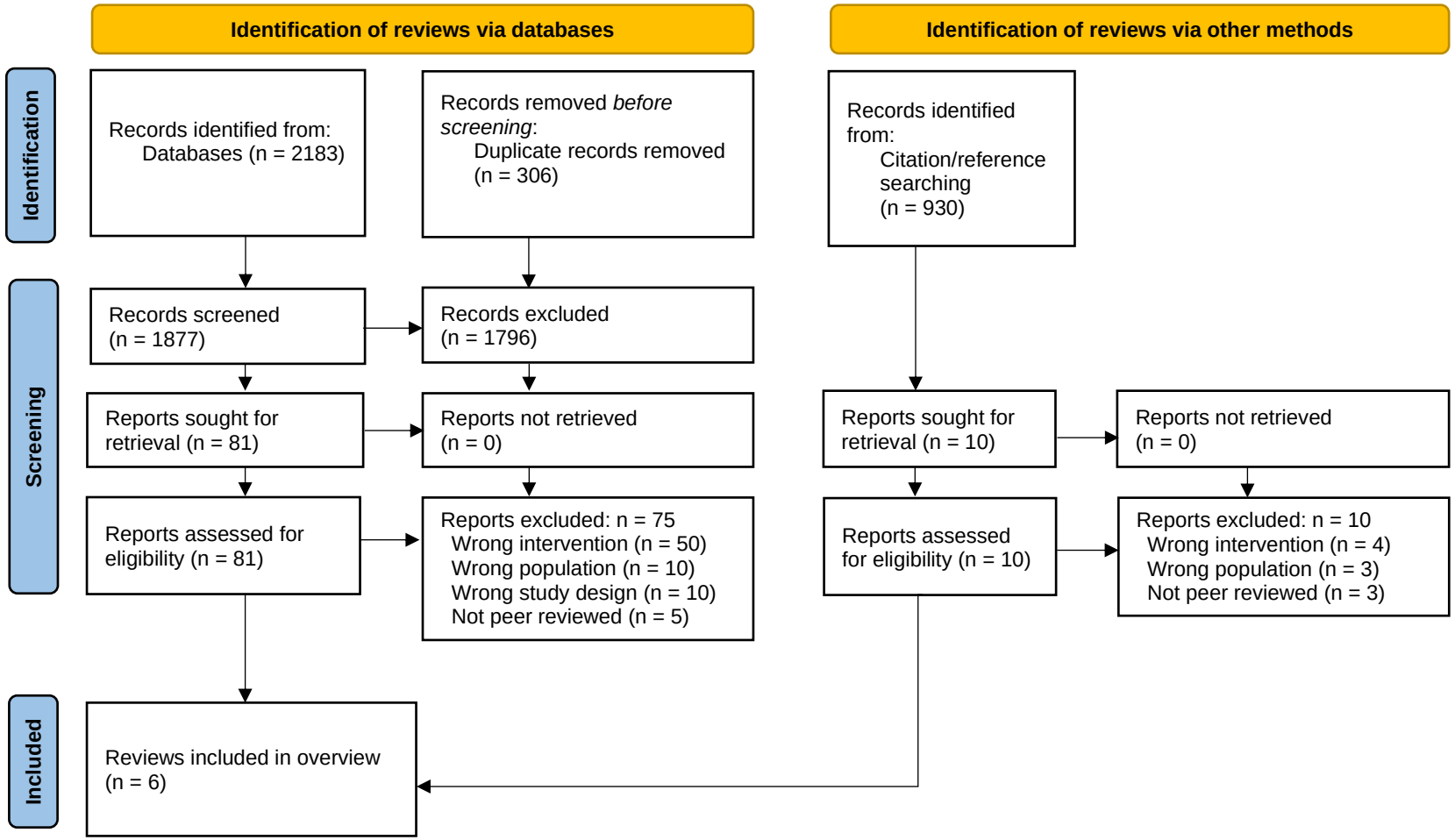
Note. *u* = number of studies; [a] = all 27 studies involved some element of distance coaching, with some studies also incorporating in person elements. [b] = Email: *u* = 19, Text (SMS): *u* = 1.

Table 5. Coaching Fidelity and Primary Study Findings Across Reviews

Review	Coaching Fidelity	Outcomes	Primary findings	Secondary findings
Casey (2011) *u* = 19	not reported	Practitioner's use of instructional practices	SCD: Consistency of effects examined in 19 studies; 64% of experimental manipulations (tiers) demonstrated a clear effect	not examined
Artman-Meeker (2015) *u* = 49	20 of 27 (74%) studies reported fidelity using notes, observation, and checklists	Practitioner's use of instructional practices Children's developmental and learning outcomes	GDS: 13 of 32 studies met modified WWC standards – 7 studies with adult and child outcomes showing strong effects SCD: 12 of 17 studies met WWC SCRD standards – 4 met without reservations demonstrating strong effects and 8 met WWC standards with reservations demonstrating moderate effects	not examined
Elek (2018) *u* = 53	not reported	Coaching components	Qualitative identification of critical features of coaching	not examined
McLeod (2021) *u* = 7	5 of 7 (71%) studies reported fidelity using observation and checklists	Practitioner's use of instructional practices	GD: 1 study did not meet modified WWC standards SCD: 4 of 6 studies met WWC standards – 1 study met WWC standards without reservations and 3 studies met WWC standards with reservations, with 3 of 4 studies meeting strong effects	not examined
Yang (2022) *u* = 33	25 of 33 (76%) studies reported fidelity using observations, notes, and checklists	Practitioner's use of instructional practices Children's developmental and learning outcomes	GDS: 29 of 33 studies reported practitioner outcomes (knowledge, *u* = 2; adult/child relationships, *u* = 12; classroom environment, *u* = 4; language and literacy instruction, *u* = 9; and practitioner sense of confidence, *u* = 2). 19 of 33 studies reported child outcomes (language and literacy skills, *u* = 13; social-emotional skills, *u* = 3; and academic skills, *u* = 2).	GDS: examined five potential moderating factors (teacher time, coach/coachee relationship, specificity of coaching, technology, and practitioner/classroom characteristics)
McLeod (2024) *u* = 27	23 of 27 (85%) studies reported fidelity using observations, notes, and checklists	Practitioner's use of instructional practices	GD: 3 of 4 studies met modified WWC standards – 1 study met all four modified WWC criteria and 2 studies met three modified WWC criteria SCD: 22 of 23 studies met WWC standards – 6 studies met without reservations and 16 studies met with reservations – across studies there were 12 strong demonstrations of effect and 6 moderate demonstrations of effect	SCD: results examined by feedback modality

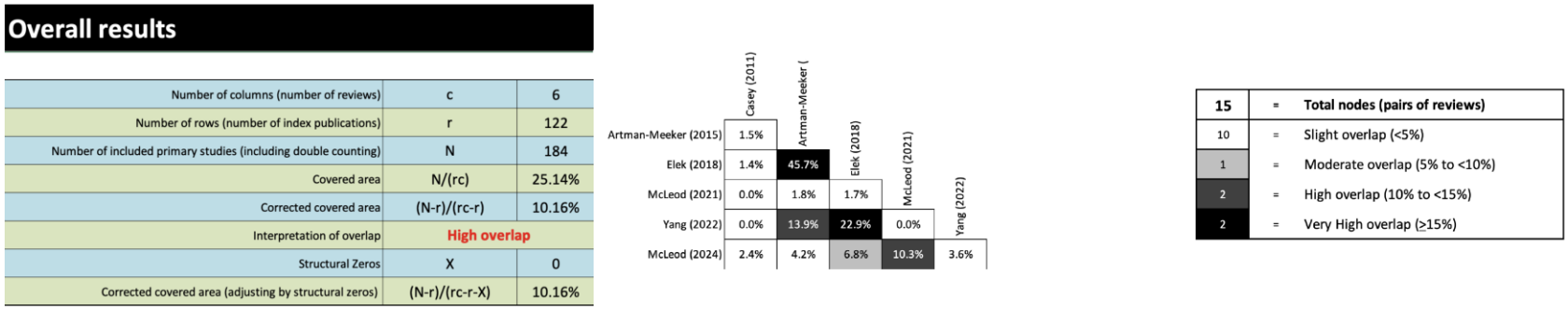
Note. SCD = single case design; GD = group design; WWC = What Works Clearinghouse

Figure 1. Review Selection Flow Diagram



Flow Diagram adapted from: Page et al. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ, 372*, n71. https://doi.org/10.1136/bmj.n71

Figure 2. GROOVE Primary Study Overlap Summary Across Included Reviews.



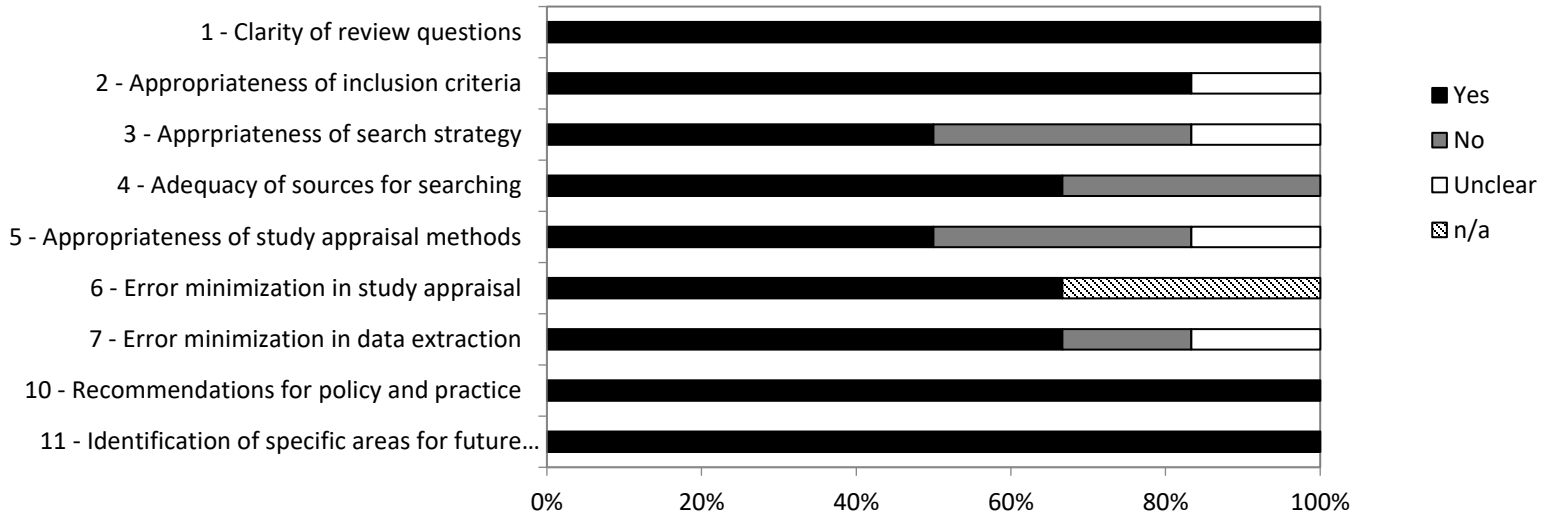
Overall results

Number of columns (number of reviews)	c	6
Number of rows (number of index publications)	r	122
Number of included primary studies (including double counting)	N	184
Covered area	N/(rc)	25.14%
Corrected covered area	(N-r)/(rc-r)	10.16%
Interpretation of overlap	High overlap	
Structural Zeros	X	0
Corrected covered area (adjusting by structural zeros)	(N-r)/(rc-r-X)	10.16%

	Casey (2011)	Artman-Meeker (	Elek (2018)	McLeod (2021)	Yang (2022)
Artman-Meeker (2015)	1.5%				
Elek (2018)	1.4%	45.7%			
McLeod (2021)	0.0%	1.8%	1.7%		
Yang (2022)	0.0%	13.9%	22.9%	0.0%	
McLeod (2024)	2.4%	4.2%	6.8%	10.3%	3.6%

15	=	**Total nodes (pairs of reviews)**
10	=	Slight overlap (<5%)
1	=	Moderate overlap (5% to <10%)
2	=	High overlap (10% to <15%)
2	=	Very High overlap (≥15%)

Figure 3. JBI Appraisal Checklist for Systematic Reviews and Research Syntheses Summary



Appendix A: Search Strategy: Education Resource Information Center

1. TI (coach*)
2. TI (feedback)
3. AB (coach*)
4. AB (feedback)
5. DE “Coaching (Performance)” OR DE “Test Coaching”
6. 1 OR 2 OR 3 OR 4 OR 5
7. TX (“systematic review” OR “systematic literature review” OR “literature review” OR “scoping review” OR “scoping literature” OR “scoping literature review” OR “rapid review” OR “comprehensive review” OR “comprehensive literature” OR “comprehensive literature review” OR “narrative review” OR “narrative literature review” OR “integrative review” OR “best evidence synthesis” OR “mapping review” OR “evidence map” OR “meta-analysis” OR “meta analysis” OR “metaanalysis” OR “meta-analyses” OR “meta analyses” or “metaanalyses” OR “meta-syntheis” OR “metasynthesis” OR “quantitative review” OR “quantitative synthesis” OR “research synthesis” OR “research review” OR “review of research”)
8. DE “Meta Analysis”
9. DE “Literature Reviews”
10. 7 OR 8 OR 9
11. TX (infan* OR toddler* OR preschool* OR kindergarten* OR prekindergarten OR prek OR pre-k OR “young child*” OR daycare OR “day care” OR childcare OR “child care” OR

"nursery school" OR "head start" OR "birth to 3" OR "birth to three" OR "early childhood")

12. 6 AND 10 AND 11

Appendix B: Search Strategy: Cummulative Index of Nursing and Allied Health Libraries (CINAHL) Plus

1. TI (coach*)
2. AB (coach*)
3. TI (feedback)
4. AB (feedback)
5. (MM “Feedback”)
6. 1 OR 2 OR 3 OR 4 OR 5
7. TX (“systematic review” OR “systematic literature review” OR “literature review” OR “scoping review” OR “scoping literature” OR “scoping literature review” OR “rapid review” OR “comprehensive review” OR “comprehensive literature” OR “comprehensive literature review” OR “narrative review” OR “narrative literature review” OR “integrative review” OR “best evidence synthesis” OR “mapping review” OR “evidence map” OR “metaanalysis” OR “meta analysis” OR “metaanalysis” OR “metaanalyses” OR “meta analyses” or “metaanalyses” OR “metasyntheis” OR “metasynthesis” OR “quantitative review” OR “quantitative synthesis” OR “research synthesis” OR “research review” OR “review of research”)
8. (MH "Meta Analysis") OR (MH "Meta Synthesis")
9. (MM "Scoping Review") OR (MM "Systematic Review") OR (MH "Literature Review+")
10. 7 OR 8 OR 9

11. TX (infan* OR toddler* OR preschool* OR kindergarten* OR prekindergarten OR prek OR pre-k OR “young child*” OR daycare OR “day care” OR childcare OR “child care” OR “nursery school” OR “head start” OR “birth to 3” OR “birth to three” OR “early childhood”)
12. 6 AND 10 AND 11

Appendix C: Search Strategy: Medline

1. TI (coach*)
2. AB (coach*)
3. TI (feedback)
4. AB (feedback)
5. (MM "Mentoring")
6. (MM "Formative Feedback")
7. 1 OR 2 OR 3 OR 4 OR 5 OR 6
8. TX (“systematic review” OR “systematic literature review” OR “literature review” OR “scoping review” OR “scoping literature” OR “scoping literature review” OR “rapid review” OR “comprehensive review” OR “comprehensive literature” OR “comprehensive literature review” OR “narrative review” OR “narrative literature review” OR “integrative review” OR “best evidence synthesis” OR “mapping review” OR “evidence map” OR “metaanalysis” OR “meta analysis” OR “metaanalysis” OR “metaanalyses” OR “meta analyses” or “metaanalyses” OR “metasyntheis” OR “metasynthesis” OR “quantitative review” OR “quantitative synthesis” OR “research synthesis” OR “research review” OR “review of research”)
9. (MM "Meta-Analysis as Topic+")
10. (MM "Systematic Reviews as Topic")
11. 8 OR 9 OR 10
12. TX (infan* OR toddler* OR preschool* OR kindergarten* OR prekindergarten OR prek OR pre-k OR “young child*” OR daycare OR “day care” OR childcare OR “child care” OR

"nursery school" OR "head start" OR "birth to 3" OR "birth to three" OR "early childhood")

13. 7 AND 11 AND 12

Appendix D: Search Strategy: PsycINFO

1. TI (coach*)
2. AB (coach*)
3. TI (feedback)
4. AB (feedback)
5. MM "Coaching" OR MM "Coaches" OR MM "Executive Coaching" OR MM "Life Coaching" OR MM "Sports Coaching" OR MM "Test Coaching"
6. MM "Feedback" OR MM "Biofeedback" OR MM "Delayed Feedback" OR MM "Knowledge of Results" OR MM "Sensory Feedback"
7. 1 OR 2 OR 3 OR 4 OR 5 OR 6
8. TX (“systematic review” OR “systematic literature review” OR “literature review” OR “scoping review” OR “scoping literature” OR “scoping literature review” OR “rapid review” OR “comprehensive review” OR “comprehensive literature” OR “comprehensive literature review” OR “narrative review” OR “narrative literature review” OR “integrative review” OR “best evidence synthesis” OR “mapping review” OR “evidence map” OR “metaanalysis” OR “meta analysis” OR “metaanalysis” OR “metaanalyses” OR “meta analyses” or “metaanalyses” OR “metasyntheis” OR “metasynthesis” OR “quantitative review” OR “quantitative synthesis” OR “research synthesis” OR “research review” OR “review of research”)
9. MM “Meta Analysis”
10. MM “Systematic Review”
11. 8 OR 9 OR 10

12. TX (infan* OR toddler* OR preschool* OR kindergarten* OR prekindergarten OR prek OR pre-k OR “young child*” OR daycare OR “day care” OR childcare OR “child care” OR “nursery school” OR “head start” OR “birth to 3” OR “birth to three” OR “early childhood”)
13. 7 AND 11 AND 12