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Article in *European Journal of Educational Research* · April 2019

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Does Capacity-Building Professional Development Engender Practitioners' Use of Capacity-Building Family-Centered Practices?

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Received: March 14, 2019 • Revised: March 18, 2019 • Accepted: March 22, 2019

Abstract: The analyses described in this paper permitted an evaluation of whether capacity-building professional development practices were related to early childhood intervention practitioners' reported use of capacity-building family-centered practices. This was ascertained by structural equation modeling for two different types of family-centered practices (participatory and relational) where the two models were compared to determine the better fitting model and the sizes of effects for the relationships among the variables in the models. Results provided converging evidence that capacity-building professional development engenders practitioners' use of capacity-building family-centered practices. Implications for practice are described.

Keywords: *Professional development, capacity-building, family-centered practices, social validity, coaching*

To cite this article: Dunst, C. J., Espe-Sherwindt, M., & Hamby, D. W. (2019). Does Capacity-Building Professional Development Engender Practitioners' Use of Capacity-Building Family-Centered Practices? *European Journal of Educational Research*, 8(2), 515-526. doi: 10.12973/eu-jer.8.2.515

Introduction

The term early childhood intervention refers to the learning experiences and opportunities afforded young children with identified disabilities, developmental delays, conditions placing children at-risk for poor outcomes, and the supports and resources provided to the children's primary carers in order to have the time and energy to promote child learning and development (Dunst & Espe-Sherwindt, 2017). Systems and programs of early childhood intervention exist or are in the process of being developed in North America (Hanson, Morrow, & Bandstra, 2006; Underwood & Frankel, 2012), Europe (European Agency for Development in Special Needs Education, 2004; European Association on Early Childhood Intervention, 2019), Australasia (Liberty, 2014; Sukkar, 2013), Asia (Hu & Yang, 2013; Kiling, Due, Li, & Turnbull, 2018), and other countries throughout the world (Mitchell & Brown, 1991; Odom, Hanson, Blackman, & Kaul, 2003).

There is increased recognition that primary caregiver involvement in early childhood intervention ought to be done in a family-centered manner (e.g., Kilmer, Cook, & Munsell, 2010; Sukkar, Dunst, & Kirkby, 2017). The term *family-centered* is defined as a particular type of help-giving practice that includes treating families with dignity and respect, information sharing so that families can make informed decisions, acknowledging and building on family strengths, and active family member participation in early childhood intervention (Dunst & Espe-Sherwindt, 2016, p. 37). As noted by a number of experts and professional organizations (e.g., European Association on Early Childhood Intervention, 2015; Meezan, 2000), adopting and using family-centered practices is a goal and not the status quo in the field of early childhood intervention. As a result, professional development has been advanced as a means to build early childhood intervention practitioner capacity to use family-centered practices (e.g., Dunst, Trivette, & Deal, 2011; Fordham, Gibson, & Bowes, 2011; Vilaseca et al., 2018).

This paper includes findings from analyses of the relationships between early childhood intervention professional development and practitioners' use of two types of family-centered practices: Relationship-building practices and capacity-building participatory practices (Dunst & Espe-Sherwindt, 2016). The primary focus of analysis was whether evidence-based capacity-building professional development practices were differentially related to the two types of family-centered practices. A secondary focus was the relationship between practitioners' judgments of the importance of family-centered practices and their use of the practices.

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Capacity-building practices is defined as the experiences and opportunities afforded people to strengthen existing competencies and promote the acquisition of new competencies (Eade, 1997; Rappaport, 1981). Capacity-building professional development is defined as the experiences and opportunities used by professional development specialists to engage learners (e.g., early childhood intervention practitioners) in activities to improve their knowledge, skills, and intervention practices (Desimone, 2009; Guskey, 2002). Evidence-based professional development is defined as practices informed by research findings demonstrating an empirical relationship between particular types of adult learning and professional development practices and learner outcomes (Dunst, Bruder, & Hamby, 2015; Dunst, Trivette, & Hamby, 2010). Findings from a meta-analysis of adult learning studies, for example, indicated that coaching over extended periods of time “stood out” as an especially important element of evidence-based professional development (Dunst & Hamby, 2015).

Family-centered practices have been the focus of investigation for more than 20 years (see e.g., Cunningham & Rosenbaum, 2014; Dempsey & Keen, 2008; Dunst, Trivette, & Hamby, 2008). Research has consistently found that there are both the relationship-building and participatory components of family-centered practices (Dunst & Espe-Sherwindt, 2016). Relationship-building practices include practitioner behavior typically associated with good clinical practice (active listening, empathy, respect, etc.) and practitioner beliefs about family member strengths. Relationship-building practices, also described as relational family-centered practices, include behavior used by practitioners to be responsive to family member concerns and priorities (Espe-Sherwindt, 2008). Participatory practices include practitioner behavior that (a) facilitate informed family decision-making and choices and (b) active family engagement in obtaining desired resources or achieving family-identified goals. Participatory practices, also described as capacity-building family-centered practices, include behavior used by practitioners’ to strengthen family members’ abilities to improve their life circumstances (Dunst & Trivette, 2009a).

Findings from studies comparing practitioners’ use of relational and participatory practices indicate that the former is used more frequently than the latter (Dunst, Trivette, & Hamby, 2007; Dunst et al., 2008). At least one factor that may account for these differences is practitioners’ beliefs about the importance of participatory practices and the value of family capacity-building as a focus of early childhood intervention. These belief appraisals are described in the literature as social validity appraisals (Foster & Mash, 1999; Luiselli & Reed, 2011). “Social validity is [defined as] the acceptability of and satisfaction with intervention procedures [that are] assessed by soliciting opinions from the people who receive and implement them” (Luiselli & Reed, 2011, p. 139). Research findings indicate that these belief appraisals influence practitioners’ decisions to use different kinds of early childhood intervention practices (Dunst, 2017a; Strain, Barton, & Dunlap, 2012). Therefore, even evidence-based professional development may not be effective if the practices constituting the focus of adult learning are not viewed by practitioners as worth the time and effort to learn and use with young children and their families.

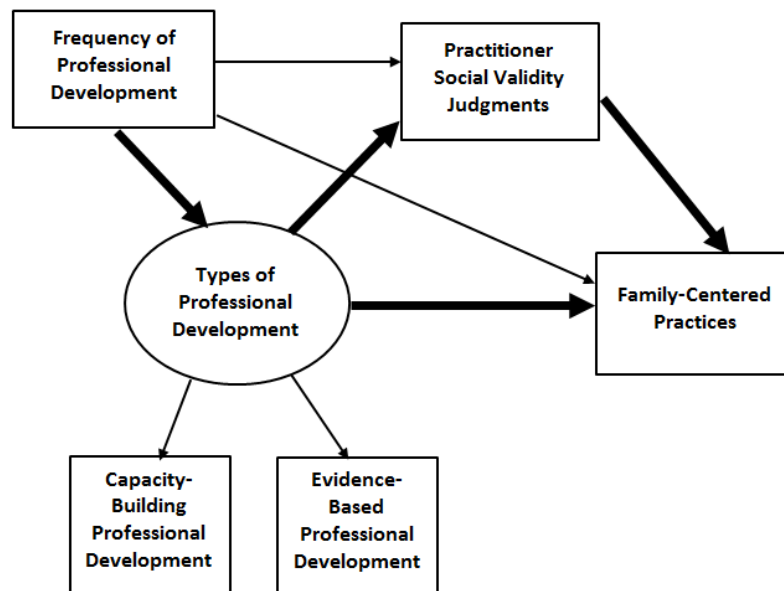


Figure 1. Hypothesized relationships between frequency of professional development, evidence-based capacity-building professional development, social validity appraisals, and early childhood intervention practitioners’ use of family-centered practices.

Figure 1 shows the model that was the focus of investigation. The hypothesized pathways of influence in the model that were of primary interest based on the evidence briefly reviewed above are highlighted in the figure. The frequency of

provision or engagement in evidence-based capacity-building professional development was hypothesized to be related to practitioners' use of family-centered practices. Practitioners' social validity judgments about the importance of family-centered practices were hypothesized to be related to the use of family-centered practices. Types of professional development (evidence-based and capacity-building) were hypothesized to be indirectly related to practitioners' use of family-centered practices mediated by social validity appraisals. To the best of our knowledge, no studies have included investigation of all four pathways of influence.

Two models were tested; one for relational family-centered practices and one for participatory family-centered practices. The fit of the models to the relationships among the variables in the models was hypothesized to be better for participatory compared to relational practices to determine if evidence-based capacity-building professional development engenders practitioners' use of family-centered capacity-building (participatory) practices. The sizes of effects for the relationships among variables in the models were also hypothesized to be larger for capacity-building compared to relationship-building family-centered practices.

Purpose of the Analyses

The analyses described in this paper have special relevance to early childhood intervention in Europe for four reasons. First, family-centered practices are recognized as an important component of effective early childhood intervention by both noted European experts (e.g., Carpenter, 2007; Carpenter, Schloesser, & Egerton, 2009; Dalmau et al., 2017) and European associations dedicated to installation of evidence-based intervention practices (e.g., European Association on Early Childhood Intervention, 2015). Second, studies of the use of family-centered practices in Europe indicate that these practices are not routinely used by practitioners (e.g., Pereira & Serrano, 2014; Vilaseca et al., 2018) and especially participatory family-centered practices (Karlsson, Björck-Åkesson, & Granlund, 2008; Pereira & Serrano, 2014). Third, in-service and continuing professional development in early childhood intervention is recognized as essential for preparing a highly knowledgeable and skilled European workforce (Pretis, 2006) and especially in terms of the use of family-centered practices (Karlsson et al., 2008; Vilaseca et al., 2018). Fourth, the need to use evidence-based adult learning practices to promote adoption and use of evidence-based early childhood intervention, early care, and education practices had been recognized in 38 European countries and four other national units (European Commons, 2019).

Methodology

Participants

The participants were 842 practitioners employed in different early childhood intervention programs in a Midwestern state in the USA. Early childhood intervention is provided in children's homes, preschool programs, and other settings, as well as combinations of settings, as is typical in most programs throughout the world (e.g., Guralnick, 2001; Odom et al., 2003).

The types of early childhood programs included school districts (40%), Intermediate Education Agencies (37%), Early Head Start/Head Start Programs (13%), and other types of early childhood programs (10%). The majority of participants reported their disciplines as early childhood education or early childhood-special education (70%). Eighteen percent of the respondents were physiotherapists, occupational therapists, or speech and language therapists. Twelve percent had other professional backgrounds (e.g., social work, psychology, nursing). Most participants (75%) had five or more years of experience working with young children birth to 3 years of age (12%), 3 to 5 years of age (52%), birth to 5 years of age (13%), or children both younger and older than 5 years of age (23%). Preliminary analyses indicated that these background variables were either not related to the practitioners' use of family-centered practices or accounted for less than 2% of the variance in the use of the practices.

Survey

The practitioners completed a survey as part of efforts to identify the need for professional development to improve their use of recommended early childhood intervention practices. The survey included questions about the frequency of participation in professional development, the capacity-building nature of the professional development, the types of professional development they received, belief appraisals about the value of using family-centered practices, and the extent to which the practitioners used family-centered practices. Frequency of professional development opportunities was rated on a 4-point scale ranging from never = 0 to quite often = 3. The extent to which professional development had capacity-building effects in terms of using family-centered practices was coded on a 4-point scale ranging between not-at-all = 1 to quite a lot = 4. Types of professional development included information provision (readings, discussions, lectures), professional development specialist demonstrations of how to use the recommended practices (film, video clips, live demonstrations), authentic practitioner learning experiences (opportunities to improve use of the practices), and coaching/collaboration (feedback on the use of the practices). Respondents were asked to indicate which of the professional development practices they received as well as could indicate none. Findings from a research synthesis of these types of practices indicate that inclusion of all four types of practices as part of professional development is associated with optimal learner benefits (Dunst et al., 2010). Contrast coding (Cohen, Cohen, West, & Aiken, 2003) was used to score all combinations of professional development practices on a continuum from none = -3

(none of the four practices) to all four = 3 (all four of the practices). A latent variable was used to construct a measure of evidence-based capacity-building professional development using the capacity-building and evidence-based measures as a predictor of the two different types of family-centered practices.

The survey also included 10 family-centered practices items (e.g., I build trusting and respectful partnerships with families; I engage family members in opportunities to strengthen parenting knowledge and skills). Participants were asked to rate each of the items twice; once for the *importance* of the practices and once for the *current use* of the practices. Both sets of judgments were made on a 5-point scale ranging from low = 0 to high = 4. A factor analysis of practitioners' ratings of the use of the practices produced a two factor solution; one for relational practices (N = 4 items, $\alpha = .89$) and one for participatory practices (N = 6 items, $\alpha = .88$). Summated scores for the two sets of items were used as the dependent measures in the analyses described next (Spector, 1992).

Methods of Analysis

Structural equation modeling (SEM) was used to evaluate the fit of the model to the data in Figure 1 (Joreskog & Sorbom, 2014). SEM is a multivariate statistical analysis procedure that permits simultaneous evaluation of complex, hypothesized relationships among variables of interest. In addition to testing the fit of a hypothesized model to the data, an SEM analysis includes measures of the strength of relationships between different pathways in a model.

Two SEMs were run; one for the two sets of relational practices (importance and current use) measures and one for the two sets of participatory practices (importance and current use) measures. The professional development measures in both models were the same. Three sets of analyses were the focus of investigation: (1) the fit of the relationships between the measures in the models to the hypothesized model (Figure 1), (2) the sizes of the structural coefficients for the direct and indirect pathways in the models, and (3) the amount of variance accounted for in the practitioners' use of the practices by the professional development and social validity measures.

Fit was investigated using the chi-square test (Kline, 2005), root mean square error of approximation (RMSEA; MacCallum, 1995), and the likelihood ratio test (LRT; Lewis, Butler, & Gilbert, 2011). A nonsignificant chi-square test and a RMSEA close to zero are indicators of an adequate fit of the model to the data. An LRT chi-square difference test is a measure of the better fit of one SEM compared to another SEM. All three measures are comparative fit indices and are used to evaluate differences between contrasting SEMs (Kenny, 2015).

LISREL was used to compute the structural coefficients for both the direct and indirect effects of the predictor variables on practitioners' use of family-centered practices (Joreskog & Sorbom, 2014). Direct effects are evidenced by the structural coefficients between two measured or latent variables in an SEM, and indirect effects are evidenced by the products of two or more direct effect structural coefficients where the intermediate variable is the mediator between the two direct effect measures (Sobel, 1988). The differences in the sizes of effects between the relational and the participatory practices structural coefficients were assessed using now generally agreed upon formula for obtaining the correct denominator term for testing between structural coefficient differences (e.g., Paternoster, Brame, Mazerolle, & Piquero, 1998).

Regression analysis (Joreskog & Sorbom, 2014) was used to calculate the amount of variance accounted for in the practitioners' use of relational and participatory family-centered practices by the professional development and social validity measures. Fisher's Z-test transformation was used to evaluate whether the total amount of variance accounted for by the predictor variables differed between the participatory and relational practices outcome measures (Salkind, 2007). A between variance comparison provides a test of whether the predictor variables are more strongly related to either type of family-centered practice.

Results

Fit Statistics

The goodness-of-fit statistic was $\chi^2 = 1.28$, $df = 2$, $p = .5264$ for the participatory practices model and was $\chi^2 = 6.63$, $df = 2$, $p = .0364$ for the relational practices model. A nonsignificant chi-square indicates a better fit of the model to the data.

The RMSEA for the participatory practices model was .00, 90% CI = .00, .06, $p = .8990$, and RMSEA for the relational practices model was .05, 90% CI = .01, .10, $p = .3825$. The closer RMSEA is to zero and the upper bound of the confidence interval is .08 or smaller, the better the fit of the model to the data (Kenny, 2015).

The LRT (between chi-square difference test) was $\chi^2 = 5.35$, $df = 1$, $p = .0207$, favoring the participatory practices model. A statistically significant chi-square difference test indicates that a model with a smaller chi-square statistic is a better fit of the model to the data compared to a contrasting model (Stoel, Garre, Dolan, & van den Wittenboer, 2006).

All three fit statistics indicate a better fit of the model to the participatory practices data compared to the relational practices data. The fit statistics for the participatory practices model also are all within boundaries generally considered a "good fitting" model (Hooper, Coughlan, & Mullen, 2008; Kenny, 2015) which was not the case for the relational practices model.

Structural Coefficients

Figure 2 shows the standardized structural coefficients for the paths in both the participatory practices (Figure 2-1) and relational practices (Figure 2-2) models. The tests for the between structural coefficient differences for both the direct and indirect pathways are shown in Table 1. These are tests of whether the sizes of effect of the structural coefficients differ between the two contrasting models (Hedges, 2009).

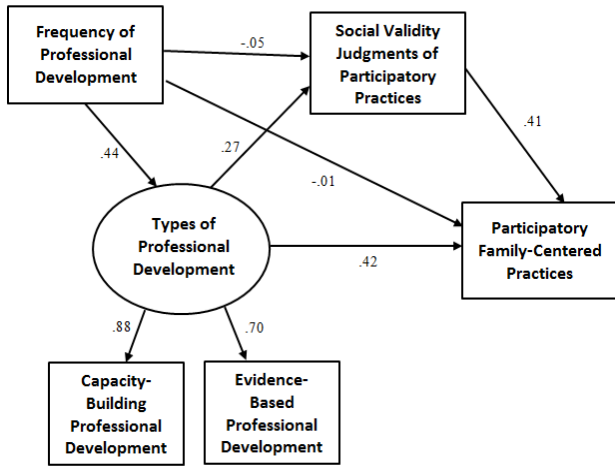


Figure 2.1

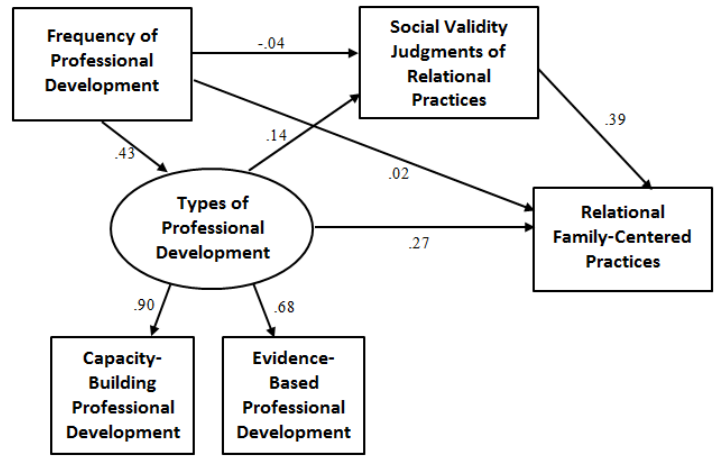


Figure 2.2

Figure 2. Standardized structural coefficients for the relationships between professional development, social validity, and early childhood practitioners' use of participatory (Figure 2.1) and relational (Figure 2.2) family-centered practices.

Table 1. Direct and Indirect Structural Coefficients and The Results for the Between Model Comparisons

Structural Coefficients	Participatory Family-Centered Practices				Relational Family-Centered Practices				Between Model Differences	
	β	b	SE	p-value	β	b	SE	p-value	Z-test	p-value
Direct Effects										
F-PD	.44	.95	.09	.0000	.43	.92	.09	.0000	0.24	.8103
F-SV	-.05	-.05	.03	.0877	-.04	-.03	.02	.1326	0.55	.5823
F-FCP	-.00	-.00	.04	.4866	.02	.02	.03	.2862	0.40	.6891
PD-SV	.27	.11	.02	.0000	.14	.04	.01	.0007	3.13	.0017
PD-FCP	.42	.24	.02	.0000	.27	.11	.02	.0000	4.60	.0000
SV-FCP	.41	.57	.04	.0000	.39	.53	.04	.0000	0.71	.4777
Indirect Effects										
F-PD-SV	.12	.10	.02	.0000	.06	.04	.01	.0000	2.68	.0073
F-SV-FCP	-.02	-.03	.02	.0668	-.02	-.01	.01	.1539	0.89	.3711
F-PD-FCP	.19	.22	.03	.0000	.12	.10	.02	.0000	3.33	.0009
PD-SV-FCP	.11	.06	.01	.0000	.05	.02	.01	.0008	0.71	.4795
F-PD-SV-FCP	.05	.06	.02	.0013	.02	.02	.01	.0227	1.79	.0751

NOTES. F = Frequency of professional development, PD = Professional development, SV = Social validity, and FCP = Family-centered practices. B = Standardized structural coefficient, b = Unstandardized structural coefficient, and SE = Standard error of the structural coefficients.

The structural coefficients for the four direct effects highlighted in Figure 1 were all statistically significant in both the participatory and relational practices models. The indirect effects of evidence-based capacity-building (EBCB) professional development on the use of family-centered practices mediated by social validity appraisals were also statistically significant in both models. These results are consistent with the expectations stated in the introduction of the paper that the influences of capacity-building professional development would be more robust for participatory compared to relational family-centered practices.

In addition to the hypothesized direct and indirect effects, there were a number of other statistically significant indirect effects among the variables in both models. Frequency of professional development was indirectly related to social validity appraisals mediated by EBCB professional development; frequency of professional development was indirectly related to family-centered practices mediated by EBCB professional development; and frequency of professional development was indirectly related to family-centered practices mediated by a combination of both EBCB professional development and social validity appraisals. These findings are consistent with the hypothesis that the more frequent provision of or engagement in EBCB professional development would be related to increased use of family-centered practices.

The between model difference tests for the sizes of participatory and relational practices structural coefficients provide evidence for whether EBCB professional development is differentially related to the two types of family-centered practices. There were four statistically significant between model differences, and all involved EBCB professional development having a direct or mediated effect on family-centered practices. The size of effect of EBCB professional development on social validity appraisals was larger for participatory compared to relational practices, and the size of effect of EBCB professional development on family-centered practices was also larger for participatory compared to relational practices. The indirect effect of frequency of professional development on social validity appraisals and family-centered practices mediated by EBCB professional development were both larger for participatory compared to relational practices. The between model differences provide support for the hypothesis that EBCB professional development engenders practitioners' use of capacity-building family-centered practices.

Regression Analyses

The multiple regression results for the relationships between the four predictor variables and family-centered practices was $R^2 = .40$, $df = 4, 837$, $p = .0000$, for participatory practices and $R^2 = .25$, $df = 4, 837$, $p = .0000$, for relational practices. The Fisher Z-test for the differences in the amount of variance accounted for in the use of family-centered practices was statistically significant, $Z = 4.08$, $p = .0001$. The results indicated that the effects of EBCB professional development were more robust for participatory compared to relational family-centered practices.

Discussion

Results from the different sets of analyses provided converging evidence that: (1) the SEM for the participatory practices was a better fitting model compared to the relational practices model, (2) the sizes of direct and indirect effects for the relationships between capacity-building professional development and family-centered practices were larger for the participatory compared to relational practices, and (3) evidence-based capacity-building professional development proved more important as a factor influencing practitioners' reported use of capacity-building family-centered practices. The findings, taken together, provided support for the hypothesis that more frequent provision of or engagement in evidence-based capacity-building professional development engenders early childhood intervention practitioners' use of family-centered participatory practices (Dunst, 2017b; Espe-Sherwindt, 2008). The results also indicate that early childhood intervention practices that are judged as important and acceptable are more likely to influence the relationship between capacity-building professional development and practitioner use of family-centered practices in a manner consistent with previous findings (Strain et al., 2012; Strohmeier, Mulé, & Luiselli, 2014; Trivette, Raab, & Dunst, 2014).

On the one hand, finding a relationship between capacity-building professional development and capacity-building family-centered practices was not entirely unexpected since participatory family-centered practices are a special case of capacity-building professional development practices (Dunst, 2010; Dunst & Trivette, 2010). On the other hand, the results indicate that professional development that includes experiences and opportunities to promote and support practitioners' acquisition and use of capacity-building family-centered practices (e.g., coaching and performance feedback) constitutes a set of implementation strategies practitioners can use with parents and other family members (Dunst et al., 2011). Professional development specialists who use capacity-building practices, and especially when the practices actively engage practitioners in authentic learning opportunities that include coaching and performance feedback (Dunst & Hamby, 2015; Kretlow & Bartholomew, 2010; Theeboom, Beersma, & van Vianen, 2014), provide practitioners a model for how to use evidence-based capacity-building methods and strategies with parents and other family members.

Continuing and in-service professional development is important for educators in general, and early childhood intervention practitioners in particular, to remain up-to-date in terms of evidence-based and evidence-informed practices (Bluestone et al., 2013; Cordingley, 2008; Krugman, 2003). This is the case because professional development

that specifically focuses on practitioner capacity-building is more likely to result in practitioners adopting and using evidence-based and evidence-informed practices (Dunst & Trivette, 2009b; Nores & Fernandez, 2018; Sheppard, Brown, & Dibbon, 2009).

The types of professional development examined in this paper are especially indicated for promoting early childhood intervention practitioners' use of practices for building and strengthening family capacity to improve family functioning and to provide children development-enhancing learning opportunities (Dunst, 2010; Dunst, Bruder, & Espe-Sherwindt, 2014; Swanson, Raab, & Dunst, 2011). As the results from this study indicate, capacity-building professional development was related to practitioners' use of capacity-building family-centered practices has been found to be related to a host of positive child, parent, and family benefits (Cunningham & Rosenbaum, 2014; Dempsey & Keen, 2008; Dunst et al., 2008).

The findings suggest that if practitioners are expected to use family-centered capacity-building practices with parents and other carers, it is important that professional development specialists use capacity-building continuing and in-service professional development practices to promote practitioners' use of family-centered practices. This is especially the case in terms of professional development specialists' use of coaching and competency-enhancing performance feedback since research indicates that these particular practices have value-added benefits in terms of optimal learner outcomes (Kraft, Blazar, & Hogan, 2018; Kretlow & Bartholomew, 2010). Practitioner use of coaching and performance feedback with parents and other carers, in turn, would be expected to have positive outcomes as well (e.g., Elek & Page, 2018; Graham, Rodger, & Ziviani, 2009). Accordingly, the likelihood that parents have the knowledge and skills to promote child learning and development in ways that strengthen parenting confidence and competence indicates that practitioners need to incorporate the key characteristics of professional development described in this paper as part of their work with families. The reader is referred to ectacenter.org/decrp/fcb.asp for a set of e-learning lessons where the types of professional development described in this paper were used as the foundation for developing methods and strategies for promoting practitioner use of capacity-building coaching practices in work with parents and other family members.

Coaching that included performance feedback was one component of capacity-building professional development that was related to practitioner reported use of recommended family-centered practices. As noted by a number of researchers and practitioners, evidence-based coaching includes joint planning between a parent and practitioner, practitioner observations of parent-child interactions, a practitioner modeling and demonstrating the use of family-desired intervention practices, repeated authentic "real-life" parent learning experiences to use the practice, practitioner encouragement and support, reciprocal feedback between the parent and practitioner that promotes scaffolding of learning, and opportunities for mutual reflection on the benefits of the intervention practice (Elek & Page, 2018; Friedman, Woods, & Salisbury, 2012; Kemp & Turnbull, 2014). Findings from a meta-analysis of four different adult learning practices showed that frequent use of coaching practices by far was the most effective of the four practices (Dunst & Hamby, 2015). Knoche, Kuhn, and Eum (2013) noted that more frequent use of coaching that includes ongoing performance feedback is how practitioners become more proficient interventionists.

Implications for Practice

The results of this study have a number of implications for European countries in the process of building and implementing systems of early childhood intervention that include the adoption and use of family-centered practices. Early childhood intervention has shifted "from viewing the child with special needs as the key recipient of services to viewing the child's parents, caregivers, and family as the principal recipients of services and supports" (Raver & Childress, 2015, p. 32). As is the case in countries on other continents, the adoption and use of capacity-building practices have been a challenge in many European countries (e.g., Pereira & Serrano, 2014). This is true in countries that have more than 20 years of experience making a paradigm shift from traditional professional-centered practices to family-centered practices (e.g., Vilaseca et al., 2018) and in countries in the process of developing national systems of family-centered early childhood intervention (European Association on Early Childhood Intervention, 2019).

Figure 3 shows an early childhood intervention model that is based on the professional development model depicted in Figure 1. The model includes similar relationships among practitioner evidence-based capacity-building practices (**how**) and evidence-based early childhood intervention practices (**what**), frequency of practitioner-family interactions (**how often**), and parents' social validity appraisals of the value and importance of the practices that are the focus of intervention (**why**). As shown in the model, the frequent use of family-centered capacity-building practices to promote a parent's use of evidence-based early childhood intervention practices would be expected to affect the ways in which a parent engages in interactions with his or her child and especially when the intervention practices are considered important by a parent. The four elements of the model (**what**, **how**, **why**, and **how often**), taken together, would be expected to promote parents' use of activities to engage their child in everyday learning opportunities (Dunst, 2018; Graham et al., 2009), which in turn would be expected to be related to positive child, parent, and family benefits (e.g., Dunst, Trivette, Hamby, & Bruder, 2006; Espe-Sherwindt & Serrano, 2016; Woods & Kashinath, 2007).

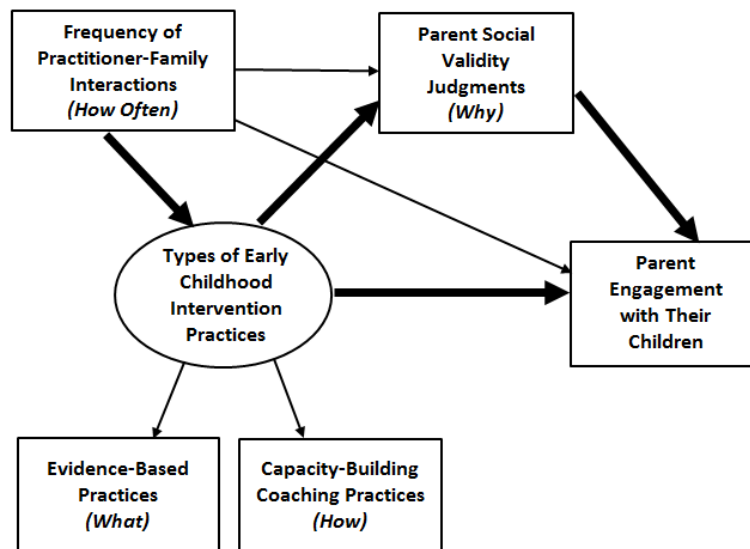


Figure 3. Model for depicting the influences of practitioner use of capacity-building coaching practices on parents' use of evidence-based intervention practices to strengthen parents' engagement with their children.

In terms of everyday early childhood intervention, it is important to make a distinction between evidence-based coaching practices (*how*) and evidence-based intervention practices (*what*) and how they are related. The capacity-building practices in the Figure 3 model are considered a particular type of adult learning practice used by practitioners to engage parents and other caregivers in activities that enhance their knowledge and abilities to affect changes in child learning and development. Capacity-building practices “focus on active family member participation in making informed choices and acting on those choices with [practitioner] encouragement and support, and practitioner flexibility and responsiveness to changing family concerns and consequences” (Espe-Sherwindt & Serrano, 2016, p. 163). This is accomplished in early childhood intervention by practitioners using family-centered capacity-building coaching practices to support and strengthen family capacity to affect child, parent, and family outcomes. Capacity-building coaching is *how* practitioners share information and expertise with a family to promote parent knowledge and skills in ways that strengthen a parent's capacity to promote child learning and development and improve parent and family functioning.

Two related considerations require additional attention as part of practitioner use of capacity-building coaching practices. First, parents and other family members become involved in early childhood intervention because they look to practitioners as sources of important information and expertise. Practitioners, therefore, need to share their knowledge and expertise in ways strengthening family capacity. This includes, but is not limited to, proactive knowledge sharing in response to family concerns and priorities and promoting parents' use of different kinds of instructional strategies to enhance child learning and development and that not doing so would be inconsistent with family-centered principles (Dunst & Espe-Sherwindt, 2016). Second, parents, like all adult learners, may need frequent and repeated opportunities to work with practitioners in order to acquire knowledge and skills to improve child, parent, and family functioning. The frequency of these practitioner-parent interactions should be individualized and be in response to family-indicated need for assistance and not be based on some *a priori* schedule of contacts (e.g., weekly or every other week). Therefore, as part of working with parents of young children, practitioners should have conversations with families to establish the frequency of practitioner-parent contacts.

Conclusion

Findings from the study described in this paper illustrate how capacity-building professional development and capacity-building family-centered practices not only are opposite sides of the same coin but also how the two different practices are closely related. As hypothesized, the use of capacity-building professional development was related to practitioners' reported use of capacity-building family-centered practices. Knowledge of this relationship can be of great benefit as part of developing and strengthening an early childhood intervention workforce so that practitioners are better able to support and strength family capacity to promote child learning and development.

Acknowledgments

Appreciation is extended to the Iowa Department of Education for permission to use the data reported in this paper. The contents and opinions expressed in the paper, however, are those of the authors and no endorsement by the Department or any Departmental staff should be inferred or implied.

References

- Bluestone, J., Johnson, P., Fullerton, J., Carr, C., Alderman, J., & BonTempo, J. (2013). Effective in-service training design and delivery: Evidence from an integrative literature review. *Human Resources for Health, 11*(1), 51-76. doi:10.1186/1478-4491-11-51
- Carpenter, B. (2007). The impetus for family-centred early childhood intervention. *Child: Care, Health and Development, 33*(6). doi:10.1111/j.1365-2214.2007.00727.x
- Carpenter, B., Schloesser, J., & Egerton, J. (Eds.). (2009). European developments in early childhood intervention. Luxembourg: Eurllyaid Publication. Retrieved from <https://www.eurllyaid.eu/eurllyaid-publications/>
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Mahwah, NJ: Erlbaum.
- Cordingley, P. (2008). Research and evidence-informed practice: Focusing on practice and practitioners. *Cambridge Journal of Education, 38*, 37-52. doi:10.1080/03057640801889964
- Cunningham, B. J., & Rosenbaum, P. L. (2014). Measure of Processes of Care: A review of 20 years of research. *Developmental Medicine and Child Neurology, 56*(5), 445-452. doi:10.1111/dmcn.12347.
- Dalmáu, M., Balcells-Balcells, A., Giné, C., Cañadas, M., Casas, O., Salat, Y., Farré, V. & Calaf, N. (2017). How to implement the family-centered model in early intervention. *Anales de Psicología, 33*(3), 641-651. doi:10.6018/analesps.33.3.263611
- Dempsey, I., & Keen, D. (2008). A review of processes and outcomes in family-centered services for children with a disability. *Topics in Early Childhood Special Education, 28*, 42-52. doi:10.1177/0271121408316699
- Desimone, L. M. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. *Educational Researcher, 38*(3), 181-199. doi:10.3102/0013189X08331140
- Dunst, C. J. (2010). *Family capacity-building in early childhood intervention: Effects on parent and child competence and confidence*. Presentation made at the 8th National Congress on Early Intervention with Young Children and their Families, Aveiro, Portugal.
- Dunst, C. J. (2017a). Early childhood practitioner judgments of the social validity of performance checklists and parent practice guides. *Journal of Education and Training Studies, 5*(3), 176-187.
- Dunst, C. J. (2017b). Family systems early childhood intervention. In H. Sukkar, C. J. Dunst, & J. Kirkby (Eds.), *Early childhood intervention: Working with families of young children with special needs* (pp. 38-60). Abingdon, Oxfordshire: Routledge.
- Dunst, C. J. (2018). *Practitioner strategies for involving family members in providing young children with disabilities or delays everyday learning opportunities*. Paper presented at the 30th Annual Conference of the European Academy of Childhood Disability, Tbilisi, Georgia.
- Dunst, C. J., Bruder, M. B., & Espe-Sherwindt, M. (2014). Family capacity-building in early childhood intervention: Do context and setting matter? *School Community Journal, 24*(1), 37-48.
- Dunst, C. J., Bruder, M. B., & Hamby, D. W. (2015). Metasynthesis of in-service professional development research: Features associated with positive educator and student outcomes. *Educational Research and Reviews, 10*(12), 1731-1744. doi:10.5897/ERR2015.2306
- Dunst, C. J., & Espe-Sherwindt, M. (2016). Family-centered practices in early childhood intervention. In B. Reichow, B. A. Boyd, E. E. Barton, & S. L. Odom (Eds.), *Handbook of early childhood special education* (pp. 37-55). Switzerland: Springer International.
- Dunst, C. J., & Espe-Sherwindt, M. (2017). Contemporary early intervention models, research, and practice for infants and toddlers with disabilities and delays. In J. M. Kauffman, D. P. Hallahan, & C. P. Pullen (Eds.), *Handbook of special education* (2nd ed., pp. 831-849). New York: Routledge.
- Dunst, C. J., & Hamby, D. W. (2015). A case study approach to secondary reanalysis of a quantitative research synthesis of adult learning practices studies. *International Journal of Learning, Teaching and Educational Research, 13*(3), 181-191.
- Dunst, C. J., & Trivette, C. M. (2009a). Capacity-building family systems intervention practices. *Journal of Family Social Work, 12*(2), 119-143. doi:10.1080/10522150802713322
- Dunst, C. J., & Trivette, C. M. (2009b). Let's be PALS: An evidence-based approach to professional development. *Infants and Young Children, 22*(3), 164-175. doi:10.1097/IYC.0b013e3181abe169

- Dunst, C. J., & Trivette, C. M. (2010). Family-centered helpgiving practices, parent-professional partnerships, and parent, family and child outcomes. In S. L. Christenson & A. L. Reschley (Eds.), *Handbook of school-family partnerships* (pp. 362-379). New York: Routledge.
- Dunst, C. J., Trivette, C. M., & Deal, A. G. (2011). Effects of in-service training on early intervention practitioners' use of family systems intervention practices in the USA. *Professional Development in Education*, 37, 181-196. doi:10.1080/19415257.2010.527779
- Dunst, C. J., Trivette, C. M., & Hamby, D. W. (2007). Meta-analysis of family-centered helpgiving practices research. *Mental Retardation and Developmental Disabilities Research Reviews*, 13, 370-378. doi:10.1002/mrdd.20176
- Dunst, C. J., Trivette, C. M., & Hamby, D. W. (2008). *Research synthesis and meta-analysis of studies of family-centered practices*. Asheville, NC: Winterberry Press.
- Dunst, C. J., Trivette, C. M., & Hamby, D. W. (2010). Meta-analysis of the effectiveness of four adult learning methods and strategies. *International Journal of Continuing Education and Lifelong Learning*, 3(1), 91-112.
- Dunst, C. J., Trivette, C. M., Hamby, D. W., & Bruder, M. B. (2006). Influences of contrasting natural learning environment experiences on child, parent, and family well-being. *Journal of Developmental and Physical Disabilities*, 18, 235-250. doi:10.1007/s10882-006-9013-9
- Eade, D. (1997). *Capacity-building: An approach to people-centered development*. London: Oxfam Publication.
- Elek, C., & Page, J. (2018). Critical features of effective coaching for early childhood educators: A review of empirical research literature. *Professional Development in Education*, 1-19. doi:10.1080/19415257.2018.1452781
- Espe-Sherwindt, M. (2008). Family-centred practice: Collaboration, competency and evidence. *Support for Learning*, 23, 136-143. doi:10.1111/j.1467-9604.2008.00384.x
- Espe-Sherwindt, M., & Serrano, A. M. (2016). It takes two: The role of family-centered practices in communication intervention. *Revista de Logopedia, Foniatria y Audiologia*, 36(4), 162-169. doi:10.1016/j.rlfa.2016.07.006
- European Agency for Development in Special Needs Education (2004). *Early childhood intervention analysis of situations in Europe: Key aspects and recommendations*. Odense, Denmark: Author.
- European Association on Early Childhood Intervention (2015). *The implementation of early childhood intervention in 15 European countries*. Luxembourg: Eurlayaid Publications. Retrieved from <https://www.eurlayaid.eu/eurlayaid-publications/>
- European Association on Early Childhood Intervention. (2019). *Agora project: Developing early childhood intervention services through participation and co-production*. Luxembourg: Author. Retrieved from <http://www.eurlayaid.eu/projects/>
- European Commons (2019). Adult education and training. In *National education systems* (Chapter 8). Luxembourg: Eurydice. Retrieved from https://eacea.ec.europa.eu/national-policies/eurydice/national-description_en.
- Fordham, L., Gibson, F., & Bowes, J. (2011). Information and professional support: Key factors in the provision of family-centred early childhood intervention services. *Child: Care, Health and Development*, 38(5), 647-653. doi:10.1111/j.1365-2214.2011.01324.x
- Foster, S. L., & Mash, E. J. (1999). Assessing social validity in clinical treatment research issues and procedures. *Journal of Consulting and Clinical Psychology*, 67, 308-319. doi:10.1037/0022-006X.67.3.308
- Friedman, M., Woods, J., & Salisbury, C. (2012). Caregiver coaching strategies for early intervention providers: Moving toward operational definitions. *Infants and Young Children*, 25(1), 62-82. doi:10.1097/IYC.0b013e31823d8f12
- Graham, F., Rodger, S., & Ziviani, J. (2009). Coaching parents to enable children's participation: An approach for working with parents and their children. *Australian Occupational Therapy Journal*, 56, 16-23. doi:10.1111/j.1440-1630.2008.00736.x
- Guralnick, M. J. (2001). A developmental systems model for early intervention. *Infants and Young Children*, 14(2), 1-18.
- Guskey, T. R. (2002). Professional development and teacher change. *Teacher and Teaching: Theory and Practice*, 8(3/4), 381-391. doi:10.1080/135406002100000512
- Hanson, K. L., Morrow, C. E., & Bandstra, E. S. (2006). Early interventions with young children and their parents in the US. In C. McAuley, P. Pecora, & W. Rose (Eds.), *Enhancing the well-being of children and families through effective interventions: International evidence for practice*. London, England: Jessica Kingsley.
- Hedges, L. V. (2009). Statistical considerations. In H. Cooper, L. V. Hedges, & J. C. Valentine (Eds.), *The handbook of research synthesis and meta-analysis* (2nd ed., pp. 37-48). New York, NY: Russell Sage Foundation.

- Hooper, D., Coughlan, J., & Mullen, M. R. (2008). Structural equation modeling: Guidelines for determining model fit. *Electronic Journal of Business Research Methods*, 6, 53-60.
- Hu, X. Y., & Yang, X. J. (2013). Early intervention practices in China: Present situation and future directions. *Infants & Young Children*, 26(1), 4-16. doi:10.1097/IYC.0b013e3182736cd3
- Joreskog, K. G., & Sorbom, D. (2014). *LISREL 9.1 for Windows* [Computer software]. Skokie, IL: Scientific Software International.
- Karlsson, M., Bjorck-Åkesson, E., & Granlund, M. (2008). Changing services to children with disabilities and their families through inservice training - is the organisation affected? *European Journal of Special Needs Education*, 23(3), 207-222. doi:10.1080/08856250802130418
- Kemp, P., & Turnbull, A. P. (2014). Coaching with parents in early intervention: An interdisciplinary research synthesis. *Infants & Young Children*, 27(4), 305-324. doi:10.1097/IYC.0000000000000018
- Kenny, D. A. (2015). Measuring model fit. Retrieved from <http://davidakenny.net/cm/fit.htm>
- Kiling, I. Y., Due, C., Li, D. E., & Turnbull, D. (2018). Interventions supporting development of young children with disabilities at environmental risk in Indonesia: A scoping review. *SAGE Open*, 8(1), 1-9. doi:10.1177/2158244018754935
- Kilmer, R. P., Cook, J. R., & Munsell, E. P. (2010). Moving from principles to practice: Recommended policy changes to promote family-centered care. *American Journal of Community Psychology*, 46(3-4), 332-341. doi:10.1007/s10464-010-9350-9
- Kline, R. B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). New York: Guilford Press.
- Knoche, L. L., Kuhn, M., & Eum, J. M. A. (2013). "More time. More showing. More helping. That's how it sticks": The perspectives of early childhood coaches. *Infants & Young Children*, 26(4), 349-365. doi:10.1097/IYC.0b013e3182a21935
- Kraft, M. A., Blazar, D., & Hogan, D. (2018). The effect of teacher coaching on instruction and achievement: A meta-analysis of the causal evidence. *Review of Educational Research*, 88(4), 547-588. doi:10.3102/0034654318759268
- Kretlow, A. G., & Bartholomew, C. C. (2010). Using coaching to improve the fidelity of evidence-based practices: A review of studies. *Teacher Education and Special Education*, 33, 279-299. doi:10.1177/0888406410371643
- Krugman, M. (2003). Evidence-based practice: The role of staff development. *Journal for Nurses in Staff Development*, 19, 279-285.
- Lewis, F., Butler, A., & Gilbert, L. (2011). A unified approach to model selection using the likelihood ratio test. *Methods in Ecology and Evolution*, 2, 155-162. doi:10.1111/j.2041-210X.2010.00063.x
- Liberty, K. (2014). Early intervention in Aotearoa New Zealand: Services and challenges. *New Zealand Research in Early Childhood Education*, 17, 115-145.
- Luiselli, J. K., & Reed, D. D. (2011). Social validity. In S. Goldstein & J. A. Naglieri (Eds.), *Encyclopedia of child behavior and development*. New York: Springer.
- MacCallum, R. (1995). Model specification: Procedures, strategies, and related issues. In R. H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues and applications* (pp. 16-36). Thousand Oaks, CA: Sage.
- Meezan, W. (2000). Translating rhetoric to reality: The future of family and children's services. *Journal of Family Strengths*, 5(1), Article 4.
- Mitchell, D. R., & Brown, R. I. (Eds.). (1991). *Early intervention studies for young children with special needs*. New York: Springer.
- Nores, M., & Fernandez, C. (2018). Building capacity in health and education systems to deliver interventions that strengthen early child development. *Annals of the New York Academy of Sciences*, 57-73. doi:10.1111/nyas.13682
- Odom, S. L., Hanson, M. J., Blackman, J. A., & Kaul, S. (Eds.). (2003). *Early intervention practices around the world*. Baltimore: Paul H. Brookes.
- Paternoster, R., Brame, R., Mazerolle, P., & Piquero, A. (1998). Using the correct statistical test for the equality of regression coefficients. *Criminology*, 36(4), 859-866. doi:10.1111/j.1745-9125.1998.tb01268.x
- Pereira, A. P. D. S., & Serrano, A. M. (2014). Early intervention in Portugal: Study of professionals' perceptions. *Journal of Family Social Work*, 17, 263-282. doi:10.1080/10522158.2013.865426

- Pretis, M. (2006). Professional training in early intervention: A European perspective. *Journal of Policy and Practice in Intellectual Disabilities*, 3(1), 42-48. doi:10.1111/j.1741-1130.2006.00051.x
- Rappaport, J. (1981). In praise of paradox: A social policy of empowerment over prevention. *American Journal of Community Psychology*, 9, 1-25. doi:10.1007/BF00896357
- Raver, S. A., & Childress, D. C. (Eds.). (2015). *Family-centered early intervention: Supporting infants and toddlers in natural environments*. Baltimore: Brookes.
- Salkind, N. J. (2007). Fisher's Z transformation. In N. J. Salkind (Ed.), *Encyclopedia of measurement and statistics* (Vol. 1, pp. 360-364). Thousand Oaks, CA: Sage Publications, Inc.
- Sheppard, B., Brown, J., & Dibbon, D. (2009). Professional development and capacity building. In B. Sheppard, J. Brown, & D. Dibbon (Eds.), *School district leadership matters* (pp. 85-100). Basel, Switzerland: Springer International.
- Sobel, M. E. (1988). Direct and indirect effects in linear structural equation models. In J. S. Long (Ed.), *Common problems: Proper solutions* (pp. 46-64). Beverly Hills: Sage.
- Spector, P. E. (1992). *Summated rating scale construction: An introduction*. Newbury Park, CA: Sage.
- Stoel, R. D., Garre, F. G., Dolan, C., & van den Wittenboer, G. (2006). On the likelihood ratio test in structural equation modeling when parameters are subject to boundary constraints. *Psychological Methods*, 11(4), 439-455. doi:10.1037/1082-989X.11.4.439
- Strain, P. S., Barton, E. E., & Dunlap, G. (2012). Lessons learned about the utility of social validity. *Education and Treatment of Children*, 35, 183-200. doi:10.1353/etc.2012.0007
- Strohmeier, C., Mulé, C., & Luiselli, J. K. (2014). Social validity assessment of training methods to improve treatment integrity of special education service providers. *Behavior Analysis in Practice*, 7(1), 15-20. doi:10.1007/s40617-014-0004-5
- Sukkar, H. (2013). Early childhood intervention: An Australian perspective. *Infants & Young Children*, 26(2), 94-110. doi:10.1097/IYC.0b013e31828452a8
- Sukkar, H., Dunst, C. J., & Kirkby, J. (Eds.). (2017). *Early childhood intervention: Working with families of young children with special needs*. Abingdon, Oxfordshire: Routledge.
- Swanson, J., Raab, M., & Dunst, C. J. (2011). Strengthening family capacity to provide young children everyday natural learning opportunities. *Journal of Early Childhood Research*, 9, 66-80. doi:10.1177/1476718X10368588
- Theeboom, T., Beersma, B., & van Vianen, A. E. M. (2014). Does coaching work? A meta-analysis on the effects of coaching on individual level outcomes in an organizational context. *Journal of Positive Psychology*, 9(1), 1-18. doi:10.1080/17439760.2013.837499
- Trivette, C. M., Raab, M., & Dunst, C. J. (2014). Factors associated with Head Start staff participation in classroom-based professional development. *Journal of Education and Training Studies*, 2(4), 32-45. doi:10.11114/jets.v2i4.449
- Underwood, K., & Frankel, E. B. (2012). The developmental systems approach to early intervention in Canada. *Infants & Young Children*, 25(4), 286-296. doi:10.1097/IYC.0b013e3182673djc
- Vilaseca, R. M., Galvan-Bovaira, M. J., Gonzalez-del-Yerro, A., Baques, N., Oliveira, C., Simo-Pinatella, D., & Gine, C. (2018). Training needs of professionals and the family-centered Approach in Spain. *Journal of Early Intervention*. <https://doi.org/10.1177/1053815118810236>
- Woods, J. J., & Kashinath, S. (2007). Expanding opportunities for social communication into daily routines. *Early Childhood Services: An Interdisciplinary Journal of Effectiveness*, 1, 137-154.