

Parent Perspectives of Desired and Experienced Child and Family Practices in the Early Elementary Grades

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Abstract

Knowledge of the types of school-based practices parents consider important for their children and themselves are the foundations for improving school-family relationships. Surveys were used to determine parents' (1) desire for family-centered practices, individualized and developmentally appropriate child practices, and integrated and coordinated child and family practices in the early elementary grades, (2) the extent to which parents and their children experienced desired practices, (3) barriers and solutions to use of the practices, and (4) strategies and recommendations for promoting increased use of desired practices. Participants were parents of children with disabilities or developmental delays who previously participated in early intervention or preschool special education programs, or both, where the children were currently enrolled in grades K through 3 at the time data collection occurred. Findings indicated that the desire for targeted practices varied depending on the types of practices, the parents and children minimally experienced desired practices, and that barriers and solutions tended to be related to family-school relationships. Implications for practices are described.

Keywords: Family-centered, developmentally appropriate, inclusion, integrated, coordinated, desired practices, experienced practices, barriers, solutions

DOI: 10.7176/JEP/10-15-05

Publication date: May 31, 2019

1. Introduction

The study described in this paper was conducted as part of a research institute charged with bridging the gap between early childhood intervention (ECI) practices and elementary school practices (Le Tendre, 2000; Yeboah, 2002). A major goal of the institute was to develop, evaluate, and disseminate strategies and procedures that could move successful early intervention and preschool practices into the early elementary grades. A secondary goal was to identify barriers and solutions to the adoption of these practices, as well as recommendations, strategies, and procedures for promoting increased use of desired ECI practices in the early elementary grades. The results were expected to inform the kinds of practices that were important to families and the ways in which school-family relationships could be improved.

The study focused on the desire for and use of (1) family-centered practices (Dunst & Espe-Sherwindt, 2016), (2) individualized and developmentally appropriate child intervention practices (Niemeyer, Cassidy, Collins, & Taylor, 1999), and (3) integrated and coordinated child and family practices (Bruder, 2005). All three types of practices are considered best practices in the birth to age six early intervention and preschool years (Bailey & McWilliam, 1993; Odom & McLean, 1996). Those aspects of family-centered, individualized and developmentally appropriate, and integrated and coordinated practices examined in the study were ones for which there is both general consensus and/or agreement about the desirability of the practices for both children and families and an increasing amount of evidence for the benefits of the practices (e.g., Dunst, 2017; Dunst, Trivette, & Hamby, 2008; Farley, Brock, & Winterbottom, 2017; Odom, Buisse, & Soukakou, 2011). According to Bailey (1994), family-centered early intervention has four specific features and characteristics: "(1) Family support is a primary goal of any early intervention activity..., (2) each family has its own culture and unique set of strengths, values, skills, expectations, and service needs..., (3) families have a right and a responsibility to play a primary role in determining the nature and extent of services provided for themselves and their children..., and (4) to provide appropriate services for families, a coordinated system of services must be in place" (pp. 27-28). Individualized practices are ones that are responsive to child and family concerns and priorities and include the use of informal and formal resources, strategies, and techniques tailored to each individual child and family's situation (Aaron et al., 2014; Turbiville, Turnbull, Garland, & Lee, 1996). Developmentally appropriate practices also emphasize child-initiated learning, teacher responsiveness to child interests, and the use of curricular materials and methods that promote and enhance development at a pace best suited to each individual child's learning style (McKenzie, 2013; Ruble & McGrew, 2013). Integrated and coordinated service delivery refers to practices involving opportunities for joint planning and collaboration among professionals and between professionals and parents (Bruder, 1994; Rainforth & York-Barr, 1997), coordinated and integrated delivery of services to children and their

families (Salisbury, 1992), and the inclusion of children with disabilities in typically occurring school programs and activities (Peck, Odom, & Bricker, 1993; Wolery & Wilbers, 1994).

Previous research has found differences in desired and experienced family-centered practices among both ECI practitioners and parents of young children participating in ECI programs (see Dunst, 2002 for a review). Similar results have been found in studies of professionals and parents of children in the early elementary grades (Dunst & Trivette, 2009; McWilliam, Maxwell, & Sloper, 1999). Results from these studies indicate that the study participants experienced less family-centered practices than they desired. Findings from studies of developmentally appropriate practices (e.g., Trivette, Dunst, Hamby, & Meter, 2012) and integrated and coordinated practices (e.g., Institute of Medicine, 1997; Kavale & Forness, 2000) also indicate a discrepancy between desired and experienced practices. The study described in this paper differed from previous investigations by obtaining parents' judgments of three different kinds of ECI practices rather than only one type of practice. This permitted comparisons of similarities and differences in both desired and experienced recommended practices in the early elementary grades.

1.2 Purpose of the Study

The study described in this paper focused specifically on family perspectives of family-centered practices, individualized and developmentally appropriate child practices, and integrated and coordinated practices being used with children having identified disabilities, developmental delays, or academic-related problems in grades K through 3 where all of the children had previously participated in ECI. We examined the desire for these practices, the extent to which parents and their children experienced the practices, the barriers (problems, concerns, etc.) associated with the use of desired practices, and the solutions and recommendations parents identified as strategies for increasing the adoption of desired practices. The results were expected to shed light on highly desired practices, the extent to which the practices were experienced by the children and other family members, and both barriers and solutions to for increasing the use of the practices.

2. Method

2.1 Participants

The participants were 52 parents of children with identified disabilities or developmental delays and children at-risk for poor outcomes who had participated in birth to age 3 early intervention and/or 3 to 5 year old preschool programs. The parents were recruited from two programs in urban settings in western Pennsylvania (PA) and two programs in rural settings in western North Carolina (NC). Early intervention and preschool program directors agreeing to assist with the investigation sent both a letter from the investigators to program participants explaining the study and a cover letter from the program directors inviting the parents to participate in the study. The letters were sent to parents whose children had previously participated in early intervention or preschool special education programs and who were 5 to 9 years of age at the time the study was completed. The correspondence included a stamped postcard that interested parents returned to the investigators. A letter further explaining the study together with the survey described below was sent to each parent returning a postcard.

Table 1 shows the background characteristics of the survey participants in the study. Table 2 shows the preschool and school-age status of the children who participated in an early intervention or preschool program, or both. All but one respondent was a child's mother. More of the PA parents were from higher socio-economic backgrounds compared to the NC parents, $\chi^2 = 12.78$, $df = 4$, $p = .0124$. Additionally, a larger percentage of PA children participated in both birth to age three and age three to five early intervention and preschool programs, $\chi^2 = 4.87$, $df = 1$, $p = .0273$, compared to the NC child participants. The children in PA had more physical and intellectual disabilities and fewer learning disabilities, $\chi^2 = 13.94$, $df = 5$, $p = .0160$, compared to the children in NC. There were no other significant between setting differences on any of the other parent and child background characteristics.

2.2 Survey

The parent survey included three sections. Section one included 24 items, divided into three sets of eight family-centered, eight individualized and developmentally appropriate, and eight integrated and coordinated practices. Each item had two parts. The first part asked the respondents to indicate the extent to which they desired each of the practices for themselves or their children (desired practices) and the second part asked the respondents to indicate the extent to which each of the practices occurred or happened for their child and family (experienced practices). Each of the items was rated on a 3-point scale ranging from *Not-At-All* (desired or experienced), (desired or experienced) *A Little*, or (desired or experienced) *A Lot* with their child or family. Section two elicited parent descriptions of problems or concerns they encountered with school personnel and the kinds of practices school personnel used to create positive family-school relationships and family participation and involvement in their children's education. Section three asked for background information about the respondent, his/her child who received either early intervention or preschool education, or both, and family.

Table 1. Background characteristics of the parents completing the family surveys

Characteristics	North Carolina		Pennsylvania	
	Number	Percentage	Number	Percentage
Parent age (Years)				
20-29	4	14	1	4
30-39	16	55	12	52
40-47	9	31	10	44
Parent education				
Less than high school	3	10	0	0
High school graduate	12	42	7	30
Some college	7	24	5	22
College graduate	7	24	11	48
Marital status				
Married/living with a partner	19	65	19	82
Divorced or separated	8	28	2	9
Single or never married	2	7	2	9
Race				
White	26	90	21	91
African American	2	7	2	9
Native American	1	3	0	0
Family socioeconomic status^a				
Low	0	0	2	9
Low-middle	10	34	0	0
Middle	6	21	5	22
Middle-high	8	28	7	30
High	5	17	9	39

^aHollingshead (1975) four-factor measure of socioeconomic status.

Table 2. Selected characteristics of the participants children

Characteristics	North Carolina		Pennsylvania	
	Number	Percentage	Number	Percentage
Child diagnosis				
Physical disability	4	15	6	26
Intellectual disability	3	11	10	44
Sensory disability	2	7	0	0
Speech disability	4	15	4	17
Preschool experiences				
Early intervention and preschool	14	48	18	78
Preschool only	15	52	5	22
Child's grade level				
Kindergarten	9	31	9	39
First	3	10	5	22
Second	5	17	6	26
Third	12	41	3	13
Child's school placement				
Primarily regular class	2	7	4	17
Regular class/some pull-out	14	48	4	17
Regular class/special education class	8	28	9	39
Special education class only	5	17	6	26

2.3 Methods of Analysis

An iterative data analysis process was used to evaluate the match or mismatch between desired and experienced practices. First, we computed the percentage of participants who strongly desired each of the 24 practices constituting the focus of investigation where strongly desired was operationally defined as responses rated *Desired A Lot*. Second, we computed the percentage of respondents who both desired and experienced each of the practices where experienced was operationally defined as *Experienced a Lot*. The McNemar test for matched-pairs data (Siegel & Castellan, 1988) was used to determine if the proportions of desired and experienced practices were the same or different. Third, we computed matched-pairs *t*-tests using the 1 to 3 item ratings in order to be able to

compute the mean difference effect sizes for each of the 24 sets of practices to determine the magnitude of the differences between desired and experienced practices (Dunst & Hamby, 2012). Fourth, we calculated summed scores for each set of practices (family-centered, developmentally appropriate, and integrated and coordinated) and computed between types of practices *F*-tests for both the desired and experienced practices. This permitted us to determine if any of the three kinds of practices differed in terms of desired and experienced practices.

Barriers and solutions to desired practices were identified by asking participants to describe, following their ratings of each set of desired and experienced practices, the (a) problems or concerns they encountered in interactions with school personnel and (b) kinds of practices school personnel used that proved effective in work with their children and families. Responses were sorted into categories by the principal investigator where two research assistants independently determined agreement or disagreement with the responses assigned to each category. Disagreements were resolved by discussions among all three researchers.

3. Result

Preliminary analyses were conducted to determine if the parents' response patterns differed as a function of the following background variables: Setting (PA vs. NC), early childhood experience (early intervention and preschool vs. preschool only), parent age and education, respondent marital status (married vs. not married), race (white vs. nonwhite), and family socioeconomic status. Separate one-way ANOVAs were conducted with each of the background measures as blocking variables and each of the 24 desired and 24 experienced practice responses as the dependent measures. The number of significant differences did not exceed what would have been expected by chance and therefore the results are presented for both samples of participants combined.

3.1 Family-centered practices

3.1.1 Desired vs. experienced practices

Table 3 shows the percentage of parents who indicated they strongly desired the eight different family-centered practices and the percentage of these *same* parents who indicated they or their children experienced the practices *a lot*. In all eight analyses, a smaller percentage of parents reported experiencing the practices compared to desired

Table 3. Percentage of respondents indicating that they desired and experienced Different kinds of family-centered practices

Family-centered practices	Desired the practice	Experienced the practice ^a	χ^2	<i>p</i> -value
School staff work in a collaborative manner with families to achieve outcomes for students and families	88.7	34.0	23.52	.0000
School staff seek information from parents about family desires, concerns, and priorities for their children	81.5	25.9	22.09	.0000
School philosophy addresses the needs, priorities, and well-being of families	80.8	32.7	19.50	.0000
Parents play a leadership role in deciding IEP ^b goals	77.4	28.3	20.57	.0000
Parents take a leadership role in planning IEP assessments	75.5	22.6	20.16	.0000
Parents make final decisions and choices about whether they want schools to address family issues	75.5	20.8	23.52	.0000
School staff are responsive to the concerns of all family members	69.2	23.1	18.62	.0000
Parents coordinate school and nonschool services for their children	57.4	16.7	10.70	.0011

^aPercentage of respondents who both desired and experienced the practices.

^bIEP = Individualized education plan.

practices as evidenced by the matched-pairs chi-square results. On average, 76% (SD = 9) of the parents strongly desired the eight family-centered practices, but only 25% (SD = 6) of the parents, on average, reported experiencing the practices. These differences were confirmed by the matched-pairs *t*-tests and the magnitude of the mean difference effect sizes for these comparisons. The *t*-tests for the between condition comparisons (desired

vs. experienced) ranged between $t_s = 4.99$ and 5.86 , $dfs = 51$, $ps = .0000$, where the average mean difference effect sizes for these comparisons was 1.02 ($SD = 11$, $Range = .88$ to 1.17).

3.1.2 Between types of family-centered practices comparisons

The between type of practices comparisons indicated that the parents' differentially desired the eight family-centered practices, $F(7, 357) = 4.14$, $p = .0002$, and also differentially experienced the practices, $F(7, 357) = 3.61$, $p = .0009$. Six of the eight practices were desired by 75% or more of the parents (Table 3). One of the family-centered practices ("parents coordinate services for their children") was desired by only about half of the parents and only 17% of these *same* parents reported experiencing this practice.

Post hoc follow-up analyses found that fewer parents desired the "parents coordinate services for their children" practice compared to three other family-centered practices (school philosophy, school-family collaboration, and school staff seek family input). There were no other statistically significant differences between any of the other desired practices. The *post hoc* follow-up analyses of the experienced practices found statistically significant differences between "parents coordinate services for their children" and both "school staff work in a collaborative manner with parents" and "school philosophy addressed family needs and concerns." Fewer parents experienced the former practice compared to the latter practice.

3.2 Individualized and developmentally appropriate practices

3.2.1 Desired vs. experienced practices

The parents' responses to the individualized and developmentally appropriate practices are shown in Table 4. Fewer percentages of parents reported their children experiencing all eight practices compared to the practices desired by the parents as evidenced by the statistically significant matched-pairs chi-square results.

Table 4. Percentage of respondents indicating that they desired and their children experienced individualized and developmentally appropriate practices

Developmentally appropriate practices	Desired the practice	Experienced the practice ^a	χ^2	p -value
School staff help students participate in regular classroom activities	84.3	23.5	25.49	.0000
School practices place equal emphasis on academic skills, social and physical development, and art education	78.4	39.2	9.00	.0027
Students with disabilities work on the same subject areas as students without disabilities	75.5	32.1	20.17	.0000
Classroom practices have all students work together in pairs or small groups	67.3	40.4	11.27	.0008
Classrooms are set up in activity areas and all students are allowed to work on the activity of their choice	61.5	30.8	10.89	.0010
Children with and without disabilities work together in small groups	56.6	22.6	12.80	.0003
Students have the opportunity to choose and decide what they want to learn	45.1	17.6	9.00	.0027
Children with and without disabilities choose how they spend their time in the classroom	37.3	9.8	9.00	.0027

^aPercentage of respondents who both desired and experienced the practices.

An average of 63% ($SD = 16$) of the parents desired the eight practices, but an average of only 23% ($SD = 11$) of the parents reported their children experienced the practices. These differences were confirmed by the matched-pairs t -tests results and mean difference sizes of effects for the desired vs. experienced comparisons. The eight between condition comparisons were all statistically significant, $t_s = 3.27$ to 6.62 , $dfs = 51$, $ps = .0020$ to $.0000$, where the average mean difference effect sizes for these comparisons was $.85$ ($SD = .20$, $Range = .63$ to 1.22).

3.2.2 Between types of developmentally appropriate practices comparisons

The between type of practices comparisons indicated that the parents' differentially desired the eight individualized and developmentally appropriate practices, $F(7, 357) = 9.04, p = .0000$, and also reported that their children differentially experienced the practices, $F(7, 357) = 5.36, p = .0000$. Only four of the individualized and developmentally appropriate practices were desired by two-thirds or more of the parents, whereas two practices were desired by fewer than half of the parents (Table 4). Both of the latter practices were ones that involved student self-directed learning.

The *post hoc* follow-up analyses of the desired practices found that two of the inclusion-related practices ("school practices place equal emphasis on academic and nonacademic education" and "all students work together in groups") differed statistically from the two student self-directed learning practices ("children decide how to spend time in the classroom" and "students decide what they want to learn"). Fewer parents desired the former two practices compared to the latter to practices. The *post hoc* analyses of the experienced practices found that fewer parents reported the use of the "students decide what they want to learn" practice compared to both "school practices place equal emphasis on academic and nonacademic learning" and "all students work together in groups" practices. There were no statistically significant differences between any of the other desired or experienced individualized and developmentally appropriate practices.

3.3 Integrated and coordinated practices

3.3.1 Desired vs. experienced practices

Table 5 shows the parents' responses to the integrated and coordinated practices. There were statistically significant differences in the percentages of parents who desired the practices compared the percentages of parents who reported themselves and their children experiencing all eight of the practices as evidenced by the chi-square results. An average of 78% (SD = 13) of the parents desired the eight integrated and coordinated practices, but an average of only 28% (SD = 13) of the parents reported experiencing the practices. All eight matched-pairs *t*-tests were also statistically significant for the desired vs. experienced comparisons, $t_s = 3.12$ to $10.06, dfs = 51, ps = .0030$ to $.0000$, where the average mean difference effect size was 1.09 (SD = .49, Range = .50 to 2.07).

Table 5. Percentage of respondents indicating that they desired and experienced integrated and coordinated practices

Integrated and coordinated practices	Desired the practice	Experienced the practice ^a	χ^2	<i>p</i> -value
Therapy and special services staff work closely with regular and special education teachers to meet IEP ^b goals	92.0	34.0	23.52	.0000
School personnel and parents work together to develop a child's IEP	90.4	40.4	20.57	.0000
IEP includes child goals and objectives in both school and nonschool activities	90.2	33.3	29.00	.0000
A school staff member is designated to coordinate services for students with disabilities	83.3	33.3	16.33	.0001
IEP activities are implemented primarily in the student's regular classroom	72.0	30.0	15.70	.0001
School personnel work with community-based programs outside the school to increase learning opportunities	70.6	3.9	31.11	.0000
Students with disabilities are educated primarily in regular education classrooms	65.4	32.7	9.80	.0017
Therapy and other specialized services are implemented primarily in the student's regular classroom	58.0	18.0	10.67	.0011

^aPercentage of respondents who both desired and experienced the practices.

^bIEP = Individualized education plan.

3.3.2 Between types of integrated and coordinated practices comparisons

The between type of practices comparisons indicated that the parents' differentially desired the eight integrated and coordinated practices, $F(7, 357) = 7.09, p = .0000$, and also reported that their children and families differentially experienced the practices, $F(7, 357) = 7.83, p = .0000$. All of the practices except one were desired by two-thirds or more of the parents, whereas integrated therapy services were desired by only 58% of the parents (Table 5).

The *post hoc* follow-up analyses of the desired practices found fewer parents desired "students with disabilities are educated in regular classrooms" compared to three other desired practices (working together to develop a child's IEP, IEP goals and objectives, and therapy staff and teachers work together). Fewer parents also desired "therapy staff and teachers work together" less compared to two other practices (working together to develop a child's IEP and IEP goals and objectives). The *post hoc* follow-up analyses of the experienced practices found fewer parents reporting "school personnel works with community-based programs outside of school" compared to all of the other integrated and coordinated practices. Fewer parents also reported their children experiencing less "therapy and other specialized services implemented in regular classrooms" compared to "school personnel and parents work together to develop a child's IEP."

3.4 Between types of ECI practices comparisons

Whether the three different types of practices (family-centered, developmentally appropriate, and integrated and coordinated) that were the focus of investigation were differentially desired and experienced by the children and parents was determined by three between types of practices ANOVAs, one for desired practices and one for experienced practices. The results showed that the three types of practices were differentially desired by the parents, $F(2, 102) = 6.77, p = .0017$, but not differentially experienced by the children and parents, $F(2, 102) = 1.74, p = .1800$. The results are shown in Figure 1 in terms of the average percentage of desired and experienced practices. *Post hoc* follow-up analyses of the desired practices showed that the individualized and developmentally appropriate practices were desired less than both of the other two types of practices, and that family-centered practices and integrated and coordinated did not differ significantly in terms of the desire for the practices. As can be seen in Figure 1, the average percentage of practices experienced by the children and parents were nearly identical.

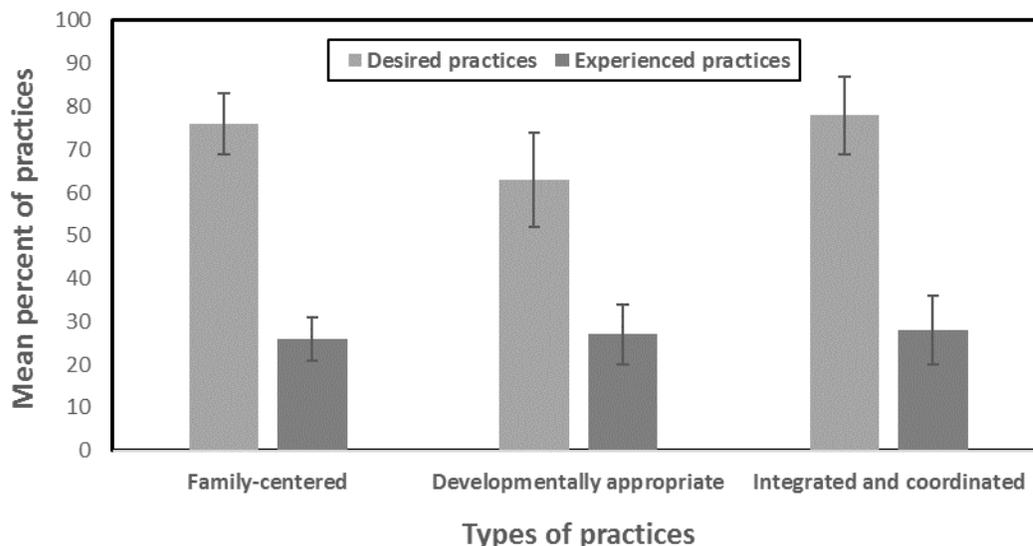


Figure 1. Mean percent of practices desired by the parents and experienced by the parents and their children. (Note. Error bars = 95% confidence intervals.)

3.5 Barriers and solutions

Thirty of the 52 survey participants (58%) listed one or more problems and concerns, 16 respondents (31%) indicated no problems, and 6 respondents (11%) gave no responses. Forty-three respondents (82%) listed one or more aspects of positive family-school transactions, 3 respondents (6%) provided no examples of effective practices, and 6 respondents (11%) gave no responses. Table 6 shows the number and percentage of parents who recorded barriers and solutions to increasing school staff use of these three sets of practices. Fifty-two (52) different problems and concerns were listed as barriers, and 73 school practices were listed as solutions.

Table 6. Number and percentage of barriers and solutions identified by the survey participants

Barriers and solutions	Number	Percentage
Barriers		
Unresponsive and inflexible school practices	13	25
Poor school personnel communication/collaboration	13	25
Inappropriate child instructional practices	10	19
Poor school personnel attitudes	8	15
Staff and material shortages	5	10
Other (e.g., lack of staff commitment, staff time constraints)	3	6
Solutions		
Positive family-school collaboration and communication	35	48
Responsive and flexible school practices	19	26
Information regarding parent rights	5	7
Developmentally appropriate child instructional practices	4	5
Team planning processes and procedures	3	4
Child acceptance and inclusion	2	3
Appropriate resources and materials	1	1
Other (nonspecific)	4	5

Practices that were nonresponsive to family requests and the lack of family-school communication and collaboration were the most frequently mentioned problems. The lack of school personnel use of appropriate instructional practices (particularly those involving the respondent's children's participation in typical school programs and activities) and the lack of a positive attitude toward parents or children, or both, were the second most frequently mentioned problems. Three of the four most frequently mentioned barriers involved poor family-school relationships. The practices mentioned most frequently as contributing to the children and families experiencing desired practices were (1) positive family-school communication and collaboration and (2) school personnel's use of responsive, individualized, and flexible practices with the parents or children, or both. The other types of practices were infrequently mentioned by the parents.

A comparison between the practices considered barriers and solutions find the same practices are mentioned as concerns and problems and practices contributing to positive factors family-school experiences. The findings suggest that a focus on improving family-school relationships, and finding ways for school personnel to become more responsive and flexible to family requests, could contribute to increased school personnel use of the practices constituting the focus of investigation.

4. Discussion

The findings from the different sets of analyses indicated that parents differentially desired different types of family-centered practices, individualized and developmentally appropriate child practices, and integrated and coordinated practices and that for all 24 ECI practices constituting the focus of investigation, the majority of the children and parents did not experience desired practices. Results also indicated that individualized and developmentally appropriate child practices were desired less than family-centered practices and integrated and coordinated practices. Analyses of the barriers and solutions to desired practices showed that poor family-school relationships impeded the provision of desired practices and positive family-school relationships contributed to the provision of desired practices.

Comparisons of the desired vs. experienced practices find fewer differences in the percentage of parents reporting the use of desired developmentally appropriate practices compared to family-centered practices and integrated and coordinated practices. About 30% of the parents who desired developmentally appropriate practices for their children indicated that these practices were not used with their children. In contrast, about 50% of the parents who desired family-centered practices and integrated and coordinated practices did not experience these practices. These differences are most likely due to the fact that developmentally appropriate practices are generally seen as within the purview of "what schools do" (Copple, Bredekamp, Koralek, & Charner, 2014), whereas neither family-centered practices nor integrated and coordinated practices are generally not seen as a major focus of school practices (Dunst & Trivette, 2009; Institute of Medicine, 1997).

It is instructive to compare the most and least desired practices to identify the response patterns of the parents participating in the study. These two sets of practices are shown in Table 7. The most desired practices are *all* student-focused and entail what school personnel do either independently or in collaboration with students' parents to achieve individualized student goals and objectives using student-specific practices. All but one of the least desired practices are also student-specific but emphasize student self-directed learning as part of the inclusion of children with disabilities in regular classroom activities. The results "paint a clear picture" of what are considered important school practices to parents of children with disabilities in the early elementary grades.

Table 7. Most and least desired early childhood intervention practices for use in the early elementary grades

Early childhood intervention practices	Percent of parents
Most desired practices	
Therapy and special services staff work closely with regular and special education teachers to meet a child IEP goals	92.0
School personnel and parents work together to develop a child's IEP	90.4
IEP includes child goals and objectives in both school and nonschool activities	90.2
School staff works in a collaborative manner with families to achieve outcomes for students and families	88.7
School staff help students (with disabilities) participate in regular classroom activities	84.3
A school staff member is designated to coordinate services for students with disabilities	83.3
Least desired practice	
Therapy and other specialized services are implemented primarily in students' regular classroom activities	58.0
Parents coordinate school and nonschool services for their children	57.4
Children with and without disabilities work together in small groups	56.6
Students (with disabilities) have the opportunity to choose and decide what they want to learn	45.1
Children with and without disabilities choose how they spend their time in regular classroom activities	37.3

4.1 Implications for practice

There are a number of implications from the findings described in this paper for increasing school personnel use of parent desired practices for their children and families. The first implication for practice is based on the fact that not a single practice was strongly desired by all of the parents. This indicates a need for a highly individualized approach to identifying parent-desired practices so the school personnel can be responsive to specific parent requests. The practices listed in Tables 3, 4, and 5 can be used as checklists for identifying desired practices and tailoring school-family interactions to specific parent desires and priorities (see especially Gawande, 2009). The second implication for practice is based on the fact that the same school personnel practices were identified as both barriers and solutions to adoption and use of desired practices where poor family-school relationships impeded the use of the practices and positive family-school relationships promoted the use of the practices. Results indicated that school personnel sensitivity and responsiveness to parent requests and positive attitudes toward and interactions with parents and other family members were practices that were found to increase the use of parent desired practices (see especially Christenson & Reschly, 2010; Epstein et al., 2018). Strengthening school personnel family-school relationships in ways that are responsive to family-desired practices including, but not limited to the practices described in this paper, will require professional development and school leadership to promote school personnel acquisition of the knowledge and skills to effectively work with parents and other family members (Auerbach, 2010; J. L. Epstein & Sanders, 2006). Leadership and professional development, to have meaningful benefits in terms of affecting changes in school personnel practices, needs to be evidence-based and found to be related to outcomes of interest including the practices constituting the focus of investigation described in this paper (Dunst, Bruder, & Hamby, 2015; Dunst, Bruder, Hamby, Howse, & Wilkie, 2018; Dunst, Trivette, & Hamby, 2010).

4.2 Implications for research

The results of the study have a number of implications for research. More in-depth analyses of why parents consider certain practices more important than others would help educators and other school personnel better understand parents' perspectives of desired school practices. More in-depth investigation of barriers and solutions to improving school-family relationships would inform changes that need to be made to be more responsive to parent desired practices for their children and themselves.

5. Acknowledgments

This study described in this paper was supported, in part, with funding from the U.S. Department of Education, Office of Special Education Programs (H024Q50001). The opinions expressed, however, are those of the authors and do not necessarily represent those of the Department or Office.

6. Conflicts of interests

The authors declare no conflicts of interests.

7. Authors' contributions

CJD designed the study, determined the appropriate methods of analysis, and wrote the manuscript. DWH conducted the data analysis.

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